Project Identification Form (PIF) entry ? Medium Sized Project ? GEF - 7

Promoting cleantech innovation and entrepreneurship for green jobs in Mongolia

Part I: Project Information

GEF ID
10889

Project Type
MSP

Type of Trust Fund
GET

CBIT/NGI
CBIT **No**
NGI **No**

Project Title
Promoting cleantech innovation and entrepreneurship for green jobs in Mongolia

Countries
Mongolia

Agency(ies)
UNIDO

Other Executing Partner(s)
Ministry of Environment and Tourism (MET) (to be confirmed during PPG phase)

Executing Partner Type
Government

GEF Focal Area
Climate Change

Taxonomy
Land Degradation, Focal Areas, Sustainable Land Management, Chemicals and Waste, Plastics, Sound Management of chemicals and waste, Disposal, Best Available Technology / Best Environmental Practices, Eco-Efficiency, International Waters, Strategic Action Plan Implementation, Sustainable Development Goals, Climate Change, United Nations Framework Convention on Climate Change, Paris Agreement, Nationally Determined Contribution, Climate Change Mitigation, Agriculture, Forestry, and Other Land Use, Financing,

Sustainable Urban Systems and Transport, Technology Transfer, Renewable Energy, Energy Efficiency, Strengthen institutional capacity and decision-making, Influencing models, Demonstrate innovative approache, Deploy innovative financial instruments, Transform policy and regulatory environments, Beneficiaries, Stakeholders, Local Communities, Private Sector, Capital providers, Large corporations, Financial intermediaries and market facilitators, SMEs, Individuals/Entrepreneurs, Academia, Civil Society, Community Based Organization, Non-Governmental Organization, Participation, Type of Engagement, Partnership, Information Dissemination, Consultation, Awareness Raising, Communications, Education, Public Campaigns, Behavior change, Strategic Communications, Gender Equality, Sustainable Cities, Integrated Programs, Energy efficiency, Urban Resilience, Global Platform for Sustainable Cities, Green space, Buildings, Municipal waste management, Integrated urban planning, Urban Biodiversity, Urban Food Systems, Food Systems, Land Use and Restoration, Commodity Supply Chains, Capacity, Knowledge and Research, Enabling Activities, Capacity Development, Targeted Research, Learning, Knowledge Exchange, South-South, North-South, Peer-to-Peer, Training, Knowledge Generation, Seminar, Workshop, Professional Development, Course, Innovation, Gender Mainstreaming, Sex-disaggregated indicators, Women groups, Gender-sensitive indicators, Gender results areas, Participation and leadership, Access to benefits and services, Access and control over natural resources, Knowledge Generation and Exchange, Theory of change, Conference

Rio Markers

Climate Change Mitigation

Climate Change Mitigation 2

Climate Change Adaptation

Climate Change Adaptation 0

Duration

48 In Months

Agency Fee($)

168,766.00

Submission Date

9/30/2021

A. Indicative Focal/Non-Focal Area Elements

Programming Directions	Trust Fund	GEF Amount($)	Co-Fin Amount($)
CCM-1-4	GET	1,776,484.00	10,000,000.00
	Total Project Cost ($)	**1,776,484.00**	**10,000,000.00**

B. Indicative Project description summary

Project Objective

Promote the acceleration of high-impact clean technology innovation for large-scale deployment and creation of green jobs in Mongolia

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)
1. Transforming early-stage innovative cleantech solutions into scalable, commercial enterprises	Technical Assistance	1.1 Cleantech solutions with high-impact potential are supported to reach commercialization	1.1.1 GCIP[1] methodologies, tools, training systems , guidebooks for cleantech innovation and entrepreneurship accelerator are adapted for Mongolia 1.1.2 Pool of thirty cleantech innovation and entrepreneurship experts (trainers, mentors, judges) are trained and certified to support the Mongolia Accelerator (with at least 35% women participants) 1.1.3. Three cycles of the annual competition-based Mongolia Accelerator are conducted (at least 50 enterprises with at least 35% women participants)	GET	561,650.00	1,600,000.00

[1] This project will be implemented in close links with the approved GEF program entitled ?Global Cleantech Innovation Programme (GCIP) to Accelerate the Uptake and Investments in Innovative Cleantech Solutions? GEF ID 10408. This means that Mongolia project could benefit from the guidelines, tools and methodologies developed from programme 10408.

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)
1. Transforming early-stage innovative cleantech solutions into scalable, commercial enterprises	Technical Assistance	1.2 Start-ups and SMEs are supported through advanced and gender-responsive business growth and investment facilitation services	1.2.1 Targeted business growth support services are provided to selected cleantech enterprises (Up to 15 enterprises with at least 35% women participants) towards commercialization 1.2.2 Enterprises (15 enterprises with atleast 35% women participants) are connected to financing opportunities and provided with tipping-point investment facilitation support 1.2.3 Mentoring and partnership support is provided to cleantech enterprises (up to 10) for global market expansion in collaboration with the global GCIP network	GET	195,484.00	2,400,000.00
1. Transforming early-stage innovative cleantech solutions into scalable, commercial enterprises	Investment	1.2 Start-ups and SMEs are supported through advanced and gender-responsive business growth and investment facilitation services	1.2.4 Innovative early-stage financing mechanism designed and established to support the deployment and scale-up of cleantech solutions	GET	520,000.00	3,000,000.00

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)
2. Cleantech innovation and entrepreneurship ecosystem(CIEE) strengthening and connectivity	Technical Assistance	2.1 The CIEE in Mongolia is strengthened and interconnected	2.1.1 CIEE Analysis (such as market conditions, policy environment, development Priorities, gender priorities, technology focus, etc. based on mapping of cleantech solutions and prioritization in accordance with national strategies) and Action Plan	GET	167,350.00	1,800,000.00
			2.1.2. Cleantech innovation and entrepreneurship policies, regulations and recommendations are developed (gender-responsive)			
			2.1.3 Platform for ecosystem players organized to promote linkages, collaboration and to facilitate the generation, exchange and dissemination of knowledge products and provide support to start-ups/SMEs on compliance issues associated with their cleantech innovations)			

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)
3. Knowledge management and project coordination	Technical Assistance	3.1 Project outcomes enhanced through use of guidelines, knowledge management, and communication and advocacy	3.1.1 The GCIP internal guidelines for project management teams are adapted and implemented by the Mongolia project 3.1.2 Knowledge management, communication and advocacy strategies of GCIP adapted and applied 3.1.3 National web platform operated as part of the GCIP global web platform to maintain local community and network and coordinate the global GCIP community	GET	72,000.00	200,900.00
3. Knowledge management and project coordination	Technical Assistance	3.2 Impacts and progress of the project are tracked and reported	3.2.1 Environmental and social impacts of project estimated, tracked and reported 3.2.2 Project progress monitoring and reporting as per UNIDO and GEF guidelines including development of gender action plan 3.2.3 Independent mid-term review and terminal evaluation is conducted	GET	100,000.00	69,100.00
				Sub Total ($)	**1,616,484.00**	**9,070,000.00**

Project Management Cost (PMC)

Project Management Cost (PMC)		
GET	160,000.00	930,000.00
Sub Total($)	**160,000.00**	**930,000.00**
Total Project Cost($)	**1,776,484.00**	**10,000,000.00**

C. Indicative sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
GEF Agency	UNIDO	Grant	Investment mobilized	50,000.00
GEF Agency	UNIDO	In-kind	Recurrent expenditures	150,000.00
Recipient Country Government	Ministry of Environment and Tourism	In-kind	Recurrent expenditures	800,000.00
Recipient Country Government	Ministry of Energy	In-kind	Recurrent expenditures	700,000.00
Recipient Country Government	Ministry of Food, Agriculture and Light Industry	In-kind	Recurrent expenditures	800,000.00
Private Sector	TBD	In-kind	Recurrent expenditures	990,000.00
Private Sector	Local financial institutions (TBD)	Loans	Investment mobilized	1,000,000.00
Private Sector	Development Finance Institutions (TBD)	Loans	Investment mobilized	2,000,000.00
Private Sector	Climate Change Research and Cooperation Centre	In-kind	Recurrent expenditures	500,000.00
Private Sector	Mongolia Sustainable Finance Association	In-kind	Recurrent expenditures	10,000.00
Private Sector	Golomt Bank	Loans	Investment mobilized	3,000,000.00
			Total Project Cost($)	**10,000,000.00**

Describe how any "Investment Mobilized" was identified

Recipient government: Through close consultations with the GEF Focal point, the project concept is being presented and in-kind contributions are being discussed with Ministry of Environment and Tourism, Ministry of Energy and Ministry of Food, Agriculture and Light Industry. Confirmed structures of co-finance will be determined during the PPG phase. Private sector: Online meetings are going on with potential funders from the private sector including local financing institutions (Golomt Bank, Khan Bank, Trade and Development Bank and international Development financing institutions (ADB, EBRD) to present the project concept, explore synergies and potential sources for co-financing. Golomt Bank and Mongolia Sustainable Finance Association have confirmed their commitment to provide co financing through co-financing letter. With the rest, discussions are still ongoing and will be finalised during the PPG phase. Estimates are based on initial consultation with the government counterparts and UNIDO?s prior experience in mobilizing co-financing for projects with similar objectives and market conditions.

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

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
UNIDO	GET	Mongolia	Climate Change	CC STAR Allocation	1,776,484	168,766	1,945,250.00
			Total GEF Resources($)		**1,776,484.00**	**168,766.00**	**1,945,250.00**

E. Project Preparation Grant (PPG)

PPG Required **true**

PPG Amount ($)

50,000

PPG Agency Fee ($)

4,750

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
UNIDO	GET	Mongolia	Climate Change	CC STAR Allocation	50,000	4,750	**54,750.00**
				Total Project Costs($)	**50,000.00**	**4,750.00**	**54,750.00**

Core Indicators

Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (direct)	90000	0	0	0
Expected metric tons of CO?e (indirect)	450000	0	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 CO?e (direct)				
Expected metric tons of CO?e (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 CO?e (direct)	90,000			
Expected metric tons of CO?e (indirect)	450,000			
Anticipated start year of accounting	2022			
Duration of accounting	10			

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)

Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	273			
Male	507			
Total	780	0	0	0

Provide additional explanation on targets, other methodologies used, and other focal area specifics (i.e., Aichi targets in BD) including justification where core indicator targets are not provided

780 beneficiaries (at least 35% female consisting of: - 50 enterprises accelerated ? - 30 cleantech experts (judges, mentors and coaches) trained and certified - 200 beneficiaries from the startups (4-5people per startup) - 500 stakeholders sensitized The figures mentioned in the indicators section are tentative and is subject to change during the project. Indicator 6: The figures mentioned in the indicators section are tentative and is subject to change during the project. Indicator 6: Indicative expected results of 90,000 to 180,000 tCO2e of direct GHG emission savings and 450,000-900,000 tCO2e of indirect GHG emission savings at the end of project implementation. Methodology for estimating GHG emissions is to be further elaborated during the preparatory grant phase (PPG) while taking into account of the approach taken by the GEF approved program GEF ID 10408 as well as the project scope of promoting innovative cleantech solutions for low carbon circular economy and their impact in the priority the project scope of promoting innovative cleantech solutions for low carbon circular economy and their impact in the priority sectors of clean energy, agriculture and light industry . Other environmental and social co-benefits are also expected. Such additional environmental benefits to GHG emission reductions will be considered and tracked if any as per the selected technologies and innovations.

Part II. Project Justification

1a. Project Description

Global environmental problems

1. Mongolia has a population of 3.3 million people, with predominantly urban (only 31.3% rural), with a majority of women (51%), and relatively young (27.3% under the age of 15) population. Mongolia has an economic growth rate of 1.6% in 2020 and the GDP annual growth rate in Mongolia averaged 6.22 % from 1991 until 2021, reaching an all-time high of 20.60 % in the third quarter of 2011 and a record low of -10.10 % in the first quarter of 2020. The GHG emissions of Mongolia have risen by 600 % in comparison to emissions recorded in 1970.

2. Although Mongolia contributes only to a small fraction of the global greenhouse gas (GHG) emissions (0.09%), its carbon emissions per capita is higher than the global and Asia Pacific average. As of 2019, Mongolia is ranked 8th place when it comes to GHG per capita according to the World Bank. This is based on the fact that coal remains a major contributor to local pollution and climate change, accounting for about 90 % of all emissions in Mongolia. The energy and agriculture sectors are the largest GHG emitters in Mongolia, contributing to more than 80 per cent of the country?s total emissions.

3. According to the World Resources Institute CAIT data, the agriculture sector is the most GHG emitting sector in Mongolia, contributing to around 51.83% of the total emissions. The main reason driving this growth was found to be enteric fermentation[1][1] from goats, sheep and cattle. Herding is a business and a common way of life in Mongolia. A large segment of the Mongolian population (small-scale and large-scale herders) remains dependent on livestock production as their primary means of livelihood.[2][2] In the decade from 1990 to 1999, livestock numbers increased, largely due to a rapid rise in the goat population from approximately 5 million head in 1990 to 11 million head in 1999. This increase was due in part to high cashmere prices. Although livestock producers increased livestock numbers in response to market factors, the widespread and multi-year drought of 2000-2002 caused high livestock mortality in the national herd.[3][3] Accordingly, GHG emissions from the agriculture sector dropped during this period. From 2004 to 2009, livestock numbers rose again with government support in veterinary and feed services.[4][4] However, in 2010, livestock production declined again due to extreme winter events. But since 2010, emissions have been constantly on steep rise. Current total ruminant population is over 65 million head of goats, sheep and cattle (not including horses, camels and ruminant wildlife) according to National Statistics Office.

4. The energy sector is the second highest emitter of GHG, contributing to around 41.3% of the total emissions. The main reasons for the increase came from the emissions from coal fired electricity and heat generation. Compared to 1990, there is about 64.56% increase in emissions from the energy sector with the energy sector production going up by 870.07% from 1990[5][5]. In 2013, Mongolia generated 93% of its electricity and over 99% of its heat using coal[6][6]. According to WRI CAIT, energy sector emissions grew 71% from 1990 to 2018 with electricity and heat production driving this increase. The usage of coal has nearly doubled (from 3084 GWh in 1990 to 5782 GWh in 2018). According to the World Bank collection of development indicators[7][7], 99.13% of Mongolia?s population had access to electricity in 2019. As the economy continues to grow, there will be simultaneous growth in energy demand and GHG emissions.

5. With the Mongolia Vision 2050 - the country?s lead strategy for economic and social policy in the medium and long term that was introduced in 2020 - the government prioritizes the promotion of green economy. It clearly calls for preserving the ecological balance, improve the living environment of the Mongolian people to lead healthy and long life, supporting increased adoption of clean technology while complying with principles of efficiency and effectiveness in all economic and social sector, as well as calls for increased uptake of clean energy, energy efficiency and resource efficiency.[8][8]

6. Micro, small, and medium-sized enterprises (MSMEs) are one of the most dynamic sectors in Mongolia. This sector comprises 77% of total registered business entities, 72% of total workforce, 17.8% of gross domestic product, and 2.3% of total exports.[9][9] Under the Ministry of Food, Agriculture and Light Industry, there is the Small and Medium Enterprise Development Fund[10][10] since 2009, which strengthens the small and medium sized enterprises in the economy by providing small and medium enterprises with necessary soft loans and supportive loans and job creation. However, according to the International Finance Corporation (IFC) assessment, lack of financing and capacity are key barriers for small business owners to grow and expand their businesses. The COVID-19 pandemic has further exacerbated the situation. UNIDO carried out a Firm-level survey on the impact of COVID-19 in Mongolia in 2021 and majority of the enterprises emphasized the needs of Government support for access to finance to recover the businesses[11][11].

7. With a continuously growing economy and a steady population growth, Mongolia is heading towards a high emission trajectory in the coming years. Therefore it is crucial to support the development and deployment of cleantech innovations across all sectors of the economy to reduce GHG emissions. Therefore, this project will promote the development and large-scale deployment of

clean technology products, business models and services so as to reduce GHG emissions across the key economic sectors of the country.

Root causes and barriers that need to be addressed

8. Through policy on the development of information and communications technology (2017-2025)[12][12],Mongolia plans to accelerate the development of Mongolia by enabling public access to ICT advancements, developing knowledge based high technology and export oriented local manufacturing industry, supporting human capital development and enhancing competitiveness.

9. The Global Green Economy Index (GGEI)[13][13] analyses national green economic performance among countries. In 2016, Mongolia performed poorly in the Global Green Economy Index, ranking 79th out of 80 countries.

10. Regarding the Global Competitiveness Index[14][14] that analyses institutions; infrastructure; ICT adoption; macroeconomic stability; health; skills; product market; labour market; financial system; market size; business dynamism; and innovation capability, ranked Mongolia at 102 out of 140 countries in 2019.

11. In the Global Knowledge Index[15][15] published by the UNDP, Mongolia?s position stands as 70 among 138 countries in 2020. Although Mongolia ranks considerably better in pre-university education and general enabling environment, they rank poor on research, development and innovation.

12. Despite the recognized importance of innovation in the national economy, there are still a number of challenges that limit SMEs from contributing towards the development and commercialization of cleantech innovation as presented in table below.

Barriers faced by light industry SMEs in developing and scaling-up innovative cleantech solutions

Limited access to finance	Limited access to finance is a key barrier for start-ups in Mongolia and was identified by stakeholders to be one of the key barriers for SMEs in further developing their business activities. The limited access to finance, especially private sector finance, is due to a number of reasons: a) difficulty to access capital for innovation projects that normally observe specific risks b) limited understanding of investors of opportunities and specific risk of investing in (local) cleantech markets c) limited awareness of financial schemes and respective requirements and procedures available to cleantech businesses as well as limited government financial incentives to support private sector in advancing and adopting innovation in the cleantech space d) limited knowledge of cleantech innovation and investment amongst local investors and subsequently a very low risk appetite e) lack of interaction between SMEs and potential investors f) entrepreneurs lack the ability to prepare and present adequate business cases and financial models
Lack of capacity	A lack of capacity in SMEs is observed in view of: a) lack of key skills and know-how on how to transform a technological innovation into a viable enterprise leading to high rates of failure for early-stage cleantech enterprises b) lack of capacity to develop robust business models leading to high risk of failure of established businesses b) lack of awareness in the private sector of new developments and trends on innovations related to their operations, manufacturing and distribution, locally or globally which limits their development c) limited access to international expertise and limited knowledge of markets and potential partners outside their country which could expand their business
Barriers related to cleantech innovation and entrepreneurship ecosystems	
Lack of institutional coordination	There is a lack of institutional coordination in Mongolia in view of supporting entrepreneurs. There is still a need for coordinating cleantech startups, enablers (incubators) and pipelines (universities) in view of establishing a well-coordinated network, which would serve as a basis to further enhance innovation and entrepreneurial ecosystems in the country.

Limited enabling policy and regulatory environment	Fostering innovation and entrepreneurship demands a robust and enabling policy and regulatory environment that in turn provides a basis for attracting investments. Therefore, it is of utmost importance to support the uptake of supportive policies and enabling business environments that encourage investments in cleantech products, businesses and services. Particularly, the legislative framework addressing private sector involvement in clean technologies innovation is underdeveloped, hampering potential investment in innovation.
Lack of clean technology innovation ecosystem	In Mongolia, there is a lack of innovation ecosystem specifically tailored towards clean technologies and SMEs. Although there is some innovation infrastructure established, such as the Hub Innovation Center, The Business Innovation & Growth (BIG) Centers, there is still a need for an ecosystem that is exclusively dedicated to cleantech and SMEs.
Lack of public awareness	While there climate change is taking a toll on the country?s economy and population, there is still a lack of public awareness regarding market potential of cleantech and low-emission innovation technologies. Awareness raising of clean technologies is crucial in terms of enhancing the understanding of the public on benefits derived by the utilization of cleantech products, services and business models.
Lack of trained experts and information about cleantech	A potential barrier to a national innovation and acceleration programme for cleantech in SMEs and start-ups in Mongolia is the lack of trained experts for mentoring start-ups and entrepreneurs involved in cleantech innovations and also a lack of information about technology options, best practices, and benchmarks within SMEs.

13. This project will also analyze the barriers faced by women in cleantech and fill the gap regarding equal access to networks and market opportunities and finance.

14. In summary, Mongolia?s cleantech sector is an emerging sector which lacks capacity and coordination. There remains a need for further support in the field of advanced commercialization support, further incubation, access to early-stage financing, national networking within the complex ecosystem, commercialization with market and finance linkages, widening and increasing the geographical reach and support to national partners.

2) The baseline scenario and any associated baseline projects

15. Mongolia?s harsh climatic conditions create one of the most insurmountable barriers to its economic development, and the anticipated climate change will limit it even further. Therefore, Mongolia has consistently demonstrated its strong support of international initiatives in protection of global climate. Mongolia was one of over 150 countries to sign the United Nations Framework Convention on Climate Change (UNFCCC) at the United Nations Conference on Environment and Development (UNCED), held in Rio de Janeiro in June 1992. The State Great Khural (Parliament) of Mongolia ratified this Convention on September 30, 1993. In order to comply with the obligations and commitments under the UNFCCC, Mongolia has been undertaking certain measures and actions at national level such as listed below.

