Promoting cleantech innovation for climate action in Senegal

Part I: Project Information

GEF ID
10715

Project Type
FSP

Type of Trust Fund
GET

CBIT/NGI
- [ ] CBIT
- [ ] NGI

Project Title
Promoting cleantech innovation for climate action in Senegal

Countries
Senegal

Agency(ies)
UNIDO

Other Executing Partner(s)
Ministry of Environment and Sustainable Development (MEDD)

Executing Partner Type
Government

GEF Focal Area
Climate Change

Taxonomy
Agriculture, Forestry, and Other Land Use, Climate Change Mitigation, Climate Change, Focal Areas, Sustainable Development Goals, Transform policy and regulatory environments, Influencing models, Consultation, Type of Engagement, Strategic Communications, Stakeholders, Gender Mainstreaming, Women groups, Sex-disaggregated indicators, Gender Equality, North-South, Knowledge