16. In November 2019, Mongolia ambitiously raised its target to reduce total greenhouse gas emissions to 22.7 % by 2030, through updating its Nationally Determined Contributions (NDC), which was approved by the Government Decree No.407[16][16]. With that updated NDC, Mongolia committed to enhance its mitigation efforts with policies and measures to be implemented in six key economic sectors - energy, industry, agriculture, waste, construction, and transport. At the Climate Ambition Summit on 12 December 2020, the President of Mongolia communicated that Mongolia could achieve a higher NDC target of 27.2% reduction in greenhouse gasses if conditional mitigation measures such as the carbon capture and storage and waste-to-energy technology are implemented.

17. In 2020 published, Mongolia?s Long-Term Development Policy Vision 2050 aims at transforming the country into a leading regional power by 2050 by fighting poverty, creating a greener and digital economy, improving the education system and gender equality for enhanced job access, redefining Mongolian social strategy in a more citizen-centered way. Mongolia will create favorable conditions for the development of scientific research, state-science production of knowledge from numerous sources of financing innovation, and business partnerships aimed to provide a knowledge economy. The country aims to not only provide all kinds of support and assistance to young people to achieve their entrepreneurial goals but also create and strengthen supportive conditions for the development of MSMEs.

18. Under this strategy, Mongolia plans to increase its share of renewable energy in the consumption of total energy to 25 % by 2025 and to 30% by 2030. In addition, Mongolia will expand the cooperation for science organizations and industry to promote and adopt innovation, and increase the expenditures for financing of science, technology and research to 2.5 % of the Gross Domestic Product by 2025. The policy sets a clear direction to adopt environment friendly advanced technologies, save natural resources, develop circular economy and reduce the emission of carbon dioxide from production and consumption by 7 % by 2025 and 14% from current levels by 2030. With regards to agriculture, the policy promotes technologies and practices that increase the fertility of soil, reduce land deterioration, adopt economical and efficient advanced agro-technical and irrigation technology to repair soil, and develop intensified farming in order to meet the domestic demand for grains, potato and vegetables. In addition, there is a push to support the business and economics of herders and herder groups, and small and medium sized farmers; provide modern techniques technologies and electricity; and create a financial, economic and legal environment for sustainable production. Overall, Mongolia plans on developing a green economy by creating effective system to use resources, improving environmental monitoring, greening the infrastructure, use of renewable energy, reprocessing of wastes, with growth of the national economic capabilities focused on developing industries using renewable natural resources, increasing livestock productivity and cultivating prolific crops. These actions defined to meet Mongolia?s Vision 2050 targets have the potential to contribute towards achieving NDC commitment.

19. The Ministry of Environment and Tourism (MET) of Mongolia is the key ministry to develop, update and implement climate related policies. Thus, the MET is the national entity with the overall responsibility for organizing and coordinating the compilation of National Communications, Biennial

updated reports, GHG inventory and submitting them to the UNFCCC Secretariat to integrate climate change-related issues in various sectors. Under the MET is the National Climate Change Committee. The Mongolia National Action Programme on Climate Change supports the country?s NDC and focusses on a set of measures, actions and strategies that enable vulnerable sectors to adapt to potential climate change and mitigate GHG emission. Since 2020, The Climate Change Research and Cooperation Centre operates under the guidance of the MET to introduce new technologies to combat climate change in close coordination with diverse stakeholders.

20. The Government of Mongolia has outlined its **Action Plan for 2020-2024**[17][17] in conformity with the National Security Concept of Mongolia, ?Vision-2050? long-term development policy, reflecting Election Platform of the Mongolian People?s Party and based on the proposals from other political parties, civil society, citizens and communities. In this action plan, one of the focuses is to strengthening science, technology and innovation while introducing modern forms of financing for SMEs, implementing policy to nurture and expand SMEs through business incubation services and creating a favorable business environment.

21. Through **Mongolia?s Five-year development guideline** for the period of 2021-2025, there is a focus on developing the science and technology as one of the key factors of the country?s sustainable development, and establish an effective national innovation system; boosting competitiveness to develop an export-oriented heavy and light industry production; green development and creating a healthy and safe environment; Employment and start-up businesses among others.

22. In 2014, Mongolia developed a Green Development Policy (GDeP)[18][18] to define ?a transition to a development model that results in sustaining well-being of people by ensuring environmentally friendly, inclusive economic growth or increasing efficient consumption of natural resources and sustainability of ecosystem services.? The policy has an Action Plan that describes various approaches to achieve the objectives and determined a total of 254 actions that will be taken through 2030. Many of these activities relate to climate change adaptation and mitigation.

23. To strengthen efforts broadly across environment sector, Mongolia introduced laws and initiatives such as Energy Conservation (EC) Law of Mongolia (2015)[19][19], State Policy on Energy (2015-2030)[20][20], National Programme for Energy (2018-2022)[21][21], National Implementation Plan (NIP), National Program on Reduction of Air and Environmental Pollution (2017-2025)[22][22], National Livestock Programme (2010), National Renewable Energy Programme (2005-2020)[23][23], National Agriculture Development Policy (2010-2021), National REDD+ Readiness Roadmap (2014), National Sustainable Finance Roadmap of Mongolia (2018) including others. Also, a sub programme of

innovation for Energy Sector was approved by Minister of Energy on 13 May 2020, as per the Minister?s Decree #112.

24. At present, there are no laws explicitly promoting entrepreneurship in Mongolia. However, Mongolia has several legal policies that seek to promote innovation and entrepreneurship. They include the following: Law on Taxation (1993)[24][24], Law on Bankruptcy (1997)[25][25], Law on Competition (2010)[26][26], Law on Credit Guarantee Fund (2012) and the Law on Innovation (2012). However, gaps in implementation and enforcement of certain laws can indirectly hinder the idea generation and business development. For example, there have been lapses in IP protection, where an inventor?s work is not properly protected or are leaked, resulting in many startups distrusting the system and not prioritizing the proper registration of IP.

25. **The SME Agency** was established by the Government Resolution No.48 dated 12th August 2020 based on the former SME and Cooperative Policy Implementation Coordination Department of Ministry of Food, Agriculture and Light Industry (MoFALI) . This agency carries out research and analysis, creates jobs for SMEs and service enterprises, facilitate and provide soft loans and financial support for import substitution and increase of exports, provides capacity building activities, support innovation based new product development and services through cluster development and also manage the SME Development fund.

26. Building on the foundations of Law of Mongolia on Technology Transfer (1998) and Law on Innovation (2012), Mongolia is placing great emphasis on the development of information and communication technology (ICT) sector through its state policy on the development of Information and Communication Technology (2017-2025).[27][27] This policy focusses on bringing in hard and soft infrastructure, latest technologies and equipment, to develop innovation based manufacturing, to accelerate ICT R&D activities, to train highly skilled human resources, and to create information technology and software clusters. This policy can be beneficial for this project to encourage IT and innovation in clean energy, agriculture and light industry sectors. Mongolia has also started to conduct an annual ICT exhibition to bring awareness to the wider stakeholders. In 2021, there were also discussions held under ?Women in ICT FORUM? and ?Women in Digital Nation?, involving domestic and international women who work in the industry.

27. The Science and Technology Master Plan of Mongolia (2007-2020) is another policy that was introduced to focus on enhancing the science and technology capacity, increasing the innovation system effectiveness, establishing a basis for national technology development, promoting the growth of high-technology based industry as well as establishing a foundation for knowledge-based economy.

28. The Mongolian National Chamber of Commerce and Industry, is pursuing its own green strategy, the ?5x20? goals, while the Business Council of Mongolia has its own ?Environmental working group?

as one of its five permanent working groups. Banks such as Xac Bank and Golomt Bank are pursuing strategies for green loans and investment because it makes good business sense.

National baseline activities and initiatives include:

29. **Ministry of Environment and Tourism (MET)** and **Ministry of Energy (MOE)** are key counterparts of UNIDO in Mongolia, especially in the ongoing Technical and economic feasibility analysis of renewable energy generation from solar and wind in Dund Govi province of Mongolia under the cooperation of the Partnership for Action on Green Economy (PAGE). This study would provide important baseline and practical connections with rural areas, where the energy resources are available and the cleantech models could be piloted within the proposed project of UNIDO in cooperation with the MET and MOE.

30. **Ministry of Food, Agriculture and Light Industry (MoFALI)** is at the center of policy making and the implementation of policies on food and nonfood (fibres, leather, wood etc.) Light Industry SME development in Mongolia. The MoFALI has implemented programs related to access to finance, business training and the empowerment of women in business. UNIDO in Mongolia has been working closely with MoFALI and providing various technical assistances to the light industry SMEs throughout the country including those in the industrial cities (e.g Ulaanbaatar, Darkhan and Erdenet) and rural areas.

31. **The Credit Guarantee Fund of Mongolia** is a public non-profit financial institution established in 2012 under the provisions of the Law of Credit Guarantee Fund. Its mission is to help develop SMEs and start-ups, especially those that face problems in meeting collateral requirements imposed by the commercial banks. This intervention could help to strengthen the capacity of the clean technology startups/SMEs, which currently are not able to access the credit guarantees.

32. **The Mongolian National Chamber of Commerce and Industry (MNCCI)** is one of Mongolia?s leading NGOs.[28][28] Currently, MNCCI has expanded to include 3000 members (1000 in Ulaanbaatar) and be represented by 20 subsidiary branches in the countryside. MNCCI?s foremost support to SMEs is in the field of information dissemination, preparation of business plans, organization of trainings and networking events as well as facilitation of business advisory services through experts. Their network will be valuable for Mongolia to reach out to startups/SMEs across the nation.

33. **The Business Growth Centers[29]**[29] in Ulaanbaatar and Dalanzadgad aim to support economic development and promotion of SMEs across Mongolia. This project will learn from build their capacity development measures while acting as linkage point for SMEs and other stakeholders to work together for a sustainable future.

34. **Ulaanbaatar Innovation Center (HUB)** is a recently established platform for building innovation systems in Ulaanbaatar, developing new ideas and innovation-based start-ups, and supporting youth development, consists of four main sections: hub co-working, hub incubator, hub events, and hub labs.

35. **SME Business Incubation Center, Chingeltei District:** The SME business incubator was established in 2011 and started its operations in 2012 in the Chingeltei district of Ulaanbaatar. The center operates in this district with around 150,000 people in four branches, providing training and business advisory services to mainly start-up, small and family-owned businesses and households.

36. The Mongolian Chamber of Commerce and Industry, Golomt Bank, and Development Solutions, the Foundation and the City of Ulaanbaatar have established **Mongolia?s first Women?s Business Center (WBC)** to support women?s entrepreneurship. WBC is committed to help entrepreneurs to start and grow their businesses through educational workshops, one-on-one assistance, co-working and business facilities, and connection with local resources. Since opening in 2016, the WBC has already received close to 5,000 visitors, and registered over 2,000 entrepreneurs who are learning to access capital, loans, and customers; build networks; and market, manage, and grow their businesses. In June 2017, the WBC opened a new business incubator (BI) to increase women?s contribution to the Ulaanbaatar economy by providing women entrepreneurs with access to state-of-the-art facilities (including computers, sewing and handcraft rooms, and a food-processing unit). A four-month accelerated incubator program (for small and start-up businesses) includes operating space, training and mentoring, and access to a business development fund. The project has raised appreciation of the value of entrepreneurship among women and will build on the momentum developed and focus on female entrepreneurs in the cleantech sector.

International initiatives and programmes on accelerators:

37. Since 2011, UNIDO has been supporting cleantech companies in their development via **Global GCIP** which uniquely fosters an ecosystem approach that supports cleantech innovations in existing and new SMEs and start-ups through the provision of catered tools and methodologies that enhance their productivity and competitiveness while promoting the establishment of a supportive policy and regulatory framework. By the end of 2017, GCIP accelerated over 865 start-ups/SMEs in 8 countries including Malaysia and Thailand. The success of GCIP was confirmed through the GEF?s evaluation in 2018. In its framework it was also recommended that: a) Any future GCIP or similar program should be structured using a more globally coordinated approach with appropriate choice of interventions based on strategic country selection; b) GCIP should actively support national-level coordination to operationalize dynamic CIEE; c) There should be sufficient time allowed to customize and sharpen the focus on policy strengthening and regulatory frameworks to foster cleantech innovation and its adoption; d) The network of private sector partners should be expanded to address GCIP participant needs for business expertise and early stage technology validation e) Direct and indirect impacts of the GCIP should be measured by establishing adequate monitoring and evaluation systems and ensure that they are implemented using standardized and relevant indicators; f) Country engagement should be deepened during the project period, including a plan and resourcing to sustain activities and expand outcomes after project closure. Based on the above-mentioned recommendations UNIDO designed the GCIP Framework in 2019 (approved by GEF as programme 10408). The GCIP Framework consists of ten country child projects, all of which are connected to the three driving pillars, including a) Pillar 1. Transforming early-stage innovative cleantech solutions into commercial enterprises; b) Pillar 2. Cleantech innovation and entrepreneurship ecosystems strengthening and connectivity; c) Pillar 3. Programme coordination and coherence. The coherence with in the GCIP Framework is ensured

through the GCIP global coordination child project (GEF ID 10461) (hereinafter referred to as GCIP Global). The GCIP Framework builds upon the achievements and key lessons learned from the implementation of the GCIP projects so far. In particular, it benefits from the collective feedback by various stakeholders including national counterparts, institutions and SMEs successfully participating in GCIP as well as strategic partners at the global level.

38. **UNIDO** implemented an EU funded ?Support to Employment Creation in Mongolia (SECiM)? project jointly with MoFALI and UN FAO in 2018-2021. The project supported food (meat and dairy) and non-food (textile and leather) private sector competitiveness building through international technical inputs complementary with national experience in import substitution, increase of exports and new product development[30][30]. The project was benefited greatly by the light industry SMEs, herder cooperatives and research and development institutions[31][31]. Through the the Partnership for Action on Green Economy (PAGE), UNIDO has also supported Mongolia in assessing its industrial waste inventory[32][32] , which provided detailed recommendations on the entire ecosystem while stressing the need to raise awareness on green economy for different sector of industries, advocating green economy in industries to achieve sustainable development. Another UNIDO study[33][33] assessed the deal process for end of life vehicles and the practices and material flows for end of life vehicles and provided concrete recommendations for action in the area of end of life vehicles and destructing persistent organic pollutants.

39. The **Private Financing Advisory Network (PFAN)** is a multilateral public private partnership initiated by the Climate Technology Initiative and the United Nations Framework Convention on Climate Change (UNFCCC). It identifies and nurtures promising, innovative clean and renewable energy projects by bridging the gap between investors, clean energy entrepreneurs and project developers. PFAN is currently jointly hosted by UNIDO and REEEP (Renewable Energy and Energy Efficiency Partnership).

40. The **Climate Technology Center and Network (CTCN)** is supporting to enhance climate resilience and economic sustainability of livestock farming in a rural community of Mongolia. As a result, climate-resilient livestock farming is expected to be strengthened while deriving economic sustainability for vulnerable herding communities in Bayant?men sum, Mongolia.

41. Through the **Climate Investment Fund?s** program ?Scaling up renewable energy program in low-income countries?, Mongolia is getting support for Capacity Building and Regulatory Support Technical Assistance[34][34], Upscaling Renewable Energy Sector[35][35] and Upscaling Rural Renewable Energy - Solar PV[36][36].

42. The **Green Climate Fund (GCF)** is supporting a paradigm shift in achieving low emission and climate-resilient development in Mongolia. The GCF is supporting Mongolian enterprises to embrace renewable energy and energy efficiency housing technologies through providing business loans, helping to mitigate high financing costs and relatively short-term loan periods. Also, GCF is not only providing financing to develop renewable energy projects through creating blended finance vehicle such as Climate Investor One (CIO) but also helping to improving the climate resilience of the Mongolian capital Ulaanbaatar and reducing greenhouse gas emissions and air pollution by creating eco-districts. This project can learn from the various initiatives of the Green Climate Fund and could contribute to the development of some of projects in the country.

43. Building on a three-decade partnership, **Asian Development Bank (ADB)** is working on several sovereign, non-sovereign and knowledge initiatives to support sustainable development of Mongolia across urban and rural regions. They have promoted agribusiness to improve their climate resilience and gender equity. ADB has not only supported the development of large solar project such as ?Sermsang Khushig Khundii Solar Project? but is also supporting the deployment of the distributed renewable energy systems in remote and less developed regions in Mongolia, enhance capacity of local public utilities in investment planning, project management, and grid control for sustainable renewable energy upscaling in the targeted region.

44. The European Bank for Reconstruction and Development is supporting Mongolia through various initiatives such as supporting national financial institutions **Khan Bank and XacLeasing LLC** by providing senior loans to be used for financing investments in climate change mitigation and adaptation technologies by local private sector clients. EBRD has also supported development of wind farms such as 50 MW Salkhit Wind Farm project, 50 MW Tsetsii Wind Farm, 55 MW Sainshand Wind Farm. Another relevant EBRD initiative contributing towards climate technology transfer to countries in transition, funded by the Global Environmental Facility (GEF), is FINTECC (Finance and Technology Transfer Centre for Climate Change). As part of the Early transition Countries initiative, Mongolia has benefitted from investment, technical and policy support for climate technologies.

45. With the Mongolian Sustainable Cashmere Platform (MSCP), **UNDP** is supporting a range of stakeholders to produce and implement a Collective Action Plan for sustainable cashmere. Also since late 2020, UNDP is supporting Accelerator Labs that will help identify, test, and pilot innovative grassroots solutions to a portfolio of complex challenges spanning poverty alleviation, climate action, and accountable governance.

46. The **GIZ** project ?Promoting economic growth and innovation to create jobs 2021-2023[37][37]? is supporting National Development Agency (NDA) in its efforts to improve economic development by establishing an investment-friendly business environment. It aims to promote the long-term economic growth of SMEs, introduce competitive and innovative production and business processes, and thereby create jobs, especially in semi-urban regions.

47. To help reduce Mongolia?s dependence on extractive industries and its underdeveloped manufacturing and services, **USAID** has helped small- and medium-sized enterprises improve their access to credit and has facilitated linkages between financial institutions and 750 borrowers, multiplying their investments 20 times over and creating more than 600 new jobs. Business Plus Initiative (USAID) is a finance and capacity-building program funded by USAID and implemented by Chemonics, addressing the issues of trade facilitation, taxes, construction permissions, and business registration[38][38].

48. In the field of employment, the **EU and Mongolia[39] are** jointly supporting small businesses and creating sustainable skilled jobs, stimulating the inception of a more diversified and vibrant economy in Mongolia. Special attention is being given to youth and the inclusion of women in developing rural areas. Mongolia is part of the EU-funded Economic Governance for Equitable Growth (EG4EG) project[40][39] to boost sustainable growth for all, including the most vulnerable.

49. **The Joint Crediting Mechanism**, led by Japan, has supported Mongolia in several renewable energy and energy efficiency projects[41][40] that facilitated diffusion of leading low carbon technologies, products, systems, services, and infrastructure as well as implementation of mitigation actions, and contributing to sustainable development of Mongolia.

50. **Startup Mongolia[42]**[41] is an NGO founded in 2011, which not only has been building public awareness of entrepreneurship and innovation but also has introduced a number of programs and resources to foster innovation such as beginning to offer Stanford?s Design Thinking course in 2015, collaborating with Mongolian university of Science and Technology to create the Open Innovation Lab (OIL) available for public access. This facility offers classroom and office space, as well as a 3D printer. One of the earliest programs Startup Mongolia offered was the Startup Weekend Ideathons. Over the course of a weekend, participants pitch problems and proposed solutions, vote for a business idea, recruit team members, and present a prototype. These ideathons are often themed. For example, the organization hosted the Startup Mompreneurs. It promotes women?s participation in entrepreneurship.

51. In 2021, the Founder institute has presence in Mongolia with the **Mongolia Virtual 2021 Founder Institute,** provides online training to high-potential entrepreneurs and teams with the devoted support network and structured growth process needed to get to traction and funding. In 2021, Startup World Cup 2021 Mongolia Regional Finale[43][42] was conducted and the winner received 100,000,000 investment prize from MCS Investment.

52. Also, [44][43]Japan International Cooperation Agency (JICA), Mongolia-Japan Center (MOJC), and MobiCom Corporation LLC (MobiCom) announced the launch of the **MonJa Startup Accelerator Program for businesses** emerging during the COVID-19 outbreak. Within the program, the JICA, MobiCom and MOJC will collaboratively promote startup businesses that are developing innovative businesses and technologies related to health, Disaster management, Business services, Education sector, Food and agriculture, Logistics.

53. Another important development since 2020 is that Mongolia is on a five ?year mission to a ?**digital nation?**[45][44], harnessing data and technology to facilitate innovation, streamline public services and diversify Mongolia?s mining-reliant economy. The recently set up Innovation and Digital Policy Standing Committee is expected to drive ICT development, and new laws covering key issues such as personal data protection and cybersecurity are being submitted to parliament for approval. These laws are key to establishing the ecosystem of a digital nation and creating an environment to accelerate technology-based start-ups and innovations, as well as encourage investment in them.

54. Although there are programmes and policies supporting the importance of innovation in Mongolia, there are differences in the level of knowledge and understanding of green economy among the Government, business community and the general public. In addition, there is a lack of entrepreneurs that are able to bring proven concepts and validated technologies to market, especially in the green tech sectors. Mongolian entrepreneurs face several difficulties such as accessing mentors, seed funding, expanding into foreign markets, lacking resources and infrastructure, and growing a team, primarily due to a lack of consumer understanding and mistrust of intellectual property protection.

55. In addition, there is lack of availability of project pipeline to access green finance, insufficient ?investment grade? business case for green projects and a lack of facilitation for Startups/MSMEs to access finance.

56. This proposed project will further strengthen the resilience of the Mongolia`s innovation and entrepreneurial economy to address domestic environmental challenges and to operate within the global market and to result in economic growth, global environmental benefits and job creation. This will create economic opportunities and support a shift towards a sustainable development of the country. The proposed project is therefore designed to directly address the barriers described.

3) The proposed alternative scenario with a brief description of expected outcomes and components of the project;

57. The proposed alternative scenario will be implemented in close links and coherence with the approved GEF project 10408 entitled GEF-UNIDO Global Cleantech Innovation Programme (GCIP) framework and seeks to support and nurture clean energy technology entrepreneurs and help then transform into fast-growing, scalable enterprises that will attract funding. This project will help clean energy, agriculture and light industry SMEs and start-ups in the cleantech sector in Mongolia, to develop and scale up; to increase market adoption of clean technology innovations, thus leading to a

reduction in GHG emissions. Furthermore, the nurturing of nascent industries will lead to increased capacity and competitiveness, job creation and market development for cleantech innovations.

Project Approach

58. The project will promote an innovation and entrepreneurship ecosystem in Mongolia by: (i) identifying and nurturing cleantech innovations into enterprises; (ii) strengthening the national capacity within institutions and partner organizations for the sustainable implementation of the cleantech ecosystem and accelerator approach; (iii) supporting and working with national policy makers to strengthen the supportive policy framework for SMEs and entrepreneurs; and (iv) by engaging with the global framework the project will enable national SMEs to scale globally and will link the national ecosystem globally.

59. Through the initial GEF grant funding the project will catalyze investment to support and accelerate start-up entrepreneurs towards the commercialization and development of their innovative concepts. Accordingly, the project is structured into three components, as shown in the Theory of Change in Figure 1 below namely:

1) Transforming early-stage cleantech innovations into commercial enterprises;

2) Cleantech innovation and entrepreneurship ecosystems strengthening and connectivity; and

3) Strategic program coordination and programmatic coherence.

60. The Theory of Change shows how the programme will deliver accelerated uptake and investment in SMEs with high-impact cleantech innovation products and services which, in turn, will meaningfully contribute to climate change mitigation targets and to green growth and job creation.

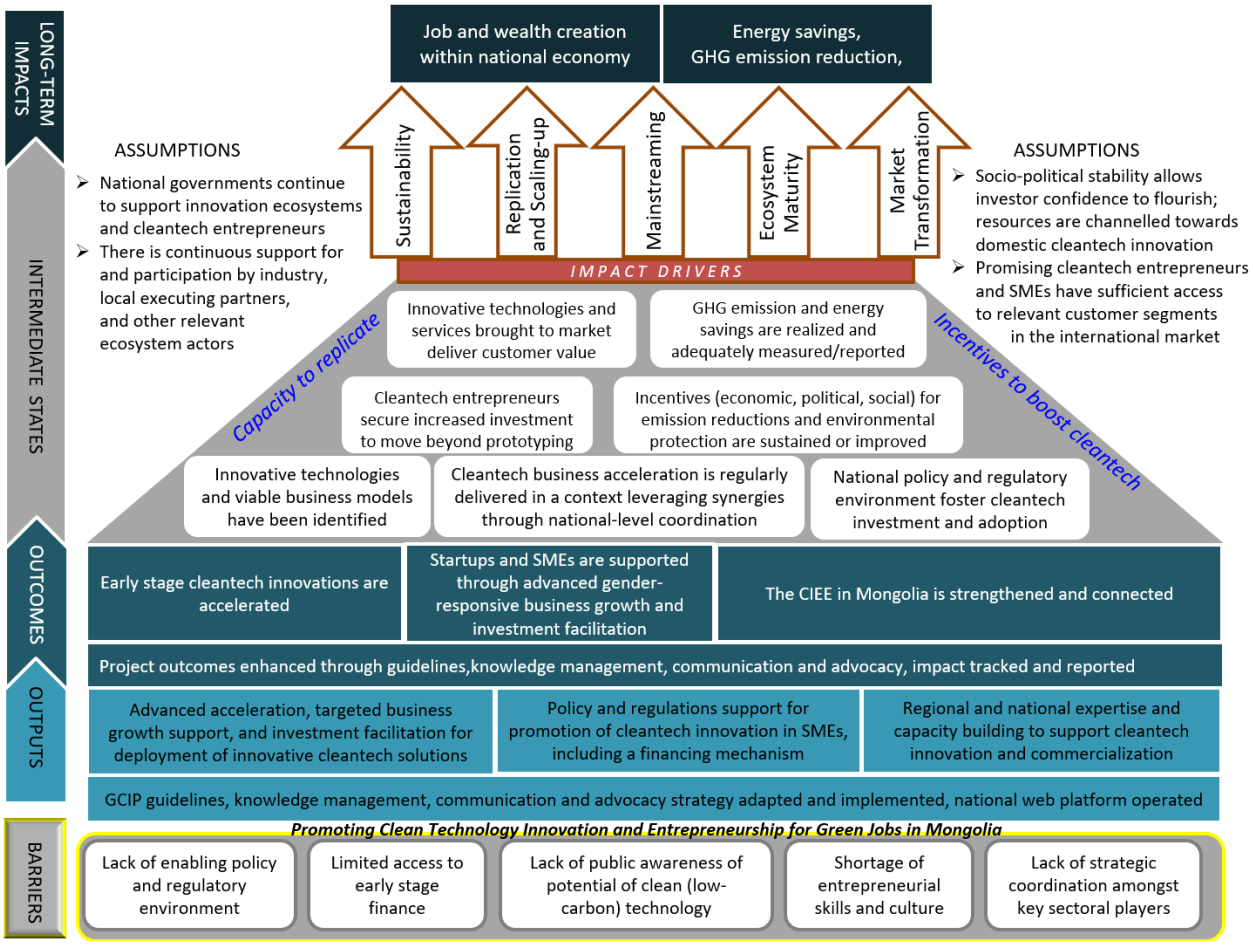


Figure 1: Theory of change

61. The project has been designed to address the barriers set out in the previous section. Specifically, the barriers faced by innovators will be addressed by the provision of support from concept through to commercialization while helping them adopt different approaches to entrepreneurship. This will include: provision of ideation and concept validation services, holding annual accelerators, advanced accelerators to provide follow-on support to the alumni as well as targeted support services, investment facilitation, mentorship and partnership support - across the country supporting at least 50 entrepreneurs. To assist piloting projects of innovation and early-stage entrepreneurship with a view to support the deployment and scale-up of cleantech solutions with a focus on low carbon circular economy as well as in the priority sectors in the country (clean energy, agriculture, light industry). To support these outputs, GCIP guidebooks will be developed and adapted for Mongolia.

62. The fragmented cleantech innovation ecosystem will be addressed with the establishment of a national cleantech innovation hub linking all the project support. Capacity gaps will be addressed with targeted capacity building for policy makers and institutional actors, and the policy and regulatory environment will be strengthened with support to address the gaps in areas such as IP, behavior change in value chains and consumers and promoting a circular economy. Networking, advocacy, knowledge

generation and exchange will enhance awareness amongst ecosystem stakeholders and increase impact of the project whilst close cooperation and linkage with global GCIP will increase opportunities for Mongolian entrepreneurs.

63. **IF** these outputs are delivered **THEN** the following outcomes will be realized: promising early stage cleantech innovations are accelerated across the country by being supported from concept through to commercialization; Alumni are supported and financed for national, regional and global expansion; and the national ecosystem and institutions are strengthened to promote and support cleantech innovation and entrepreneurship. All the outputs are underpinned by a gender mainstreaming action plan that contributes toward the debunking of gender stereotypes and ensuring that women, men and youth can equally lead, contribute to and benefit from the programme. At the same time there will be greater recognition and improved efficiency and sustainability of the Mongolian accelerator programme.

64. **BY** identifying and supporting innovative technologies and viable business models whilst increasing institutional capacity and ecosystem connectivity, **THEN** the cleantech entrepreneurs are able to secure increased investment from more aware investors, **AND** enables them to commercialize their innovative products. At the same time, **IF** a supportive policy and regulatory environment, including incentives exists, THEN cleantech investment and adoption will be fostered. **ALSO** in turn these interventions will bring innovative clean technologies to market and drive uptake, delivering customer value and contributing to the reduction of GHG emissions and energy savings. Continued growth and the mainstreaming of the technologies will result in market transformation and job and wealth creation within Mongolia, accompanied global environmental benefits including GHG emission reductions.

65. Based on the lessons and experiences gained through the global GCIP framework so far, this project will put focus on cleantech innovations especially with specific focus on those related to low carbon circular economy as well as in the priority sectors in the country (clean energy, agriculture, light industry) while ameliorating the preconditions for domestic SMEs to successfully engage with investors. In addition, the Global Cleantech Innovation Index 2017 enables to measure where clean technology companies are likely to emerge in the next 10 years through innovation inputs (general and cleantech-specific drivers) and innovation outputs (emerging and commercialized cleantech).

66. Accordingly, the project will be implemented in close collaboration with national and regional institutions to build an enabling cleantech ecosystem for development, commercialization and integration of innovative and appropriate clean technologies. Ultimately, this project will support Mongolia?s Governmental actions towards expanding the opportunities for economic activities; developing human capacity; and developing and expanding access to reliable infrastructure. By doing so, the project will support the pathway towards sustainable growth and socio-economic transformation in Mongolia.

67. While a large number of start-ups have suffered during the pandemic, COVID-19 has also led to an increase in entrepreneurial activity. While these innovative start-ups are undoubtedly essential for the future of innovation and supporting them is critical, the current COVID-19 crisis also shows the importance of small businesses with more incremental approaches to innovation and the need for

support through well designed accelerator programme. The nature of innovation is often incremental but, at the same time, essential for survival and adapting to the ?new normal? while turning the crises into growth opportunities.

68. The economic recovery packages provide a possibility for countries to recover better, greener and in a more sustainable manner. Cleantech innovations can not only make economic impacts in Mongolia by creating jobs and wealth through engagement of SMEs and entrepreneurs into business but also enhance the country?s capability to create new opportunities for green and sustainable development.

69. In order to safeguard the sustainability of the project and to ensure that the upscaling of the success of program in Mongolia, the public and private sectors will provide co-financing to support cleantech innovation ecosystems for domestic SMEs. This will ensure ownership and identification of innovations around municipalities and local industries while greening the local value chains.

70. The project builds on the collective feedbacks by various stakeholders including national counterparts, partner institutions and SMEs successfully participating in GCIP as well as strategic partners at global levels. The project will also work with new partners, at regional levels, to help built the eco-system at the provincial levels as well.

71. In addition, the approach especially in Component 2 in this project, accelerates innovations that have highest GHG emission reduction potential and have highest chances of going to the market through a number of phases and together with its partners like PFAN, continually de-risks the enterprise?s business model in order to increase the likelihood of investor interest. This is important to note since the sources of investment that the start-ups in the program will be able to mobilize depend on the alignment of the priorities of the institutions that have shown interest to invest.

GCIP connection to PFAN to support the start-up to scale-up journey of cleantech enterprises

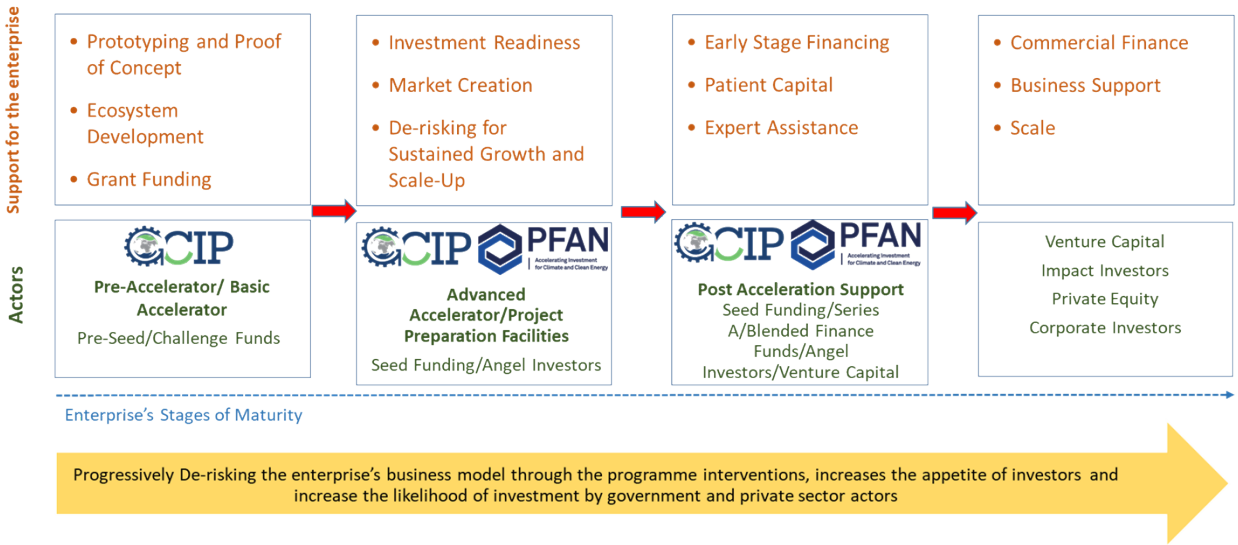


Figure: 2 Start to Scale-up Journey, De-risking for Investment Readiness

72. The objective underpinning the linkages established between GCIP and PFAN is to offer the ventures supported by the project a continuum of support services as they mature towards commercial viability and scaling up. GCIP combines a top-down (policy support) with a bottom-up (support for home-grown innovation) approach. A start-up may have several investors mixing public and private financing. The connection between the Mongolia accelerator programme and the Global projects under GCIP framework enables investors at a global level to also access start-ups from each country i.e., through activities like Investor Connect, National Forums and the Global forums.

73. The project will continue to strengthen and promote connectivity within the national cleantech innovation and entrepreneurship ecosystem focusing on innovative technology in low carbon economy in Mongolia by: (i) identifying, fostering and supporting cleantech innovators and entrepreneurs including technology verification and demonstration; (ii) building capacity within national institutions and partner organizations for the successful implementation of the accelerator approach and sustainability of the cleantech ecosystem; and (iii) supporting and working with national policy makers to develop the policy and regulatory innovations to catalyze and support cleantech innovations as business models. Through this approach, the project will actively support cleantech SMEs and start-ups to develop cleantech innovations into commercial businesses, thereby promoting the continued growth of a cleantech industry in Mongolia.

Project Description

Component 1: Transforming early-stage innovative cleantech solutions into scalable, commercial enterprises

74. Component 1 focuses on providing direct support to early-stage enterprises to enhance the capacity and competitiveness of the private sector as cleantech solution providers, and to leverage market opportunities embedded in climate change mitigation. Outcome 1.1 focuses on entrepreneurial training and business access support. Outcome 1.2 focusses on investment facilitation services for cleantech enterprises at a growth stage that demonstrate market traction and sales evidence, and can benefit from specialized support. The diagram below shows the types of assistance required by cleantech enterprises, depending on their stage of growth. The diagram below shows the types of assistance required by cleantech enterprises, depending on their stage of growth.

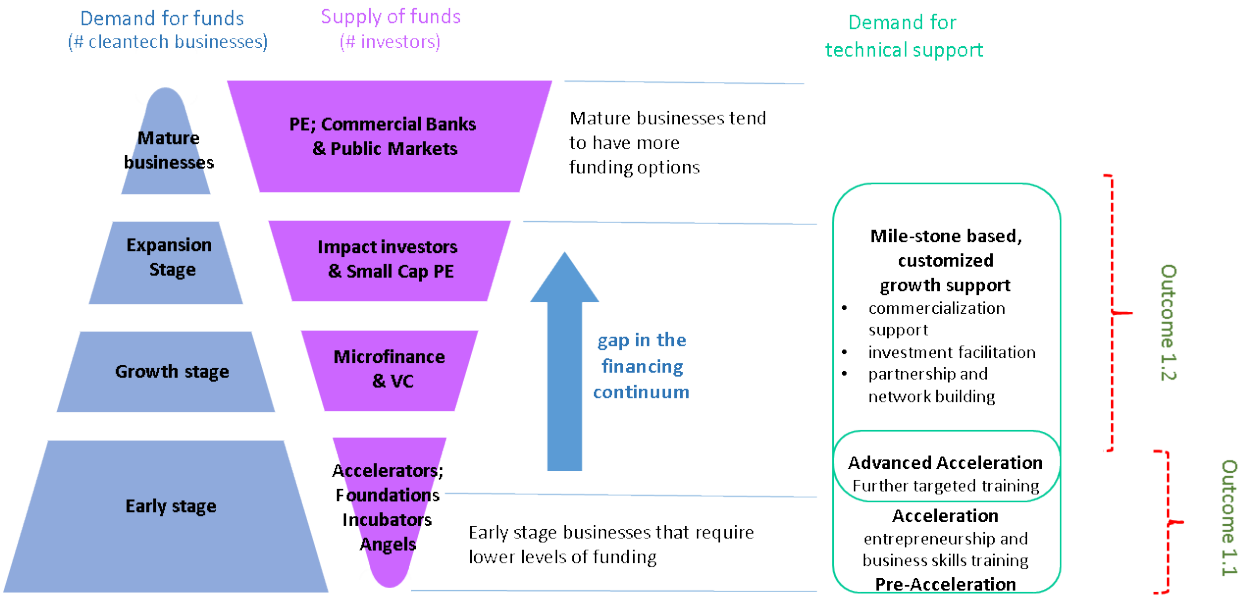


Figure 3: Demand for funds and technical support per development stage

Outcome 1.1: Cleantech solutions with high-impact potential are supported to reach commercialization

75. Early stage cleantech innovations with high impact potential will receive business acceleration support for increased market and investment readiness. Therefore, this project will benefit from support from the GCIP tools that elaborate on the approach and methodology on how to promote cleantech innovation and entrepreneurship in developing and emerging economy countries. This support includes guidebooks and practical tools for operation and management of the accelerator at a national level and complimentary activities, which will provide the reference framework for the accelerator in Mongolia within this project.

Output 1.1.1 GCIP methodologies, tools, training systems , guidebooks for cleantech innovation and entrepreneurship accelerator are adapted for Mongolia

76. Accelerator guidebooks that emphasize on the GCIP approach and methodology for promoting cleantech innovation and entrepreneurship in developing and emerging countries, will be made available as practical tools and guidelines for the operation and management of the national accelerator in Mongolia. These guidebooks will be reviewed and adapted by the identified Project Executing Entity (PEE) to reflect the context of Mongolia?s cleantech ecosystem including market conditions, policy environment, development priorities, technology priorities, local examples etc., to produce three Accelerator Guidebooks for this project on i) acceleration; ii) advanced acceleration; and iii) post-acceleration support. These guidebooks will be translated into Mongolian as required.

Output 1.1.2 Pool of thirty cleantech innovation and entrepreneurship experts (trainers, mentors, judges) are trained and certified to support the Mongolia Accelerator (with at least 35% women participants)

77. Developing a pool of cleantech innovation and entrepreneurship experts to act as mentors, coaches and judges is critical to the effectiveness of accelerators in providing the right support to the participating teams. This is because the delivery of the accelerator curriculum and the connections facilitated with the right actors will depend on the capacity and networking of these experts. In order to ensure coherence of approach among mentors, coaches and judges, a cleantech innovation and entrepreneurship expert training system will be developed by UNIDO. Similar to the accelerator guidebooks, the training system will be reviewed by the Mongolia PEE and adapted for the national context, ensuring that the training materials accurately reflect market, business, policy and investment climates. A pool of experts with the knowledge and connections to support cleantech innovations towards commercialization is also crucial to the cleantech ecosystem. The community of experts trained/certified are expected to positively influence the cleantech innovation initiatives at national level, and will contribute to the strengthening of the cleantech innovation and entrepreneurship ecosystem in general.

Output 1.1.3 Three cycles of the annual competition-based Mongolia Accelerator are conducted (at least 50 enterprises with at least 35% women participants)

78. Three annual national competition based cleantech innovation and entrepreneurship accelerators will be conducted, based on the guidebooks and tools developed under output 1.1.1. Accelerators will be guided by a general timeline recommended by UNIDO that aims to leverage the ongoing cycles across the global programme and allows Mongolia to align with some global programme activities where possible (e.g., online webinars, participation at the global forum, etc.). Through the accelerator, cleantech innovations with high-impact potential will be identified and invited to receive intensive business and entrepreneurship mentoring and coaching to accelerate their growth as businesses.

Outcome 1.2 Start-ups and SMEs are supported through advanced and gender-responsive business growth and investment facilitation services

79. This outcome will support selected alumni to further develop their innovations to reach commercial and sustainable success. Thereby, a cost-effective path to directly support and monitor growth of alumni enterprises will be pursued with the add on of removing the overemphasis on the competition aspect of the Accelerator, and allow entrepreneurs to focus on the added value and benefits of the entire process, especially in terms of training, networks and financial facilitation.

Output 1.2.1 Targeted business growth support services are provided to selected cleantech enterprises (Up to 15 enterprises with at least 35% women participants) towards commercialization

80. Advanced and Post-acceleration support will be tailored to the specific alumni?s needs for progressing into the next phase of business growth and in overcoming product related market barriers. This may include technology verification, prototyping and product development, piloting, legal and administrative support, IT services, tax registration, protection of intellectual property (IP), product life cycle assessment, environmental and social risks assessment, additional mentoring/courses on cleantech entrepreneurship, etc. Additional business model validation may also be necessary to reflect the developments in technology/product readiness, business, market and manufacturing readiness. As each alumni is different, extensive consultations will take place as part of the selection criteria and

process to ensure that the needs and expectations of the alumni is fully understood and agreed on at entry into advanced and post acceleration support. A mile-stone based approach will be employed to measure progress of each enterprise.

Output 1.2.2 Enterprises (15 enterprises with atleast 35% women participants) are connected to financing opportunities and provided with tipping-point investment facilitation support

81. Mobilizing investment for cleantech products and services is a lengthy and iterative process. Therefore, alumni enterprises with high replication and scaling up potential will benefit from tipping-point investment facilitation support. The national project will support the establishment of robust network of financial institutions, funds and investors to raise awareness and sensitize various stakeholders on the opportunities and risks associated with cleantech products and market trends. Efforts will be made to actively engage financing institutions and investors to increase investor confidence in cleantech innovations by creating dialogues and providing training sessions as well as short, interactive webinars. Examples of alumni may be presented to demonstrate possible returns on investments.

1.2.3 Mentoring and partnership support is provided to cleantech enterprises (up to 10) for global market expansion in collaboration with the global GCIP network

82. Many cleantech innovations have potential for replication in other developing countries. Based on requests received from GCIP alumni enterprises, international mentors will be identified by the PEE through the network of mentors on the GCIP website and in the target country of expansion to facilitate building of connections and networks for expansion into a new market. Through the web portal, enterprises will be given peer networking opportunities with GCIP and its linked enterprises, as well as cleantech enterprises within UNIDO?s partner network. Through peer networking, the enterprises will explore opportunities for technology collaboration, product co-development, joint venture for market expansion, etc. in a business-to-business to context.

Output 1.2.4 Innovative early-stage financing mechanism designed and established to support the deployment and scale-up of cleantech solutions

83. Early stage investment funds and impact investment funds will be needed to support early stage start-ups during and post acceleration. The aim is to identify the critical funding gaps within the early-stage start-up journey and where necessary, design and implement a sustainable funding mechanism. Depending on local needs GEF financing support will be provided to leverage finance for the gaps identified.

Component 2 Cleantech innovation and entrepreneurship ecosystems (CIEE) strengthening and connectivity

Outcome 2.1 The CIEE in Mongolia is strengthened and interconnected (incl. strengthening of policy and regulatory frameworks and financial mechanisms)

84. The policy framework and institutional sustainability are integral parts of the ?ecosystems approach?, and also of strategic relevance in ensuring that the outputs and outcomes of the project are contributing to the national priorities and sustained after project closure. This component will aim to build capacity in the PEE and other key national stakeholders to engage in cleantech acceleration and commercialization in Mongolia. Further, the proposed project will assist Mongolia in building on and developing suitable national policies and regulations that create an enabling business environment for cleantech innovation and commercialization. This will be an iterative process where analysis is conducted and recommendations made.

85. This project will benefit from GCIP frameworks, guidelines and tools, as identified under GEF program 10408, for strengthening national cleantech ecosystems, which will be reviewed and adapted by Mongolia. These will include recommendations for enhancing capacity of national institutions to support cleantech innovation and entrepreneurship, and a set of tools such as a framework for cleantech ecosystem mapping and analysis, strategies for facilitating meaningful interaction and collaboration among ecosystem players, and training material.

86. Policy frameworks (including translatable policy recommendations and strategies) will be built from research and analysis into policy frameworks that have facilitated success globally, including primary research and interviews with policymakers in countries with comparable conditions to those in the GCIP national participant countries.

Output 2.1.1 CIEE Analysis (such as market conditions, policy environment, development Priorities, gender priorities, technology focus, etc. based on mapping of cleantech solutions and prioritization in accordance with national strategies) and Action Plan

87. A cleantech innovation and entrepreneurship ecosystem (CIEE) assessment will be conducted to analyze the strengths and weaknesses of Mongolia?s CIEE. This will be instrumental in identifying the capacity building needs and optimal set of interventions nationally. The further aim will be to ensure that national ecosystem players are supported to understand and contribute in their roles as part of the ecosystem, and will have the capacity to continue promoting national cleantech innovations and enterprises towards commercialization beyond the project.

Output 2.1.2 Cleantech innovation and entrepreneurship policies, regulations and recommendations are developed (gender-responsive)

88. Policy remains a key determinant that influences cleantech market and investment behavior. In the project, multi-stakeholder policy dialogues will be facilitated to prompt discussion and collaboration among policy makers and other cleantech ecosystem actors, and to influence the policy that can create a conducive environment for commercialization of cleantech solutions. The dialogues will be captured as policy briefs and presented to relevant government ministries and agencies. Priority will be given to assisting the Government of Mongolia in developing policies, regulations and incentives required to promote cleantech innovations. The project will assist in reviewing the existing policies and regulations relating to the promotion of clean technologies, innovation and entrepreneurship and prepare a gap analysis report on policy requirements. Stakeholder consultation will be carried on any recommendations and support provided to the government to implement it.

Output 2.1.3 Platform for ecosystem players organized to promote linkages, collaboration and to facilitate the generation, exchange and dissemination of knowledge products and provide support to start-ups/SMEs on compliance issues associated with their cleantech innovations)

89. Knowledge will be captured through policy briefs, impact reports, brochures, webinars, and other types of promotional materials, and disseminated through events, social media channels, etc. as appropriate. At a national level, investor forums and awards event will be organized to encourage linkages, collaboration and synergies across the CIEE.

90. UNIDO?s annual GCIP Forum will also be an integral part of ecosystem connectivity and will be an opportunity for the project representatives and top performing companies to be connected with potential partners, customers, technology scouts and investors from around the world. This provides alumni enterprises in Mongolia with exposure to the global community, and the opportunity to forge new partnerships for co-innovations and joint ventures. The GCIP Forum is further a culmination of innovation showcasing, investment matching, and networking among national counterpart institutions, and will continue to be an important annual milestone for networking, advocacy, and knowledge exchange among cleantech innovation ecosystem players.

Component 3 Knowledge management and project coordination

91. This component brings value addition to the implementation and execution of this project in coordination with GCIP, where all partner countries will benefit from enhanced coherence and synergies. The activities will ensure that the successes and achievements are captured and communicated globally so that GCIP is leading and contributing to the global cleantech ecosystem. Strategies, Standards and Systems, along with networking opportunities developed globally, will benefit PEEs and involved stakeholders. The activities within this component are necessarily interlinked and national PEEs are responsible for coordinating with the global initiative in the operationalization of the GCIP guidelines and methodologies, and also in actively contributing the information gathering and dissemination efforts.

Outcome 3.1 Project outcomes enhanced through use of guidelines, knowledge management, and communication and advocacy

Output 3.1.1: The GCIP internal guidelines for project management teams are adapted and implemented by the Mongolia project

92. GCIP internal guidelines will be disseminated by UNIDO as a tool, and will include operational guidelines for the Project Management Unit (PMU) to be established within the national PEE. International training for the PMU will be an important channel for coordination with global efforts, and therefore the PMU will be updated at least once a year to discuss the approach and methodologies together with other countries, and share experiences and insights. In addition, a sustainability and exit strategy specific to the Mongolian context will be developed.

Output 3.1.2 Knowledge management, communication and advocacy strategies of GCIP adapted and applied

93. The communication and advocacy efforts will have three aims: 1) Promoting visibility this project and communication of impacts achieved at national level; 2) Increasing awareness of the catalytic role of clean technologies as a business model in addressing climate change and environmental issues and their profitability; and 3)Showcasing cleantech innovations from alumni enterprises and enhancing their visibility and credibility.

94. The communication strategy will include the development of awareness raising and marketing material, for public and awareness raising and for marketing material for entrepreneurs and officials. This will include briefing sessions, press releases, social media activity, attendance at events etc.

95. The global GCIP knowledge management, communication and advocacy strategy may be made available and the PEE will review and adapt the strategy for operationalization in Mongolia as appropriate.

Output 3.1.3 National web platform operated as part of the GCIP global web platform to maintain local community and network and coordinate the global GCIP community

96. The web platform will be developed as a tool for four key functions. First as an internal management and operations tool. Guidelines, tools and other knowledge products developed will be disseminated through the web platform. Second as a tool for execution of annual accelerators to be used from the beginning of the accelerator cycle (call of applications and receipt of applications), and during the accelerator (webinars, submission of assignments etc.).Third is for maintenance of a community at national level. All alumni enterprises, as well as certified mentors and coaches will be invited to join the online community as a networking tool. Profiles and impact potential of each supported cleantech solution will be showcased through the web platform. Therefore, it will serve as a gateway for potential investors and customers to collect information on alumni enterprises. Fourthly, the website will be linked to the global web platform to connect Mongolia to the broader GCIP community globally.

Outcome 3.2 Impacts and progress of the project are tracked and reported

Output 3.2.1 Environmental and social impacts of project estimated, tracked and reported

97. GCIP methodologies for gathering information on outcomes and higher-level impacts/ results will be provided and will ensure a shared understanding of GCIP associated terminology amongst all involved stakeholders and will allow for extrapolation and comparison. It will ensure that the impact is clearly understood and can be used for project management decision making. As a minimum, tracking will include global environmental benefits (GEBs), job creation and investment leveraged. Data will be gender disaggregated where appropriate and data on youth participation will also be recorded. This common methodology will be used to monitor impact within this project. The PEE will receive online training on the use of the methodology from and subsequently they will train all semi-finalists across

the programme (as part of the Accelerator) to provide GEB estimations of their innovations. Other relevant stakeholders can be included as necessary.

Output 3.2.2 Project progress monitoring and reporting as per UNIDO and GEF guidelines including development of gender action plan

98. The monitoring of project progress is essential for the adequate and timely delivery of results. This project component covers project monitoring and oversight by UNIDO in close coordination other relevant stakeholders as well as the final project evaluation. A detailed monitoring plan for tracking and reporting on project time-bound milestones will be prepared by UNIDO in collaboration with the PEE and project partners at the beginning of project implementation and periodically updated. In order to mainstream the gender dimensions, detailed gender analysis including gap analysis will be conducted during the PPG phase by hiring a gender expert based on which a detailed gender action plan will be developed and operationalized throughout the project implementation to support project contribution for enhancing gender equality and women?s empowerment (GEEW). Efforts will be made to ensure that voices of both women and men are considered when discussions are held. As necessary, gender-disaggregated focus group meetings will be organized so that both men and women can lead, shape, participate in, contribute to and bene-t from the project through mutual knowledge sharing. The operationalization of the action plan will be monitored and evaluated according to data and indicators incorporating gender dimensions including sex-disaggregated data collection, performing gender analysis, etc.

Output 3.2.3 Independent external mid-term review and terminal evaluation is conducted

99. An external mid-term review will be conducted halfway through the project implementation period. An independent final evaluation will be conducted six months prior to the terminal review meeting. The final evaluation will look at the impact and sustainability of results, including the contribution to the capacity development and the achievement of global environmental benefits. The final evaluation will also provide recommendations for follow-up activities.

4) Alignment with GEF focal area and/or Impact Program strategies

100. This project is firmly aligned with the GEF Climate Change Focal Area in its focus on innovation and technology transfer for sustainable energy breakthroughs i.e. CCM-1-4 Promote innovation and technology transfer for sustainable energy breakthroughs for cleantech innovation. The GEF-7 Climate Change Focal Area Strategy aims to support developing countries in making transformational shifts towards low emission and climate-resilient development pathways. This project directly supports that aim by enhancing the support for cleantech SMEs and start-ups, helping them to commercialize and scale, to contribute to a low emission development pathway nationally and potentially globally.

101. In line with the Climate Change Focal area, the project supports innovation and technology transfer at early stage development focusing on innovative technologies that deliver sustainable energy solutions that control, reduce or prevent GHG emissions. In particular the project focuses on cleantech innovation. The specific technologies supported will depend on the scope of the

Accelerator as defined by the key national stakeholders in consideration of Mongolia?s energy and climate change priorities but will focus on GEF 7 programming directions priorities i.e. mini grids with storage, renewable energy, energy efficiency, e-mobility, etc.

102. Specifically, this project will work with the private sector and identify locally grown cleantech innovations, support the development of marketable business models and facilitate financing for commercialization whilst at the same time strengthening the national ecosystem for innovation to foster an enabling environment for start-ups and SMEs towards investment in technology innovation. This is in line with the guidance from the UNFCCC COP23 which encouraged the GEF to further enhance engagement with the private sector and invited the GEF to support countries in piloting priority technology projects to foster innovation and investment. This project in Mongolia will adopt an interdisciplinary holistic approach by engaging several stakeholders such as start-ups, SMEs, ministries and government institutions, academia and research centers, business associations, financing institutions, foundations, venture capitalists, etc. This project will closely coordinate with the GCIP Framework, as well as other similar national and international efforts, as it is critical to maximize synergies and share knowledge and best practices that can help in enhancing entrepreneurs? contributions towards climate change mitigation.

103. Therefore, GCIP is a transversal intervention that supports all priorities of GEF 7?s Climate change focal area. The project provides much needed and best available catalytic technical assistance to cleantech SMEs/start-ups, so that they commercialize and scale-up globally and, as a result enable the creation of new industries and green jobs. Also, this project in Mongolia will promote synergies with other GEF Programmes to leverage more impacts.

104. UNIDO has been supporting cleantech companies in their development via GCIP since 2011. By doing so, UNIDO has uniquely fostered an ecosystem approach that supports cleantech innovations in existing and new SMEs and start-ups through the provision of catered tools and methodologies that enhance their productivity and competitiveness while promoting the establishment of a supportive policy and regulatory framework. By the end of 2017, GCIP accelerated over 865 start-ups/SMEs in 8 countries.

5) Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing

105. The private sector is key to the creation and expansion of the market for cleantech products and services, achieving GEBs, generating jobs, and supporting economic growth. In Mongolia, a clear government prioritization is given to promote innovations and start-ups/SMEs and to put the necessary policies and strategies in place. However, significant barriers still exist for cleantech enterprises, leading to their very low success rate. In essence, the CIEE in Mongolia is still weak, and if the GEF funding is not provided, it is very likely that cleantech innovations will not be adequately developed in Mongoloa in the near future. This will result in many unrealized opportunities in reducing GHG emissions, in strengthening partnerships with the private sector keen on investing in cleantech, in commercialization of cleantech enterprises, and ultimately in missed momentum for green economic growth and jobs.

106. This project aims to go beyond the current baseline. As discussed in the baseline section includes SMEs with breakthrough cleantech innovations in developing markets having a very low success rate due to lack of key skills and capacities to transform their innovations into viable, scalable, and fast-growing enterprises. Furthermore, the innovation and entrepreneurship ecosystem Mongolia can be hostile and initiatives to support these SMEs remain disjointed and uncoordinated. This project has been designed to learn from GCIP supported under GEF 5 & 6, to create opportunities for greater impact through providing greater commercialization support and investment facilitation services to expand opportunities for market expansion. This project is designed to provide catalytic and effective interventions that galvanize private sector interest and investments in the cleantech innovation and entrepreneurship space and also strengthen the national cleantech innovation and entrepreneurship ecosystem and connect it at a global level. These interventions, create a critical mass of interest in the cleantech sector, drive the transformation cleantech markets and result in more cleantech SMEs contributing to climate change mitigation and low-emission development.

107. Building on the baseline, including GCIP under GEF 5 & 6, the project will:

a) adapt and institutionalize methodologies, guidelines, tools and training systems for the accelerator, advanced accelerator, and post-accelerator support and for mentors, judges, trainers to be trained and certified in Mongolia. This will ensure that the country will continue to run the accelerators long after the GEF project has ended.

b) provide post acceleration support and investment facilitation services so that cleantech innovators from this will be able to commercialize their innovation and mobilize funding for scaling-up.

c) support the design and establishment of early-stage financing mechanism to ensure that alumni from this project

d) increase focus on developing policy and regulations on cleantech innovations at national level

e) participate in global events around the global competition-based accelerator such as dialogues, investor networks to promote networking and learning

f) create bigger market opportunities for cleantech innovators to expand their businesses and hence increase their success rates and reduction of more GHG emissions.

108. Furthermore, the link to the UNIDO/GEF program 10408, Mongolia?s cleantech ecosystem will benefit from cross-border connectivity and synergies with ecosystems of other GCIP partner countries, leading to bigger market opportunities for Mongolian cleantech SMEs to expand their businesses and hence increase their success rates and results in greater GHG emission mitigation efforts. One of the many incremental services that the GCIP global project provides is access to global investors. As an estimate, evidence from GCIP under GEF 5& 6 shows that some GCIP alumni were able to mobilize global funding and expand their operations. From Turkey, Episome Biotech (2017 semi-finalist) raised ?1.7million in investment through 3 rounds from Diffusion Capital Partners based in The Netherlands; Seyisco raised USD 100,000 and B-Preg and Solter Vision also raised foreign capital. Actual figures are not yet available as to the level of increased GHG emission reductions

achieved as a result of the international funding, but the global funding allowed B-Preg (bio-composite parcel shelves) to expand internationally and they now estimate annual emission reductions of 4180 tCO2e/year and growing. Therefore, SMEs with innovative cleantech solution can rapidly expand their businesses by accessing international financing opportunities and simultaneously rapidly expand global environmental benefits.

109. The GEF funding of 1.77 million US$ is estimated to catalyze co-financing of 10 million US$ from both public and private sectors which are interested in promoting solutions for low carbon, circular economy and sustainable developmen which contribute to GHG emission reductions. The project activities are regarded as opportunities for growth of SMEs in the country. The GEF resources will be used to bring best practices and international expertise to capacity development efforts. The project will support at least 50 entrepreneurs. In addition, through national ecosystem strengthening activities, the project will create basis for enhancing awareness and visibility of business and investment opportunities in the cleantech sector, thereby prompting further interest and financial flows.

110. The PEE is responsible for fostering implementation of country`s climate change mitigation actions. In addition, the project will work with already existing funds, institutions and programme as mentioned in the baseline section and develop targeted capacity building activities to which GEF will bring experiences from cases from other regions. By holding outreaching and capacity building events in regional locations, the project will enhance outreach of its activities throughout the country including women and youth.

111. Mongolia is requesting GEF funding to help address the barriers to cleantech innovation, which will lead to positive socio-economic (economic growth, green job creation, attraction of foreign and domestic investment, etc.) and environmental (contribution to the reduction of GHG emissions and to global environmental sustainability, etc.) impacts. What is more, these impacts will be amplified through opportunities for coordination and connectivity with other GCIP partner countries, and thus for global cleantech innovation scale-up.

112. The GEF grant will stimulate the formation of local innovation ecosystems and will leverage additional sources of funding by private sector sponsorship, existing institutional resources, and funding mechanisms. The identification of local cleantech solutions through the operation of regional accelerator programs will provide tailored services for local environmental benefits with global GHG emission savings benefits. These locally identified solutions will be scaled across Mongolia through the national platform and linked to global markets through the Global Cleantech Platform to leverage allocated funding sources and maximize global environmental and climate mitigation benefits. This project will seek to catalyze systemic transformation in the cleantech sector by providing post-acceleration support services so that more cleantech SMEs commercialize their innovation and scale-up their operations. By employing an ecosystems-based approach, the project will stimulate cleantech ecosystems at provincial levels that will provide support to cleantech SMEs in the long-term. The project will build capacity of regional institutions and train a cadre of cleantech experts who will continue to support cleantech start-ups.

113. If GEF funding is not provided, it is very likely that clean technology innovations will not be adequately developed in Mongolia (or only at a very low level, distributed at the national level). Barriers for entrepreneurs lacking business skills will remain and supporting mechanisms to fully commercialize their innovative products will not be developed . This will result in many unrealized opportunities in reducing GHG emissions, in strengthening partnerships with the private sector keen on investing in clean technologies, in commercialisation of cleantech start-ups and entrepreneurs and ultimately in missed opportunities for green economic growth and jobs.

114. This proposed project will strengthen local capacities in low-carbon economy, thus stimulating low-carbon development growth. Innovations will be facilitated through targeted policy dialogue, dedicated technical assistance and training programme, backed by information outreach and knowledge exchange to improve investor confidence and reduce perceived risks associated with low-carbon projects. The ultimate result will be an accelerated transition towards a low-carbon economy in Mongolia, and contribution to the economic and social development, national energy transformation, and climate change mitigation efforts.

6) Global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF)

115. The long-term lifetime of cleantech innovations introduced in the market and the strengthened and interconnected CIEE will be reflected in multiple GEBs including, primarily, GHG emission reductions. The GEBs achieved through the implementation of this project will be identified and quantified on the basis of the innovations marketed and their uptake. Given the nature of the project, the low-carbon products and services developed and commercialized will contribute to the GEBs beyond the project life and scope.

i. Background on GCIP?s target for avoided GHG emission for the GCIP Framework (GEF ID 10408)

116. In order to ensure that GCIP supports innovative cleantech solutions with high impact potential, and delivery of GEBs at the programme level, a target approach is applied. To achieve cost effectiveness of GEF funding for GEBs, a value of 5 to 10USD/tCO2e avoided is targeted (corresponding to an overall cost per tonne at programme level ofUSD38-76/tCO2e). This means that, with GEF funding of almost USD 18million, GCIP Framework aims to deliver between 1.8million and 3.6 million tonnes CO2e by 2030. As 10 countries will be a part of the overall GCIP Framework, almost 1000 semi-finalists are expected to be supported through the accelerators in all countries across the programme. Therefore, the target for the minimum projected potential of avoided GHG emissions per enterprise is between 1,800 to 3,600 tCO2e by 2030.

117. To put this minimum target approach in context, a review of previous GCIP alumni GHG reductions was carried out. The review, looking at three sources of information, shows that the proposed avoided emission target is plausible and quite conservative. It also demonstrates the huge likely variety of emission reductions due to the different country contexts and technology innovations. The review also shows that where an innovation has real market potential, the avoided GHG emissions are very significant and that the GCIP approach has experience in successfully identifying and accelerating such companies. Firstly, a survey carried out by UNIDO of 14 of its GCIP alumni showed

that these companies had already generated 600,000 tCO2esavings by 2017 and projected to generate over 4.8 million tonnes of GHG emission savings by 2020 (or 340,000 tCO2e/year per company). Secondly, the Independent Evaluation Office (IEO) report of eight GCIP projects included a sample of alumni in its annex with projected avoided emissions between between zero (either they had not been estimated yet or the cleantech was not related to CCM) and 5million tCO2e per year. A median for emission reductions that were reported (which occurred only fora small proportion of the total alumni, namely 60 out of 900) is 88 tCO2 per year. If alumni with estimated reduction are included (34) in the calculations, then the median increases to 12,200 tCO2/year with the interquartile range from 350 tCO2 to 81,000 tCO2/year. Thirdly, the Mission Innovation Framework for Assessing Avoided Emissions, in which a number of GCIP alumni (selected as part of Mission Innovation?s 100 innovative clean energy solutions in 2019) were included, shows for example that Atomberg Technologies (which manufactures an energy efficient fan) is estimated to avoid 5million tCO2e/year by 2030. In turn BEAD, an energy management AI optimization enterprise, is estimated to avoid 319 million tCO2e/year by 2030. These two companies were also covered by the IEO report mentioned above, but Atomberg had not provided an estimate (so was assumed zero) and BEAD?s estimate was 5 milliontCO2e/year.

118. The target of between 5 to10 USD/tCO2e avoided, which is set for the GCIP Framework, translates into avoided GHG emissions per enterprise of between 1,800 to 3,600 tCO2e. The provided target range will enable this project to support a mix of technologies with different CO2emission reduction potentials, and in particular allow innovations into the GCIP Accelerators that a) have a relatively low CO2 reduction potential, but a considerable demand and market growth potential (that can lead to amplification of GEBs), as well as b) that create multiple benefits (including socio-economic, such as job creation, gender mainstreaming, etc.).

119. In addition, indirect GEBs facilitated through the CIEE strengthening are also expected. In particular, indirect GHG emission reductions could result from: strengthened capacity of institutions and human resources to support commercialization and uptake of cleantech solutions at large; investments mobilized for cleantech solutions at large due to reduced risk perceptions; as well as longer-term emission reductions from behavioral change. An estimated factor of 5 is chosen to provide a projection for indirect GEBs. Where possible, efforts will be made to verify the indirect GHG emission reductions achieved at national and global levels through terminal evaluations.

120. A ten-year horizon was selected for estimating the GHG emission savings. However, assessing the GHG reduction potential of cleantech solutions (products, services) to be identified through GCIP has proven to be difficult, as by definition GCIP encourages open innovation, and the types and categories of cleantech products and services that will be supported can only be determined after the selection of semi-finalists as part of the GCIP Accelerators. Also, expected difficulties include attribution of the incremental GEBs of the cleantech solutions to the GCIP support. However, the design of past GCIP assumed abatement costs (for GEF funding) of between0.68 USD/tonne CO2e in Turkey to 29.77 USD/tonne CO2e in Armenia. As the targets were exceeded in those countries, and as the proposed benchmarks are within the same range, they are considered realistic and conservative.

121. This target-based approach for the estimation of GHG emission reductions will be applied to this project. A GCIP methodology for the calculation and monitoring of GHG reduction

potential will be developed by the GCIP Global in the first year of the project implementation, as well as it will be shared with this project.

ii other approaches to net-positive initiatives

122. There are now a few examples of approaches to net-positive initiatives, i.e. approaches for assessing avoided emissions, in particular relating to ICT. For example GeSI?s ?Methodology for evaluating the carbon-reducing impacts of ICT?[46][45], UN Global Compact: Low-emission leaders: transformative calculations[47][46] and the Climate-KIC?s Climate Forecast Impact Assessment Tool. One of the key challenges of current approaches is providing a consistent method for reliably quantifying avoided emissions. The process has a higher uncertainty compared to measurement of project or company emissions and it relies heavily on estimates and assumptions, and must consider hypothetical cases when comparing to the base case.

123. Other initiatives include: Mission Innovation?s (MI) Framework for Assessing Avoided Emissions[48][47] which aims to address some of these challenges to be able to classify and rank companies/solutions through their supply of low carbon products and services; and WWF?s Climate Solver Tool[49][48] which is an online platform which estimates the avoided GHG emissions and energy use from an innovative product. These two are the closest tools applicable for potential innovations. They include the following steps and assumptions: definition of system boundary and timeframe, identification of any rebound effects, estimates of unit efficiency/improvement and emission factors, estimate of unit baseline emissions, stage of development/deployment and certainty of data, estimate of market size and attribution.

iii) Estimation of Global Environmental Benefits of this project in Mongolia

124. As described in detail in paragraphs above, the estimation of avoided direct and indirect GHG emissions in the Mongolia project is based on a review of GHG reductions that were achieved by GCIP alumni under GEF 5 & 6 as captured in the GEF Independent Evaluation Office (IEO) report. These reductions are based on three pillars of information i) a survey of 14 GCIP alumni, ii) a sample of alumni?s projected avoided emissions found by the IEO, iii)the assessment of GHG reduction by GCIP alumni through the Mission Innovation Framework for Assessing Avoided Emissions.

125. The design of GCIP in GEF 5& 6 assumed unit abatement costs (for GEF funding) in the range of between 0.68 USD/tonne CO2e in Turkey to 29.77 USD/tonne CO2e in Armenia. The proposed benchmarks 5 to 10 USD/tCO2e in reduction are within the same range and quite realistic and conservative. The range of mitigation potential will allow the project to support a mix of technologies with different CO2 emission reduction potentials as long as this minimum average across the programme is achieved. As a key focus of GCIP is to identify and support cleantech innovations with high impact potential, this benchmark will guide the Accelerator to take into account the GEB potential

as a key criterion in accepting applications. Through the initial selection process and the early training on impact calculation, each entrepreneur will determine its baseline scenario for its technology. By delivering the training and mentoring in the Accelerator, Advanced Accelerator and Post-Accelerator, as described in the ?Alternative Scenario?, entrepreneurs will be supported to commercialise and sell their innovative cleantech products/services.

126. The three cycles of Mongolia Accelerator are expected to support up to 50 enterprises (semi-finalists), as a result of which the avoided direct GHG emissions over a ten-year horizon are estimated at between 90,000 and 180,000 tCO2e of direct GHG emission savings and 450,000 and 900,000 tCO2e of indirect GHG emission saving (based on an estimated factor of 5). The lower range has been used as input to the GEF corporate core GHG indicator target (indicator 6) as a conservative estimation. To facilitate the achievement of GEBs, there will be awareness raising and promotional activities during the call for applications to the Mongolia Accelerator, and also the applicants will be supported in calculating GHG emission reduction potential of their innovations. Additional training on GHG monitoring and calculation will be provided to all semi-finalists.

127. For some technology categories, specific GEBs beyond GHG emissions reduction potential will be monitored and captured. For example, innovations/solutions under renewable energy and energy efficiency categories, quantity of energy saved and/or capacity or renewable energy installed will be calculated, monitored and reported on. Other GEBs may include POPs reduction, reduction in air pollutants (e.g. NOx, SOx, PM and CO), improved water quality and reductions in material use.

7) Innovation, sustainability and potential for scaling up

Innovation:

128. The GCIP is unique in its approach of fostering the expansion of SMEs and start-ups into cleantech products and markets. From the assessment of the current policy framework and the identification of innovative technologies to their development and commercialization, this project supports entrepreneurs across the whole innovation value chain to develop the idea of circular economy and GHG reduction that will have a real impact in Mongolia and global markets. In contrast to other accelerators and incubator programme, this project not only promotes innovation, but also uses an innovative approach that is cross-sectoral and multi-tiered to strengthen the national innovation and entrepreneurship ecosystem by building capacity in national institutions, creating strong linkages between the most relevant ecosystem players and by raising awareness among them.

Sustainability:

129. The impact pathways of the project are carefully selected to address key barriers and galvanize continued actions by ecosystem players so as to achieve transformation impact in terms of GHG emissions reductions and job and wealth creation in Mongolia. The mainstreaming of cleantech innovations that will continue beyond this project will ultimately result in the decoupling of economic growth from GHG emission increases.

130. The sustainability of this project is ensured by involving public and private sector institutions and by building their capacity to make sure that the activities under the different components can be carried out by them after project closure.

131. Besides, the comprehensive trainings conducted for participants, judges and mentors will create a critical mass of technicians with sound business skills in different regions of the country. This knowledge can be easily transferred to create a virtuous cycle of enhancing the cleantech ecosystem to identify and support innovations through business growth and towards commercialization.

132. The project will develop an advocacy and communication strategy, with the intention to support the creation of strong networks and the effective communication channels among the cleantech ecosystem actors, and their sustained interactions and networking post project closure.

133. Strengthening the capacity within the project executing entity (PEE) to conduct the national accelerator with public and private funding post project closure will ensure sustainability of the project?s impacts. Sustainability and exit strategies will be provided by GCIP as a template and guideline, which will then be reviewed and adapted for Mongolia. The sustainability of the project is reinforced by the following:

-During and post the Mongolia Accelerator the cleantech SMEs will be guided through the development process of the concepts to ensure that their innovative concepts are sustainable and will have a real impact on the Mongolian market. To ensure that this intensive mentoring approach is sustained beyond the project implementation period, the project will conduct capacity building activities for the national counterpart institutions, mentors and judges in the country;

- Through investment facilitation, cleantech SMEs will be able to mobilize funding and investments from angels, impact investors and other sources of fund;

-By generating and using methodologies, guidelines, tools and training materials for competition-based accelerators, the project will ensure that institutions and industry associations engaged in running the accelerators will have adequate resource materials to use in running such accelerators beyond the life of the programme;

- By linking cleantech innovation ecosystems across countries, the project will create a business environment and incentives for cleantech SMEs, policy makers, and industry associations to work across countries. This will be sustained through these stakeholders investing their own resources in these activities beyond the life of the programme;

- Through the establishment of a web platform, where cleantech SMEs alumni and stakeholders will continue to update and use as a market place where global technology innovation ecosystem players will continue to post innovations, investors will continue to scout for new innovations, policy makers and regulators will continue to use to learn about policy and regulatory innovations. In fact, the web platform, will catalyze continued connectivity of innovation ecosystems from different countries;

- The management of knowledge generated from the project in terms of fact sheets, guidebooks, tools and reports on accelerating cleantech innovation. This will ensure that stakeholders will be provided with a continuous access to these tools and apply them to sustain the project approach;

- Strengthening national institutional capacity to ensure that the skills and experience are there to sustain the cleantech innovation platforms and run the accelerators beyond the GEF funding;

- Supporting the maintenance of standards in terms of processes and practices so as to ensure adherence to the highest quality of norms. Such norms will guarantee that the project will transform to a recognized brand, securing long-term sustainability;

- Development of long-term partnerships with the private sector which will form part of national exit strategy and guarantee continued funding of the programme.

Scaling Up:

134. The Mongolia cleantech project is implemented with close links to global GCIP Framework (GEF ID: 10408). This will enable the country project to bear a considerable potential for local and regional expansion in terms of cooperation and networking, as well as sectoral expansion through close relationship with other GCIP partner countries in the region and across the globe. The stakeholders involved in the Mongolia accelerator programme are enabled to form international partnerships and to enter foreign markets.

135. The private sector, in their attempts to address existing energy challenges, will play an instrumental role in driving and sustaining technical innovation in clean energy, agriculture and light industry. The project approach is premised on mobilizing economic interest by stakeholders who will sustain the interventions of the project beyond the life of the project.

---

[1] Food and Agriculture Organization of the United Nations Statistics Division (FAOSTAT), http://faostat3.fao.org/browse/area/141/E

[2] World Bank, Mongolia Livestock Sector Study, Volume I, Synthesis Report, 2009.

[3] Ibid.

[4] World Bank, Mongolia Livestock Sector Study, Volume I, Synthesis Report, 2009.

[5] International Energy Agency (IEA) https://www.iea.org/countries/mongolia

[6] International Energy Agency (IEA) Statistics: Mongolia, 2016: http://www.iea.org/statistics/statisticssearch/report/?country=Mongolia&product=electricityandheat.

[7] World Development Indicators | DataBank (worldbank.org)

[8]https://www.greengrowthknowledge.org/sites/default/files/downloads/policy-database/MONGOLIA%29%20Mongolia%20Sustainable%20Development%20Vision%202030.pdf

[9] National Program on SME Sector Promotion (approved in 2019 through Cabinet Resolution No. 156); and L. Boojoo. 2019. Leveraging SME Finance through Value Chains in the CAREC Landlocked Economies:

[10] Small and Medium Enterprises Development Fund of Mongolia, https://smefund.gov.mn/en/

[11] UNIDO Survey on the impact of COVID-19 on manufacturing firms | UNIDO

[12] The State Policy on the development of information and communications Technology (2017-2025), https://www.cita.gov.mn/wp-content/uploads/2021/01/State-Policy-on-ICT-Development-2025_en.pdf

[13] The Global Green Economy Index: Measuring National Performance in the Green Economy; 5th Edition, September 2016

[14] http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf

[15] https://www.undp.org/publications/global-knowledge-index-2020

[16] https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Mongolia%20First/First%20Submission%20of%20Mongolia%27s%20NDC.pdf

[17] 2020-2024_-ActionPlan_GOM_Eng_Edited_OE-2.pdf (cabinet.gov.mn)

[18] Green development Policy of Mongoliq (2014), https://policy.asiapacificenergy.org/sites/default/files/Green%20Development%20Policy%20of%20Mongolia%20%28EN%29.pdf

[19] https://rise.esmap.org/data/files/library/mongolia/Energy_Conserv_Law_2015.07.08_ENGLISH.pdf

[20] State Policy on Energy 2015-2030 (MN).pdf (asiapacificenergy.org)

[21] RE: https://www.legalinfo.mn/law/details/15972

[22] Government of Mongolia. 2017. Mongolia National Program for Reducing Air and Environment Pollution, 2017? 2025. Ulaanbaatar

[23] National Renewable Energy Program (EN).pdf (asiapacificenergy.org)

[24] Government of Mongolia. General Law of Taxation of Mongolia. 1993. law01 (amcham.mn)

[25] LAW OF MONGOLIA (lehmanlaw.mn)

[26] WIPO Lex

[27] State-Policy-on-ICT-Development-2025_en.pdf (cita.gov.mn)

[28] The Mongolian National Chamber of Commerce and Industry was founded on July 1, 1960 as the ?Chamber of Commerce?. Since 1990, MNCCI established itself as a Mongolia?s leading NGO devoted to the development of trade and investment in Mongolia?s business community

[29] https://www.business-innovation-growth-mongolia.com/english

[30] https://open.unido.org/projects/MN/projects/

[31] https://www.youtube.com/channel/UCZb9I62dbH8d_GwaZ4xdSJg

[32] https://www.un-page.org/files/public/industrial_waste_inventory_2017_draft.pdf

[33] https://www.un-page.org/files/public/report_elv_handling_in_mongolia_draft.pdf

[34] https://www.climateinvestmentfunds.org/projects/capacity-building-and-regulatory-support-technical-assistance

[35] https://www.climateinvestmentfunds.org/projects/upscaling-renewable-energy-sector

[36] https://www.climateinvestmentfunds.org/projects/upscaling-rural-renewable-energy-solar-pv

[37] https://www.giz.de/en/worldwide/94825.html

[38] https://www.usaid.gov/sites/default/files/documents/1861/Mongolia_Country_Profile_0.pdf

[39] https://www.consilium.europa.eu/media/23638/eu-mongolia-en-ld-160621.pdf

[40] https://www.consilium.europa.eu/media/23638/eu-mongolia-en-ld-160621.pdf

[41] http://gec.jp/jcm/?country%5B%5D=mongolia&s=&operator=in#label_result

[42] http://startupmongolia.org/

[43] https://www.startupworldcup.io/

[44] https://montsame.mn/en/read/239497

[45] https://www.cita.gov.mn/en/59329.html

[46] http://gesi.org/files/Reports/ Evaluating%20the%20carbonreducing%20impacts%20of%20 ICT_September2010.pdf

[47] http://caringforclimate.org/forum/wpcontent/uploads/LCLP_Calculations.pdf

[48]https://www.misolutionframework.net/downloads/MI_Solutions_Framework_pt2_Draft_methodology_for_calculating_avoided_emissions_v2018-1.pdf

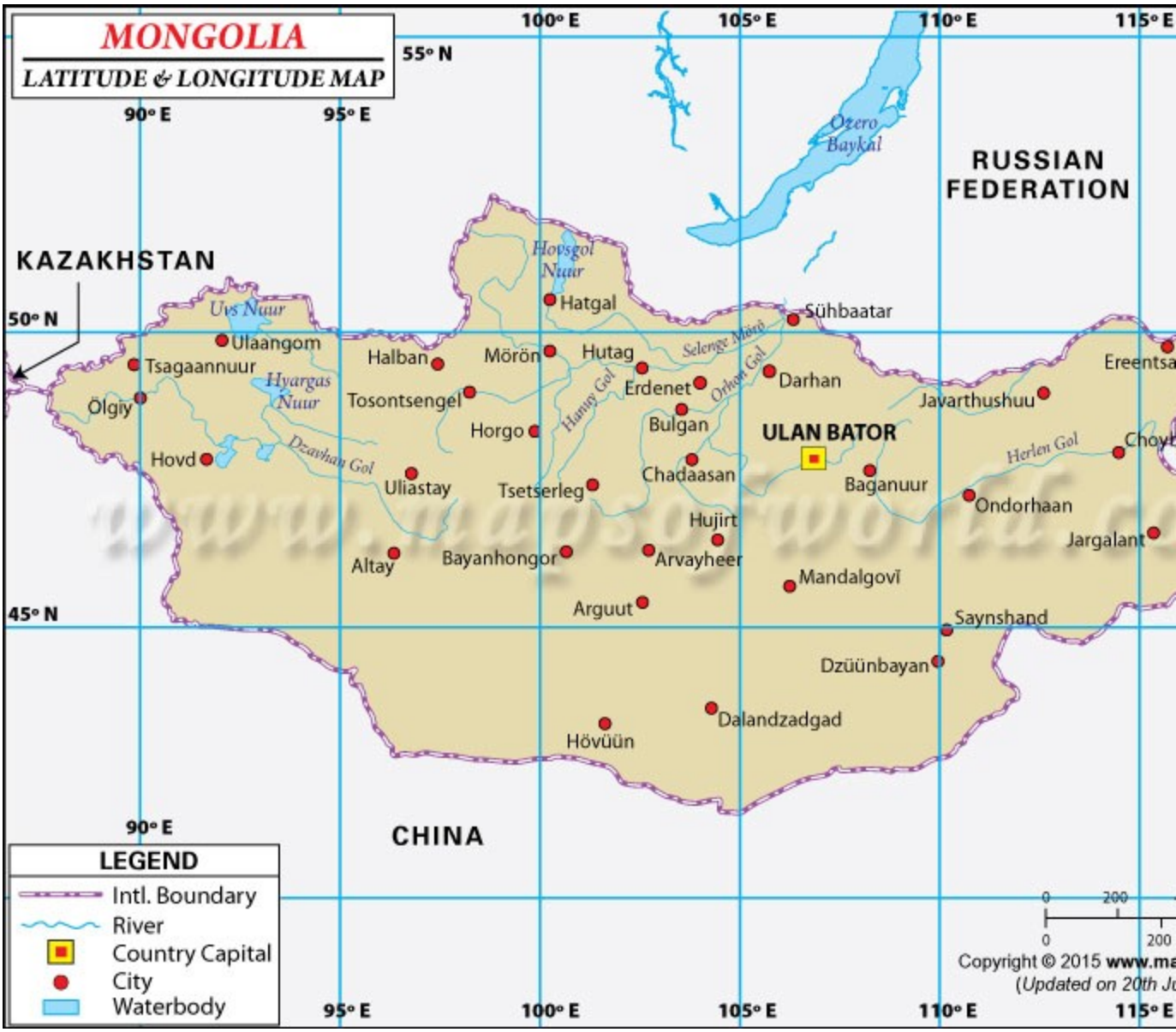
[49] http://www.climatesolver.org/blog/climate-solver-tool-everyone-over-you-explore-high-impact-innovation

1b. Project Map and Coordinates

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

136. The project will include the entire country of Mongolia. While the project is targeted at beneficiaries (entrepreneurs and all relevant CIEE stakeholders, such as universities, policy makers, financiers, and R&D institutions) from all over the country, the main project events and activities will be conducted in the current capital city of Ulan Bator. This is due to the benefits resulting from a relatively dense concentration of relevant stakeholders there, and well-developed infrastructure. During the PPG phase, any additional locations will be determined. The project boundary will not overlap any other country?s territory.

The geo-coordinates and location for Ulan Bator is as following: 47.8864? N, 106.9057? E



2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

Indigenous Peoples and Local Communities

Civil Society Organizations Yes

Private Sector Entities Yes

If none of the above, please explain why:

137. At present, online discussions are ongoing with Ministry of Environment and Tourism, Ministry of Energy, Ministry of Food, Agriculture and Light industry, and with Climate Change Research and Cooperation Centre. UNIDO is also leading online discussions with private sector entities including local financial institutions (Golomt Bank, Khan Bank, Trade and Development Bank), international development institutions (Asian Development Bank, European Bank for Reconstruction and Development), Local accelerators/incubators (KITE Mongolia, Development Solutions) that would be interested in innovations around clean energy, agriculture and light industry as well as other cleantech innovation sectors. In addition, initial discussions are being held with civil society organizations with mandate on sustainable finance (such as Mongolia Sustainable Finance Association), youth and women empowerment initiatives that are interested in cleantech innovations and would be engaged in this project. Means of engagement included communication over online channels as well as meetings held between the stakeholders and UNIDO representatives in Ulaanbaatar. Below table provides an indicative list of stakeholders to be engaged for successful implementation and execution of the programme. A detailed stakeholder map and engagement plan will be developed during the PPG phase, including roles, means of engagement and responsibilities of key stakeholders.

In addition, provide indicative information on how stakeholders, including civil society and indigenous peoples, will be engaged in the project preparation, and their respective roles and means of engagement

Stakeholders	**Envisaged role**
Relevant Ministries: ? Ministry of Environment and Tourism (MET) ? Ministry of Energy (MOE) ? Ministry of Food, Agriculture and Light Industry (MoFALI) ? Ministry of Foreign Affairs (MFA) ? National Development Agency (NDA) ? Ministry of Labour and Social Protection ? Ministry of Education and Science ? Energy Regulatory Commission of Mongolia	Political, substantive and financial (cash /in kind) support will be sought by the relevant key governmental ministries. Said institutions are key in the uptake of policies and regulatory frameworks that enhance the research, business and market conditions for SMEs whose core business revolves around clean technologies.

Academic Institutions: ? Mongolian University of Science and Technology (MUST) ? Mongol-Korea Polytechnic College ? Mongolian University of Life Science ? National University of Mongolia ? Dornod University ? Khovd University Other relevant institutions: ? Climate Change Research and Cooperation Center (CCRCC) ? The Mongolian National Council for Sustainable Development ? Institute of Energy Economics ? Center of Energy Development ? Mongolian Society for Range Management, ? Research and Development Center of Food, Agriculture and Light Industry (RDC) ? the Research and Development Institute of Light Industry (RDILI) ? National Digital Development Committee of Mongolian Government ? Mongolian Sustainable Finance Association ? Young Entrepreneurs Council of Mongolia ? The Mongolian Environmental Civil Council (MECC)	Academic institutions constitute the backbone of research and innovation activities worldwide. Therefore they are essential in the area of knowledge accumulation and dissemination management.

Industry Associations ? Mongolia Renewables Industries Association (MRIA) ? National Association of Mongolian Agricultural Cooperatives (NAMAC) ? Mongolian Software Industry Association (MOSA) ? The Science, Industrial Development and Innovation Agency of the Capital City (SIDIA) ? Mongolian Fintech Association ? Mongolian National Recycling Association (MNRA) ? Mongolian Wool and Cashmere Association (MWCA) ? Mongolian Wool Textile Association (MWTA) ? Mongolian Association of Leather Industry (MALI) ? the Mongolian Food Industry Association (MFIA)	Outreach to and involvement of target sectors and industries is crucial in order to integrate the position of affected industries and associations that constitute an integral part of clean technology innovation market in Mongolia.
Relevant existing accelerators: ? Startup Mongolia ? MonJa Startup Accelerator Program ? UNDP Mongolia?s Accelerator Lab ? Women?s Business Center	Best practices and lessons learned can be sought from existing accelerators and incubators. Further, existing networks can be used as a foundation for clean technology accelerators and incubators, thereby integrating already established stakeholder groups in Mongolia into the post-accelerator support.

SME Development/Support Institutions ? SME Business Incubation Center, Chingeltei District ? The Credit Guarantee Fund of Mongolia ? SME Development Center of Capital City Quality Supplier Development Centre (QSDC) ? Mongolian National Chamber of Commerce and Industry ? Business Council of Mongolia (BCM) ? Mongolian Science IT Park	Mongolia has recognized the potential of SMEs and has established several programs to support SMEs in the terms of funding and capacity building.
Financial Instituions ? Xac Bank ? Trade and Development Bank of Mongolia ? Golomt Bank	Engagement throughout the project as part of a network of financial institutions interested in cleantech, participants in training on investment in cleantech and investing with gender-lens principles, invitees to investor connect events and potential partners in matchmaking activities.

3. Gender Equality and Women's Empowerment

Briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis).

138. UNIDO recognizes that gender equality and the empowerment of women (GEEW) have a significant positive impact on sustained economic growth and inclusive industrial development, which are key drivers of poverty alleviation and social progress. To achieve maximum impact and contribute to GEEW on the ground, UNIDO puts especial emphasis on capturing opportunities to mainstream gender in its projects and programmes in line with its Policy on Gender Equality and the Empowerment of Women, adopted in 2009 and revised in 2015 and 2019, UNIDOs Gender Equality and Empowerment of Women Strategy 2020-2023, as well as with the Lima Declaration adopted in 2013 and the Sustainable Development Goal (in particular SDG5 Gender Equality). UNIDO has also developed an operational energy-gender guide and robust process to support and assure gender mainstreaming of its sustainable energy initiatives.

139. UNIDO recognizes that energy interventions are expected to have an impact on people and are, therefore, not gender-neutral. In fact, due to diverging needs and rights

regarding energy consumption and production, women and men are expected to be affected differently by the project (in terms of their rights, needs, roles, opportunities, etc.). Equal opportunities for women to participate in sustainable industrial development and attain higher-level positions will also create the basis of a more equal society which will generate new needs and encourage the development of new products. This means gender mainstreaming is much more than a women?s issue; it is the basis for establishing a level of equality between women and men that can help stimulate economic growth, create higher-level jobs, support communities, raise productivity and reduce poverty. Ultimately, mainstreaming gender in industrial energy projects would result in enhancing the overall effectiveness and sustainability of UNIDO?s technical cooperation services while at the same time improves its contribution to the achievement of broader development goals?.[1]

140. The overall objective of the project is to catalyse transformational solutions to environmental challenges by fostering clean technology innovation and entrepreneurship ecosystem for SMEs and start-ups. It has been identified as ?significant gender mainstreaming? project according to the gender categories. As such, the project will enable women to access income generating activities and capital to develop their innovations through targeted awareness raising and tailored capacity building. The project aims to demonstrate good practices in mainstreaming gender aspects into promoting cleantech entrepreneurship in Mongolia to strengthen the economy towards a low carbon development path, while avoiding negative impacts on women or men due to their gender, ethnicity, social status or age. Consequently, gender dimensions will be considered systematically during the whole project cycle. UNIDO has extensive experience in promoting and achieving gender sensitive impact, even in countries where gender inequality is systemic. For instance, the Global Cleantech Programme for SMEs in Pakistan and Thailand have adopted an active gender mainstreaming strategy. These efforts have been a great success as women applications and female mentors increased. For example, in Thailand the GCIP winners in 2016 and 2017 are women led team.

141. Women?s entrepreneurship is considered a key tool in enabling women?s empowerment. It is often seen as crucial for increasing the quality of life of women in the developing world, a way of triggering changes of the status-quo of women and re-addressing the balance of power within the family. A guiding principle of the programme will be to ensure that both women and men are provided equal opportunities to access, participate in and benefit from the project, particularly in the global challenges and competition as well as the post-accelerator support. Special efforts will be made to promote equal participation of women and men, both at managerial and technical levels, as consultants, participants, entrepreneurs, mentors, etc. in all stages of project implementation. GCIP-1 has already shown higher levels of women?s participation than other accelerator and incubator programmes with 25% of the 1100 alumni supported to

date being women led enterprises. Through targeted efforts that including reaching out to institutions that support women, NGOs, universities and widely disseminating the support that the programme provides to women, including the best female entrepreneur, this project hopes to continue this trend and even to increase this proportion; with a target of 35% of beneficiaries being women.

142. UNIDO?s Guide on Gender Mainstreaming Energy and Climate Change Projects will be used as a framework and guide in order to ensure that the project is in line with both UNIDO and GEF gender policies. Based on the guidelines, attention will be paid to:

- Gender-sensitive recruitment at all levels where possible, especially in selection of project staff. Gender responsive TORs will be used to mainstream gender in the activities of consultants and experts. In cases where the project does not have direct influence, gender-sensitive recruitment will be encouraged. Furthermore, whenever possible existing staff will be trained and their awareness raised regarding gender issues.

- Considering gender dimensions in all decision-making processes (this will consider but will not be limited to efforts to achieve gender balance/ representation in such processes), including Project Steering Committee meetings.

- Collection of sex-disaggregated data.

- Consultations with and involvement of stakeholders focusing on gender equality and women?s empowerment issues, such as gender experts and organizations, CSOs and NGOs promoting GEEW (providing them with equal voice), e.g. for outreach purposes.

143. Gender equality is a fundamental human right and the advancement of gender equality is one of the critical development and policy objectives for Mongolia. While Mongolia has made steady progress towards improving gender equality in the past, there are still number of challenges and barriers for women to have an equal representation and participation in social, professional, and political spheres.

144. Despite higher rates of educational attainment than men, the female labor force participation rate has decreased in recent years and female earnings are on average lower than those of their male counterparts in similar professions. Females are also under-represented among managers and executives, as well as business owners. While data on women-owned enterprises is not systematically collected, they are estimated to comprise up to 60% of microenterprises and SMEs. Women owned businesses tend to be smaller, have lower turnover and fewer employees.

145. A gender analysis will be conducted during the preparatory phase to identify the specific circumstances of women and youth in Mongolia, and will provide a basis on how

the priorities and needs of these groups will be integrated in the implementation of the project. During the project development (PPG) phase, UNIDO will ensure that the relevant gender dimensions are considered, and the project log-frame will be developed to reflect key gender dimensions of the respective outputs, activities, indicators and targets. This analysis will also incorporate the experience of countries under the previous Global Cleantech Innovation Programme (GCIP) for SMEs for a better understanding of the barriers faced by female entrepreneurs and so design effective mitigation tools. Based on the gender analysis a gender action plan will be developed to substantiate the gender mainstreaming strategy of the project.

146. Initial analysis of the project has identified the following gender specific entry points to be monitored and evaluated throughout the project implementation period. This will be reviewed again during the PPG.

Application stage for Competitions

- Collection of sex-disaggregated data through application forms: Number of women-led enterprises, % of women in the applying team;

- Targeted outreach: The main target groups would be both men and women engineers and business persons, but importantly also ways in which to bring the two groups together. From the second year of implementation, the project will consider organizing events specifically targeted at connecting women technicians/engineers with business women;

- Setting a target on the % of women-led enterprise applications.

Selection of both men and women semi-finalists, and mentors and judges

- Stringent selection criteria will be defined that provide equal opportunities for both women and men. The objective would also be to involve women in the mentoring process so that more role models could be created, thus mitigating the impact of this inequality in the future.

- Special consideration will be given to the creation of a gender related prize; either a prize for the women?s entrepreneur of the year or a special award for the team with the product/service with the most potential positive impact on gender equality, which would be part of the global cleantech competition involving all Cleantech countries concerned.

- In sum, the project design will acknowledge the differences between women and men considering distribution of economic activities and social roles in the cleantech innovation space, in line with GEF 7 Programming Strategy.

Supporting Youth

147. In addition to gender dimensions, this project will support youth entrepreneurship and employment as an added benefit. The main goal is to strengthen the cleantech innovation ecosystem, and supporting cleantech startups by providing business and entrepreneurship training and mentoring. As cleantech is a relatively new industry sector worldwide, and at nascent stages in many countries, the entry barrier for youths is low compared to other more established markets where lack of experience in that sector may prove to be a (both actual and perceived) disadvantage. Defining the product market, sales tactics, financing options for commercialization etc. for cleantech businesses are not transferrable from other industries and therefore experience in other sectors may not necessarily be an advantage. This means youth entrepreneurs are on a level playing field with older / more experienced entrepreneurs. Through the training and mentoring curriculum offered within this project, youth entrepreneurs develop necessary business skills specific to the cleantech sector, and are placed on an equal footing with older generations in the cleantech space.

148. Youths are more likely to be interested in mission/impact driven business models, as opposed to profit driven business models. This means the goals of this project are more attractive to youths that seek to establish businesses that offer environmental solutions. Therefore interest from youths to participate in in this project is higher. For example in the Pakistan project the average age of innovators was between 25 and 35 years and in South Africa 33% of the semifinalists over five years have been younger than 35 years old.

149. It is important to engage youths in the cleantech sector, as youths experience environmental problems differently due to behavioral and lifestyle differences compared to other generations. Many cleantech solutions are developed based on personal experiences, and therefore fully engaging the youth will be important in addressing environmental challenges comprehensively. To promote application from early stage R&D cleantech solutions, GCIP, under GEF program 10408, has focused on engaging universities and students. This has the added benefit that youths are naturally the target group of GCIP communications and advocacy efforts. The program is also indirectly impacting the entrepreneurial culture of partner countries, through its communications efforts. The main message is that solutions to environmental and social challenges can be profitable business models. Also, in promotion efforts for supported SMEs, many youth entrepreneurs are showcased, and the public is exposed to success stories of young entrepreneurs. Seeing peers as entrepreneurs may indirectly influence other youths to also consider entrepreneurship as an option.

[1] UNIDO, ?Guide on Gender Mainstreaming Energy and Climate Change projects?, 2014,p.6

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

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

Will the project?s results framework or logical framework include gender-sensitive indicators?

Yes

4. Private sector engagement

Will there be private sector engagement in the project?

Yes

Please briefly explain the rationale behind your answer.

150. This project focuses on start-ups and SMEs, aiming at strengthening partnerships with the private sector interested in investing in clean technologies and innovation, and provides support to entrepreneurs and innovators seeking to establish commercial ventures in clean technologies. It is expected that atleast 50 private sector entrepreneurs, SMEs, corporates, investors and associations will take active part in this project, so the private sector engagement will be crucial part of and success factor for the project.

151. The private sector engagement is key for the success of this project and its engagement in the project will further be confirmed in stakeholder consultations in the PPG phase. This Mongolia project foresees several areas of interaction with the private sector:

152. There will be direct interactions with and support for entrepreneurs (SMEs and start-ups) offering innovative cleantech solutions. The entrepreneurs are considered as agents of change that bear the potential of instigating a market transformation. The SMEs and stat-ups will be supported in the framework of G Mongolia cleantech ecosystem including accelerator, advanced accelerator, and post-accelerator supports. It is expected that at least 50 entrepreneurs will take part in this project, so the private sector engagement will be crucial part of the project. In addition, there will be active involvement of private investors, banks and other institutions to ensure promotion and stimulation of clean energy technology innovations in targeted industrial sectors.

153. The private sector companies intention to provide, and support access to, private equity investment to selected enterprises supported by Mongolia will be confirmed during the PPG phase.

154. Corporate partnerships will be formed to connect Mongolia participants with various companies with the aim to create joint venture opportunities across borders, to facilitate market expansion and product co-development. This has already been successfully piloted with the Korean Financing Technology Corporation (KOTEC) with collaborations established between Korean SMEs and GCIP alumni from Morocco, Pakistan, Thailand and Turkey. Similar partnerships are expected.

155. Moreover, this Mongolia project will target financing institutions, venture capitalists, and angel investors in its communications and outreach activities that seek to raise awareness and strengthen the knowledge of opportunities and risks associated with investments in cleantech. In addition, Investor Connect events will be organized to connect potential financiers with entrepreneurs and to facilitate investments.

156. The Mongolia project will also cooperate with industry and business associations to leverage their know-how, capital and interest in cleantech innovations, as well as to build their capacity.

157. In addition, industry experts will be engaged as mentors, trainers, judges, and Executive in Residence (EIR) to support the Mongolia Accelerator, Advanced Accelerator, and Post-Accelerator.

158.In line with GEF strategy on private sector engagement, the project capitalizes on the growing interest by national and international private actors in the sustainability agenda and creates the conditions for SME driven creation and transformation of cleantech markets. This ultimately harnesses the ingenuity and creativity of SMEs and ?crowds-in? private sector investments to deliver environmental benefits beyond business as usual.

5. Risks to Achieving Project Objectives

Indicate risks, including climate change, potential social and environmental risks that might prevent the Project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the Project design (table format acceptable)

The proposed intervention will contribute to the blue and green recovery agenda by supporting measures aimed at stimulating the economy that simultaneously accelerate the decarbonization of economy.

Identified Risks	Risk rating	Mitigation Measures
Lack of commitment shown by entrepreneurs to take part in the post-competition support and/or Alumni Network	Low	Based on the high growth rate of SMEs in the country, there is a high stage of commitment shown by entrepreneurs to progress and move their businesses to a marketable proposition

Lack of interest and involvement by government/ institutional partners to improve existing ecosystem	Low	Mongolia stipulated in numerous strategies on sustainable development initiatives to demonstrate a clear interest of governmental institutions to promote climate change mitigation in core sectors of critical importance.
Incentive and financial support system are insufficient.	Medium	Based on the current COVID-19 crisis, the financial support might be slightly hampered due to economic restrictions and the halt of international economic cooperation.
Climate Change Risks	Low	In order to mitigate any potential climate change risks to project activity sites, the project will include criteria related to such risks, and if a risk is identified, develop a mitigation strategy before implementation begins.
Lack of absorptive capacity by the national counterpart	Low	The cleantech programme is in line with national policies and will thus be executed in close coordination with the respective ministries and key stakeholders.
Lack of effective coordination between various project partners	Low	The Project Steering Committee will ensure effective coordination and collaboration among project partners and key stakeholders.
Incentive and financial support system are insufficient	Low	Linkages to other financing schemes for clean energy technology promotion and innovation programmes will be established as early as possible. The establishment of the financing mechanism will be of the highest priority.
Low success rate of new innovative cleantech businesses	Medium	Linkages to other financing schemes for clean energy technology promotion and innovation programmes will be established as early as possible. The establishment of the financing mechanism will be of the highest priority.

Climate Change Risks

159. This Mongolia Project focuses on delivering global environmental benefits through GEF and co-financing investments in clean technology innovations, SMEs and institutional capacity building. In this context, the consideration of climate risks and mitigation of these issues is important to ensure that the GCIP project is resilient to climate shocks, but also to ensure that the outcomes and consequent impacts of the project is endured.[1] Mainstreaming climate risks in project design takes cognizance of both GEF STAP guidance[2].

160. Mongolia is one of the most vulnerable countries to climate change due to its geographical location, climatic conditions, economic structure, and lifestyle. The effects of climate change are increasing the risk and burden on economic sectors that are highly dependent on nature and the climate, causing drought, melting of permafrost, degradation of soil and grazing land due to forest and pest infestation, increasing the frequency and intensity of natural and climatic phenomena. Over the past 70 years, the average annual air temperature has already warmed up to 2.24 degrees Celsius, evaporation rate increased by 3-10 % in the steppe and the Gobi Desert and 10-15 % in the forest-steppe zone and highland belts. Also, recurrences of water and weather hazards such as droughts, dzuds, strong winds, dust and snowstorms, severe thunderstorms and floods have doubled over the last two decades and their economic damage has increased.

161. Climate warming is adversely affecting water resources through intensive evaporation, melting of permafrost and glaciers. For example, the area of glaciers in the high mountains of Altai has declined by more than thirty % over the last 70 years. In 1971, 63 % of the country's total land area was covered in continuous and patchy permafrost, but in 2016, it declined to 29.3 %. These effects of climate change have more adverse effects on the social and economic sectors such as livestock, agriculture, infrastructure, construction industry, and human health, which are largely dependent on nature and climate. About 90 % of Mongolia's pasture area is at risk of desertification and land degradation. In addition to climate change, desertification and land degradation is exacerbated by human factors such as pasture capacity overload, wasteful use of land in farming, mining and infrastructure sectors, use of outdated technology, creation of many informal roads and unplanned urban expansion. According to desertification assessment conducted every 5 years, in 2015, 76.8 % of the total area was subject to severe or minor desertification and land degradation, of which 23 % was severely degraded. Especially, desertification and land degradation has increased in Great Lakes, Lake valleys, Orkhon-Selenge basin, Kherlen river basin and Central Khalkha plateau. Researchers say that 49 % of degradation is caused by human activity and 51 % by natural factors. One of the factors leading to the intensification of desertification is overgrazing in the past several years. Unregulated pasture overuse is leading to depletion of natural plants without giving enough time for regeneration, eventually resulting in extinction. As of 2015, more than 70 % of the 112.7 million hectares of pasture land was partially degraded, yields reduced by 20-30 %, plant species reduced, nutritious pasture area shrank, and proportion of wormwood and perennials deteriorated. Future climate projections indicate the likely increase of intensity of droughts and dzuds in our country. Extreme droughts, dzuds, increase in livestock loss and decline in livelihoods are expected to especially adversely affect herders located far away from the market, increase migration to the center, and increase concentration and burden on the capital and other urban areas. The improper use of arable land is one key factor in the increase of desertification and damage to soil fertility and moisture, which is a precious resource formed over thousands of years. Over 50 years since registering agriculture land, 1.2 million hectares have been cultivated, but over 700,000 hectares have been eroded, and soil humus has halved. Despite rapid developments in the mining industry, environmental protection and rehabilitation are delayed due to outdated mining and exploitation technologies and poorly planned infrastructure facilities, adversely affecting the environment and living environment of citizens.

162. Due to climate change, transboundary ecosystems, desertification and grazing land are driving shrinkage in natural flora and fauna as well as degradation of their habitat, and thereby pose great

challenges for biodiversity conservation, extinction and depletion. In particular, the east, northeast, Dornod Mongolia and Mongol Daguur regions are of special importance in protecting the herd of gazelles migrating in hundreds and thousands in the last dry steppe of the world and saving the steppe biodiversity.

163. The forest fund area of Mongolia is 18,321 thousand hectares or 11.7 % of the total land area and its proximity is 7.9 %. The decrease of 864,5 thousand hectares in area covered by forests and proximity by 0.56 % reaching 7.9 % for the last 5 years is related to forest fires, pest infestation, and illegal logging. Researchers predict risks for increased number of human and animal infections disease outbreaks and types of new and recurring diseases entering through borders, increased risk of infections in natural foci and distribution area, rapid evolution of pathogens, and the emergence of high toxicity resistant strains due to climate change and warming. Especially because of the effects of warming, the spread of viral and bacterial diseases transmitted through insects and arthropods is expanding in the world.

Observed and projected temperature changes

164. Very high rates of historical warming are reported in Mongolia?s Third National Communication to the UNFCCC. Between 1940 and 2015 average temperatures rose by an average 2.24?C. As would be expected, this rise has been associated with a decline in frost days and an increase in hot summer days. Notably, the rise in temperatures differs between extremes. Maximum temperatures have risen 2.6?C while minimum temperatures have risen only 0.3?C over the same period. Research has suggested that temperature trends can vary locally, influenced by altitude and by biome (i.e., the type of land cover).

Precipitation trends

165. Decline in average annual precipitation of 7% over the period 1940?2015 is reported in Mongolia?s Third National Communication to the UNFCCC. The country?s central regions have felt this decline in rainfall most strongly. This sits alongside a proportionately large increase in winter snowfall. The number of consecutive wet days and the number of days with heavy precipitation are also believed to have declined over the period 1971?2015. However, all these trends have low statistical significance and should be approached with caution. Local knowledge and observation has identified an increase in the frequency of thunderstorms and short high-intensity rainfall events.

Natural and climate-induced hazards

Floods:

166. Two key types of floods affect Mongolia?s communities, river flooding and flash (or surface) flooding. Flash flooding contributes to loss of life and livelihood in Mongolia, accounting for 24% of deaths to natural hazards between 2004?2015, according to Mongolia?s Third National Communication, and having a poorly understood economic impact. Development and climate change are both likely to increase these figures. The climate change component can be isolated and by 2030 is expected to increase the population annually affected by river flooding by 4,000 people, and its GDP

impact by $49 million under the RCP8.5 emissions pathway (AQUEDUCT Scenario B)[3].Future flash flood risk is complicated and driven by rapid poorly planned development on exposed plots of land at the fringes of Ulaanbaatar.

Droughts and Dust:

167. Two primary types of drought may affect Mongolia, meteorological (usually associated with a precipitation deficit) and hydrological (usually associated with a deficit in surface and subsurface water flow, potentially originating in the region?s wider river basins). At present, Mongolia faces an annual median probability of severe meteorological drought of around 4%, as defined by a standardized precipitation evaporation index (SPEI) of less than ?2. However, other more complex forms of drought develop in Mongolia as a result of its unique set of climate parameters. Dry summers followed by cold winters create a form of natural hazard locally termed dzud. Mongolia?s local drought index, reported in its Third National Communication to the UNFCCC shows a strong sustained period of summer drought from 2000 through to 2015, at a level unprecedented over the period 1940?2000. Studies have also shown an increase in the frequency of both meteorological and pasture drought over the period 1965?2010[4]. This trend is supported by local knowledge and observations and is suggested to have driven an increase in the frequency of dust storms over Mongolia?s drier areas. The East Asia region is projected to experience an increase in the frequency of severe drought events under all warming scenarios. At levels of global warming above 2?C, a severe drought event which previously took place only once every 100 years is projected to take place at least once every 40 years.

Heatwaves:

168. Mongolia can experience high maximum temperatures, despite a national average monthly maximum of only 6?C and an average July maximum of 24?C. At sub-national level, considerably higher temperatures can occasionally be experienced in some lower altitude regions, including in the capital Ulaanbaatar, but particularly in and around the Gobi Desert. The current median probability of a heat wave (defined as a period of 3 or more days where the daily temperature is above the long-term 95th percentile of daily mean temperature) is around 2%.[5]

Outcome-based climate risk analysis (scale: low, moderate and high)

Key Project Outcomes	**Potential effect of climate risks on project implementation and outcomes**	**Risk Level**	**Mitigation Measures**

? promote the acceleration of high-impact clean technology innovation for large-scale deployment and green job creation; ? implement national cleantech innovation competition-based accelerators;	? Participation at events due to heat stress/flooding ? Technologies supported, increase the likelihood of adverse effects that exacerbate climate risk ? Failure of businesses supported by GCIP due to risk from hazards within the project area.	Moderate	? Some of the support is intended to be face to face. However, if this is not possible due to climate events then the training/events will be organized on-line with the aim of providing an experience as close as possible to the physical events, with side events and one to one meetings also possible. ? To safeguard against climate change risks the screening of technologies for selection for GCIP support will include an assessment of the climate risks, over the next 30 years, and where a risk is identified it will be necessary for the SME/entrepreneur to propose suitable adaptation or management measures. ? GIZ?s Climate Expert Tool[6] for example could be used as one tool available to entrepreneurs. Once selected the alignment of proposed technologies will continue to be reviewed against local climate risks, as part of the support provided within the accelerator.
? Enhance access to financing through investment facilitation support targeted for start-ups and SMEs in early and growth stage to support commercialization and deployment of cleantech solutions with highly transformational impact for the global commons;	? In-country Financing diluted or diverted to disaster and resilience	Low	? Introduce new categories of technologies to address some of the prevailing climate risks ? Facilitate the connectivity of ecosystems and greater opportunities for scaling-up of innovations across different countries and globally through the global programme; ? Raise awareness with PMUs to assess climate risk on an annual basis ? Increase impact tracking and monitoring of Climate Risk profile through tools like ?Think Hazard?

? build a cleantech community consisting of relevant ecosystem players at national and global level and build strategic partnerships with key influencers that can lead and guide policy and business decisions in the cleantech space;	? diverted human and political resources and stakeholder attention to disaster and resilience measures	Low	? Enhance visibility, credibility and understanding of identified solutions to the local political community through the stakeholder engagement plan and communications plan; ? Support policy roadmaps that anticipate the effects of possible climate risk factors through project outcome 2. ? Through the global programme ensure coordination and cooperation among GCIP national execution partners for knowledge and experience sharing on how to anticipate and mitigate the risks identified;
? Production, scale up and deployment of cleantech innovations	? Floods and droughts endangering cleantech production infrastructure, deployment and disbursement	Low	? Once accelerated cleantech SMEs/ start-ups are starting to scale up the production of their products or services, climate risks, such as floods could slow down the entire process. However, based on the availability of domestic Early Warning Systems (1294), cleantech producers will be able to avoid severe damages to the deployment and disbursement of products and services.

Technical and institutional capacity and information needed to address climate risks and resilience enhancement measures

169. Potential responses to the climate risks in the focus sectors, i.e., energy, water and agriculture, of the project in Mongolia include:

? Ensuring favourable market conditions for climate technologies (e.g., support to an enabling environment for cleantech; identification of incentives for innovation)

? Policy environment to regulate energy production, climate-smart agriculture, cleantech innovation in industry sectors and in the digital economy.

? Planning infrastructure should take into account mitigation and adaptation to climate risks. Buildings can be designed using features that promote adaptation, for example to enable circulation of

air for cooling, and with shaded windows in the direction of the sun ? whilst also being constructed with energy-efficient materials.

? Urban management (e.g., natural ventilation for cooling, safeguard critical infrastructure; create rainwater storage and flood retention areas)

? Land-use planning (e.g., protect high-yield agricultural land, environmentally sensitive areas and natural landscapes from urban sprawl; plan greater inter-connectivity between different land uses and transport; intensify land uses where appropriate; revise flood lines)

? Soft adaptation options, e.g., livelihood protection, social safety nets, support towards cleantech SMEs that target the promotion of women and women?s needs

? Encouraging the opportunities for innovation in this sectors and technology areas through the GCIP also provide alternative mitigation and adaptation benefits in the future

? Awareness-raising and education, communication of climate information and early warning systems are important adaptations across all sectors. These require institutional cooperation and coordination across sectors, particularly in planning and development practices that reduce vulnerability to climate hazards.

COVID-19 Risk Analysis

Risk	Rating	Mitigation
Technical expertise is not readily available due to the pandemic	Low	Necessary efforts will be made to identify alternative technical experts in case it is required. Planning will be flexible enough to reschedule activities onsite that require specific expertise

Possible re-instatement of COVID-19 containment measures limits available capacity or effectiveness of project exec ution/ implementation	Medium	The capacity of stakeholders, and especially the beneficiaries, for remote-work and online interactions will be strengthened by securing access to co mmercially available conferencing systems. The current design of the curri culum for entrepreneurs is based on online interactions and deliverables, using webinars and web platforms, and therefore COVID-19 is not expected to pose a significant risk to the conduct of the acceleration cycles
Some project supporters, co-financiers or beneficiaries may not be able to continue with project execution/implementation	Low	The situation will be closely monitored in order to find alternate supporters or co-financiers, or to readjust the list of beneficiaries if needed.
Price increases for procurement of goods/services	Medium	The project team will undertake efforts needed to find alternative providers and make sure that competitive pricing is obtained.

COVID-19 Opportunity Analysis

Opportunity	Opportunity Level	Opportunity optimization measures

New business opportunities created in response to COVID-19 related restrictions and measures	High	Response to COVID-19 restrictions, such as remote working arrangements and no-contact business modalities will require solutions that can be turned into new business models. These opportunities will be analyzed at the national level and shared with the Mongolia entrepreneurs. Examples of former GCIP alumni responding to new business opportunities by providing innovative solutions during the pandemic are summarized here: https://www.unido.org/stories/cleantech-innovato rs-take-covid-19.
New business opportunities to build back better for business continuity and economic recovery post-COVID-19	High	By design, this Mongolia project engages private sector to promote and scale up cleantech products and services, and business models with resilience to climate change (e.g. circular business models). Information on relevant new business opportunities as well as policy/regulations will be added to the Mongolia project curriculum so that the entrepreneurs are fully informed of the market and policy trends.

[1] GEF and UN Environment. (2019) *STAP guidance on climate risk screening.*

[2] *ibid.*

[3] WRI (2018). AQUEDUCT Global Flood Analyzer. URL: https://floods.wri.org/#

[4] Nandintsetseg, B., & Shinoda, M. (2013). Assessment of drought frequency, duration, and severity and its impact on pasture production in Mongolia. Natural Hazards, 66, 995?1008. URL: https://link.springer.com/article/10.1007/s11069-012-0527-4

[5] WBG Climate Change Knowledge Portal (CCKP 2020). Mongolia. Climate Data. Projections. URL: https://climatedata.worldbank.org/ CRMePortal/web/water/land-use-/-watershed-management?country=MNG&period=2080-2099

[6] https://www.climate-expert.org/en/home/

6. Coordination

Outline the institutional structure of the project including monitoring and evaluation coordination at the project level. Describe possible coordination with other relevant GEF-financed projects and other initiatives.

Implementation

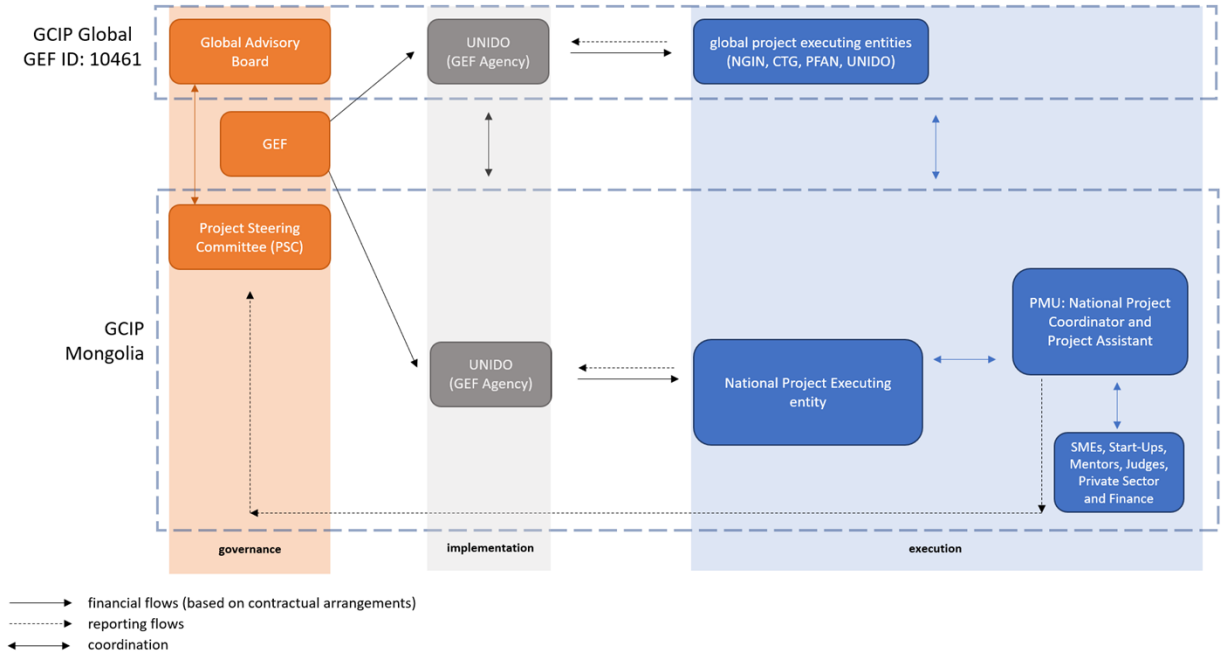


Figure 4: Project implementation arrangement

170. This project will be implemented by UNIDO. This project will be implemented by UNIDO and executed by a Project Executing Entity. The implementation function of the project lies with the designated UNIDO Project Manager in UNIDO?s Climate Technology and Innovation Division in the Department of Energy. UNIDO will not be supporting any executing functions.

171. The UNIDO Project Manager is responsible for designing the execution arrangement with the national PEE (PEE) including the terms of reference and schedule of payments. The UNIDO project manager manages the sub-contract and releases the payment tranches when satisfactory delivery achieved by the PEE according to the execution agreement.

Execution

172. In line with the GEF?s emphasis on national ownership of projects, it is the responsibility of the GEF Focal Point in consultation with the relevant line ministries to nominate the national project executing entities for the respective national child projects. The GEF Focal Point in Mongolia is Ministry of Environment and Tourism. Options for national PEE will be assessed during the PPG phase and confirmed.

173. PEE will designate internally, or recruit directly, project management personnel to form a. the Project Management Unit (PMU) to execute the activities of the national project. The PMU will consist of the National Project Coordinator (NPC) and a Project Assistant (PA). The PMU will be responsible for the day-to-day management of the project execution, monitoring and evaluation of project activities as in the agreed project work plan. The PMU will coordinate all project activities being carried out by project national experts and partners[1].

174. A number of activities, as outlined in this document, could be delivered by the global PEEs on agreement[2]. In addition, the national PEE will sub-contract qualified service providers for the execution of certain additional activities. An open and competitive process will be used to select service providers.

175. In terms of reporting, the national PEE is responsible for providing the following reports with the support of the PMU:

- ? Half-yearly progress and financial reports (in consultation with PSC)
- ? Half-yearly work plan tracking, updates and budgeting (in consultation with PSC)
- ? Annual progress reports (in consultation with PSC)
- ? Periodic thematic reports (as and when required by UNIDO)
- ? Technical reports (as prepared by engaged experts/sub-consultants)
- ? Project publications (as prepared by engaged experts/sub-consultants)

176. The PEE provides all related information to the evaluation experts for any mid-term review and final evaluations. Project management will be funded in part by the GEF budget as well as in-kind funding and co-financing from the project counterparts. During the implementation period of the project, UNIDO will provide the PMU with the necessary management and monitoring support. Amendments to the project scope will be undertaken in line with the criteria and procedures established in the GEF/C.39/Inf.

Project Steering Committee

177. To ensure proper oversight and Government and institutional ownership of the Project, a Project Steering Committee (PSC) will be established under the Chairmanship of the GEF OFP. Representatives from institutions involved in the different project components will be members of the PSC.

178. The PSC is set up to provide advisory inputs for the project. The PSC will meet twice per year to review the project implementation and execution progress and confirm the work plan for the subsequent year and any changes in the six months. Any changes/amendments proposed to the project and/or to the work plans and budgets by the Project Steering Committee are done in accordance with

the approved project document, the GEF policy, and UNIDO rules and regulations. Minutes of meetings are signed by the PSC Chairperson(s) and UNIDO.

179. The PEE forms the secretariat of and reports to the PSC on the progress of the project. The National PEE is not a voting member of the PSC.

Transfer of assets:

180. ?Full or partial title and ownership of equipment purchased under the project may be transferred to national counterparts and/or project beneficiaries during the project implementation as deemed appropriate by the UNIDO Project Manager in consultation with project stakeholders.?

Legal Context:

181. The Government of Mongolia agrees to apply to the present project, mutatis mutandis, the provisions of the Standard Basic Assistance Agreement between the United Nations Development Programme and the Government, signed and entered into force on 28 September 1976.

Coordination with other relevant GEF-financed projects and other initiatives:

182. The national project will benefit from the globally developed methodologies under the Global Framework 10408, decision support tools, training systems, learnings and access to investors. Engagement with the global framework is integrated into all components of the project and will include all stakeholders. It includes the following main activities:

A) Methodologies, guidelines, tools for acceleration, and training systems: These will be developed and harmonized at the global level and the national project will focus on adapting these to the national circumstances. Experiences in applying the tools and systems across other national projects will be used to improve the tools. The global accelerators and global forums under the global framework, will help national enterprises to bring their innovations to the global stage and link with entrepreneurs and accelerators from other countries to explore opportunities for joint co-innovation, joint ventures and mobilizing investments.

B) Enterprise?s growth support, investment facilitation and cross border growth support: Through global project, national cleantech SMEs will be supported to expand their businesses to other countries. In addition, the global framework will provide investment facilitation services to national enterprises so that they can be linked to investors (impact, venture, angels, and commercial) in EU and global levels. Furthermore, the global framework will provide support to the national project in establishing market enabling frameworks to promote investments in cleantech

C) Targeted training, innovation policy support, knowledge management, and peer-to-peer networking and learning: The global framework will provide methodologies for training national institutions, development of policies on cleantech innovation and entrepreneurship, and document best-practices. By linking policy makers, institutions, financiers and

entrepreneurs across countries, the global framework will facilitate knowledge exchange and documentation of best- practices and peer-to-peer networking and learning.

D) Program standards, communication and advocacy, and monitoring and evaluation: to promote coherence and coordination across all GCIP countries, the global framework will develop program guidelines that will be applied by the countries. Through the global web platform that will be developed by the global framework, communications and advocacy will be promoted across countries. In addition, the global framework will develop methodologies for impact tracking and monitoring and evaluation that will then be applied across countries.

183. Through the global web platform that will be developed by the global framework, communications and advocacy will be promoted across countries. In addition, the global framework will develop methodologies for impact tracking and monitoring and evaluation that will then be applied across countries.

184. The project will also seek to collaborate with the UNFCCC Climate Technology Centres Network (CTCN) and the Private Financing and Advisory Network (PFAN), which are UNIDO hosted initiatives with expertise in supporting the technology innovation value chain. PFAN will play integral role to bridges the gap faced by entrepreneurs and investors by helping entrepreneurs build their businesses and present them in a language which investors will understand and be interested in. It will also help investors find and recognize the potential of these businesses. By sharing the common vision of accelerating clean technology dissemination and effort for tackling climate change, the GCIP project will seek for cooperation with PFAN e.g. offering workshops, introducing PFAN and its systematic interventions at the series of events held under the project, exchange of advisors and experts in order to facilitate cross-fertilization between GCIP and PFAN. Since PFAN will collaborate with GCIP also under the GCIP Global framework this will help increase conformity among the GCIP projects and create synergies among them.

---

[1] Following the assessment and the approval of the PEE, collaboration between UNIDO and PEE will be based on the Project Execution Agreement (the ?Agreement?). The Agreement defines the respective responsibilities of the PEE, including but not limited to activities, deliverables, financial, personnel, procurement and asset management components, as well as the reporting schedule and format. The Agreement also includes UNIDO?s privileges and immunities, disbursement conditions, monitoring and evaluation requirements, as well as record keeping and audit standards.

[2] The GEF program entitled ?Global Cleantech Innovation Programme (GCIP) to Accelerate the Uptake and Investments in Innovative Cleantech Solutions? GEF ID 10408 has four global project executing entities (global PEEs), including PFAN (Private Financing Advisory Network), Network for Global Innovation (NGIN), Cleantech Group (CTG), and UNIDO. On agreement with the Mongolia project, the Global PEEs may be able to support the National PEE with ready access to information resources, technical assistance, and accelerator best practices identified from the full experience of the GCIP Global.

7. Consistency with National Priorities

Is the Project consistent with the National Strategies and plans or reports and assesments under relevant conventions?

Yes

If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc

National Strategies:

-Vision 2050

-National green development policy (2014-2030), Mongolia

-The State Policy on Energy 2015-2030

National Renewable Energy Programme (2005-2020)

-Energy Conservation (EC) Law of Mongolia (2015)

-National Energy Conservation Program (2018-2022)

National Program on Reduction of Air and Environmental Pollution (2017-2025)

-Law on Waste (2017)

-National Waste Management Improvement Strategy and Action Plan (2017-2030)

-National Agriculture Development Policy (2010-2021)

-National Livestock Programme (2010)

185. Particularly, this project is in line with the goals set within Mongolia?s central strategic framework, Vision 2050, which seeks to achieve a high level of sustained, sustainable and inclusive growth, focusing on the preservation of the environment and the promotion of a green economy as well as on capturing financing for green jobs. It further builds on the need to reduce the degradation of national resources while reinforcing institutional capacities and technologies as to improve the awareness on environmental safeguarding. Furthermore, goals within the strategy seek to increase the integration of renewable energy into the national energy mix, as to lower the dependency on fossil fuel for power generation. Equally, the framework underlines the need to increase energy efficiency initiatives in commercial buildings. Aligned with the Vision 2050, this project will support the identification, upscale and commercialization of innovations that will contribute towards the increased integration of renewable energy and energy efficiency appliances in Mongolia. Also, this project will support, amongst others, the identification of agriculture related cleantech innovations as to support the attainment of food self-sufficiency in Mongolia.

186. Through the Vision 2050, Mongolia seeks to promote employment, develop entrepreneurial skills, and improve the competitiveness of small and medium-sized businesses (MSMEs). This project will support these measures foreseen within this policy, by supporting cleantech innovation startups and SMEs in their commercialization and scale up as to reach market maturity.

187. This project is also well aligned with the principles of the National Green Development Policy that focuses on prioritizing assistance/support program for startup companies, which connect training production, to foster in the business incubator by incorporating the sustainable development and green economy concepts while transitioning into a sustainable economy.

188. Equally, this project is in line with the State Policy on Energy 2015-2030, to build the energy security of the country, assure sustainability of the energy sector development and create the basis for enhanced deployment of renewables like solar and wind energy, biomass, liquid or gaseous, Thermo energy, fuel cells, and other new sources of energy production and strengthen the policies on energy supply to international markets in the future. The policy highlights the government's target is a share of renewable energy in total installed capacity of 20% by 2023 and 30% by 2030, also a key target of the National Renewable Energy Programme (2005-2020). As in projects conducted within GCIP, under GEF program 10408, accelerators run in many developing countries contribute to the identification of renewable energy appliances that, through the commercialization process within GCIP, manage to reach a high market share within their segment and thereby make a meaningful contribution towards the reduction of GHG emissions.

189. Also, the project is well aligned with Energy Conservation (EC) Law of Mongolia (2015) and National National Energy Conservation Program (2018-2022), which reiterates that energy efficiency measures are an important component of the Government?s efforts to reduce urban air pollution, stemming largely from the combustion of raw coal for household and small business heating. This GCIP project supports energy efficiency technologies and will contribute towards the target to reduce energy consumption of obligated consumers by at least 10 percent [Baseline year: 2016, Target year: 2022.

190. The proposed GCIP project is also consistent with the National Program on Reduction of Air and Environmental Pollution (2017-2025), which aims reduce air pollution through the optimization of urban planning, decentralization, improving infrastructure and encouraging environmentally positive lifestyles. In addition, this proposed project also is in line with the Law on Waste (2017) and the complementing Mongolia National Waste Management Improvement Strategy and Action Plan (2017-2030) that strives to achieve conservation of raw materials, to reduce waste at source, and to establish the 3R (reduce, reuse, recycle) principles

191. The project is well aligned with National Agriculture Development Policy (2010-2021) and the National Livestock Programme (2010) in its approach to support innovative technologies to combat diverse issues in the agriculture and livestock farming sector.

192. Further, this project will support the achievement of Mongolia?s Nationally Determined Contributions (NDCs) which aim at conditionally reducing GHG emissions in energy, construction, transport, agriculture, industry and waste.

193. The project?s focus on innovative clean technologies and supporting entrepreneurial SMEs and startups is line with, and complement, many of the national priorities of Mongolia as well as those of UNIDO in that the project will contribute to capacity building. The project will also invest in the establishment of comprehensive policy frameworks and in the creation of an extensive network of clean entrepreneurs.

8. Knowledge Management

Outline the knowledge management approach for the Project, including, if any, plans for the Project to learn from other relevant Projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

194. As the project focuses on ecosystem building at national level, and ecosystem connectivity at the global level, knowledge management and exchange are built into the project (see outcome 3). A key tool for knowledge management will be the online web-platform, used primarily by the Project Executing Entity to collect data associated with the Accelerator. This will naturally create a community of the participating enterprises, judges and mentors, and foster continuous exchanges in the GCIP community and to archive all project deliverables.

195. The web-platform will also serve as a depository and dissemination tool for all knowledge products generated and collected through the project. All project reports will be shared with the relevant counterparts and disseminated through their institutional websites and UNIDO?s open data platform. All knowledge management material will be gender mainstreamed. For instance, gender responsive training and advocacy material will not perpetuate gender stereotypes through presenting women only in their traditional roles

196. The project will also benefit from and contribute to the GCIP-wide knowledge management efforts. Under component 3 of GEF programme 10408, a ?GCIP knowledge management, communication and advocacy strategy? will be developed and provided to this project as a tool. As mentioned in para. 69 (output 3.1.2 of this project), the PEE will review and adapt the GCIP strategy for operationalization in Mongolia as appropriate, and ensuring that the following key elements of knowledge management are addressed:

- overview of existing lessons and best practice that inform the project design and activities;

- plans to learn from relevant projects, programs, initiatives & evaluations;

- processes to capture, assess and document info, lessons, best practice & expertise generated during project execution/implementation;

- tools and methods for knowledge exchange, learning & collaboration, including knowledge platforms and websites;

- knowledge products to be published and shared with stakeholders;

- how knowledge and learning will contribute to overall project/program impact and sustainability;

- thought leadership strategy for cleantech enterprise development and investing (publication of opinion pieces, policy briefs etc.);

- content strategy for social media platforms to raise visibility of the project?s impacts and knowledge projects.

In addition, Project counterparts and beneficiaries as well as key stakeholders of Mongolia will be invited to benefit from all GCIP-wide knowledge management and exchange activities and initiatives. Through GCIP-wide trainings, workshops, roundtables and knowledge products, each partner country will have opportunities to learn and share lessons and benchmarks, and also expand their outreach circle

Plans to learn from relevant projects in Mongolia:

197. As described within the section on baseline projects, lessons learned will be incorporated from successfully completed and ongoing projects. This project in Mongolia will interact with various stakeholders including SME support systems such as SME Development Center, accelerators/incubator programs (Startup Mongolia, UNDP Accelerator Labs initiative, Ulaanbaatar Innovation Center (HUB), SME Business Incubation Center, Women?s Business Center (WBC) etc), financial and non-financial institutions, local start-ups/MSMEs to help understand the needs and leveraging the potential of cleantech providers in Mongolia.

198. This project will build on experiences learnt through the recently completed **UNIDO** project ?Support to Employment Creation in Mongolia (SECIM)?, which focused on the strengthening the enhanced value added and employment prospects in livestock and vegetable sectors in sub-urban and rural areas of Mongolia. UNIDO has also supported Mongolia on environmentally sound management of Polychlorinated biphenyls (PCBs) and to reduce exposure of mercury to human health and the environment by promoting sound chemical management in Mongolia. Also, two new training centers to help build competitive leather and textile industries ?The Industry of the Future blended learning centre? located at the Experiment, Manufacturing and Business Corporation of Light Industry (ARMONO), and the ?Textile Finishing Incubator Centre? is at the Research and Development Institute of Light Industry (RDILI), that UNIDO supported in setting up, have opened since 2020. Their training premises and knowledge products can be of help to the entrepreneurs to help build their competitive and innovative business initiatives.

199. Lessons can also be learnt from the ongoing **GIZ** project ?Promoting economic growth and innovation to create jobs 2021-2023[1]? regarding efforts to establish an investment-friendly business environment. Best practices will be enquired by active stakeholders from several sectors, in order to generate an overview on the innovation potential of the country.

Proposed processes to capture, assess and document information, lessons, best practice & expertise generated during implementation:

200. Knowledge capture, assessment and documenting will be a continuous effort during project implementation. Through the various monitoring and reporting exercises, bi-annually and annually i.e. progress reports, PIRs, MTR and TE, the lessons learned, best examples, recommendations, etc. will be recorded. Best practice processes and examples are to be shared through annual meetings of the country PMUs with UNIDO and the Global PEEs.

Proposed tools and methods for knowledge exchange, learning & collaboration:

201. This project will be assigned a section on the global GCIP web platform, where country-specific project information, press releases, relevant news articles, social media posts, relevant studies and alumni profiles will be made available and maintained by the PMU throughout the project?s lifetime and beyond. This will also allow the UNIDO and the country PMU to track alumni progress as well as for alumni to share experiences and continuously foster their network. The establishment of the National and Global Alumni Networks will be a key mechanism for Knowledge sharing in this project.

202. Knowledge sharing will be conducted through trainings, workshops, roundtable, printed materials and through the GCIP web platform at global and national levels. The combined set of outreach activities will ensure recognition of and support for this project.

Proposed knowledge outputs to be produced and shared with stakeholders

203. As envisaged under output 1.1.1 GCIP guidebooks and methodologies will be adapted for Mongolia. This includes training and certification of cleantech experts, supported through the development of methodologies, tools and training materials. These materials will be adapted from GCIP Guidebooks, which will be developed by the Network for Global Innovation (NGIN) under the GCIP Global. They will guide the operation and management of the Mongolia Accelerator, Advanced Accelerator, and Post-Accelerator, and will include proposed schedules; eligibility requirements and selection criteria for the participants; competition rules; training curricula and handbooks for applicants, experts (mentors, trainers and judges). Moreover, at the programme level, M&E frameworks, knowledge management, communication and advocacy strategy/ies and well as impact calculation methodologies will be developed and shared , as a blueprint for the development of country-specific strategies.

Discussion on how knowledge and learning will contribute to overall project impact and sustainability in Mongolia

204. Knowledge sharing and learning are key aspects of this project. From training the trainers, to providing support to cleantech innovators, throughout the pre accelerator cycle, accelerator cycle and post accelerator cycle, as well as through providing technology verification and product development support services to ease the potential market entry of cleantech products ? this project?s impact is dependent on successful knowledge sharing and learning that will be provided to its beneficiaries.

205. The Knowledge and learning will contribute to the overall impact and sustainability in the following ways:

a) the dissemination of relevant documents, e.g. operational guidelines, guidebooks for impact determination, frameworks, the PMU and National Project Execution Entity is empowered to strengthen their project management capabilities as well as being able to run a Business Accelerator (as a platform for calls for application and their receipt, as well as for submission of assignments and delivery of trainings/webinars during the Accelerator). This ensures the competent commercialization of technologies and products, for the growth of the SME base in-country.

b) through the web platform and the adoption of international best practice communications and sustainability strategies, the community at national levels, e.g. investors, enterprises, alumni, and experts will be maintained locally. The continued connectivity in-country and across borders ensures the continued market and financing opportunities for innovative products, resulting the consequent economic and environmental benefits.

c) by providing a knowledge depository for the general public (all relevant knowledge, communication, and advocacy materials will be available on the website), the brand, lessons and successes encourage further innovation in cleantech and enhance consumer awareness.

Plans for strategic communications:

206. The communications strategy will include the development of awareness raising and marketing material, for public and awareness raising and for marketing material for entrepreneurs and officials. This will include briefing sessions, press releases, social media activity, attendance at events etc.

207. The knowledge management, communication, and advocacy strategy will specify the exact knowledge products to be delivered along with relevant timelines and milestones. The table below provides a general overview of deliverables relevant for knowledge management.

Overview of deliverables relevant for knowledge management

Deliverable	**Timeline**
A pool of experts (trainers, mentors, judges) created	Intensive focus for Year 1-2 of project implementation/execution with regular updates after every six months.
The knowledge management, communication, and advocacy strategy framework reviewed and adapted to Mongolia; including regular online trainings that are gender sensitive and actively seek participation from women	Integrated throughout the project, with intensive focus in the second quarter of every implementation year.

Policy briefs, impact reports, brochures, webinar sand other types of promotional materials distributed through briefing sessions, press releases, social media presence, advertising, etc. ? in line with the Mongolia knowledge management, communication, and advocacy strategy	Intensive focus for Year 1-2 of project implementation/execution with regular updates after every six months.

[1] https://www.giz.de/en/worldwide/94825.html

9. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

Overall Project/Program Risk Classification*

PIF	CEO Endorsement/Approval	MTR	TE
Medium/Moderate			

Measures to address identified risks and impacts

Provide preliminary information on the types and levels of risk classifications/ratings of any identified environmental and social risks and potential impacts associated with the project (considering the GEF ESS Minimum Standards) and describe measures to address these risks during the project design.

208. A preliminary environmental and social risk screening was conducted according to the UNIDO Environmental and Social Safeguards Policies and Procedures (AI/2017/04). The screening categorized the project as ?B?. Category B projects are likely to have less adverse impacts on human populations or environmentally important areas than those of Category A projects. An Environmental and Social Management Plan (ESMP) will be developed during the PPG phase.

Supporting Documents

Upload available ESS supporting documents.

Title	Submitted
GCIP Mongolia ES_Screening	

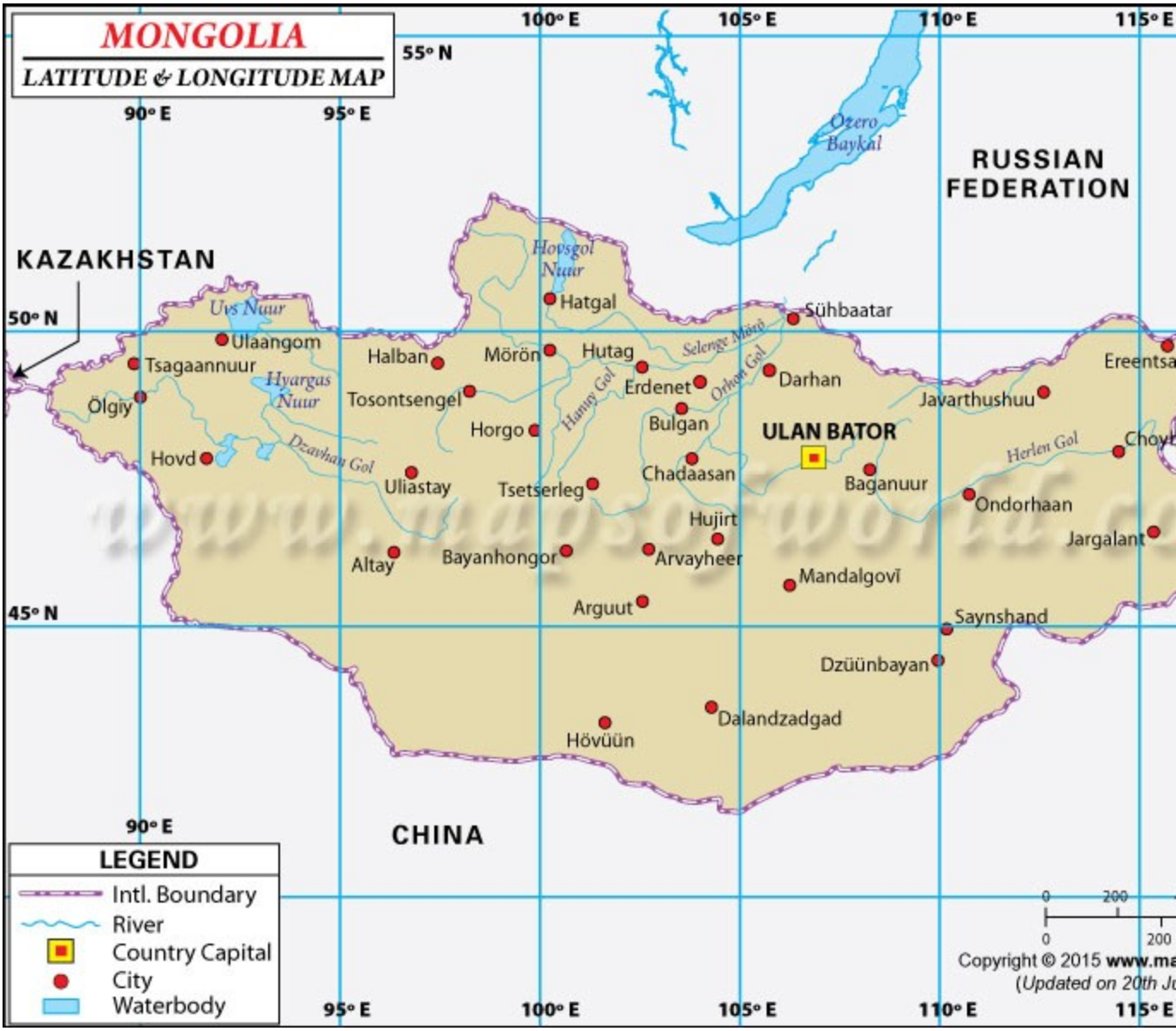
Part III: Approval/Endorsement By GEF Operational Focal Point(S) And GEF Agency(ies)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the Operational Focal Point endorsement letter with this template).

Name	Position	Ministry	Date
Mr. Altangerel ENKHBAT	Director and GEF OFP	Ministry of Environment and Tourism	9/2/2021

ANNEX A: Project Map and Geographic Coordinates

Please provide geo-referenced information and map where the project intervention takes place



Ulan Bator Coordinates is 47?54'27.8" N 106?52.994' E

The project will include the entire country of Mongolia. While the project is targeted at beneficiaries (entrepreneurs and all relevant CIEE stakeholders, such as universities, policy makers, financiers, and R&D institutions) from all over the country, the main project events and activities will be conducted in the current capital city of Ulan Bator. This is due to the benefits resulting from a relatively dense concentration of relevant stakeholders there, and well-developed infrastructure. Any additional locations will be determined during the PPG phase. The project boundary will not overlap any other country?s territory.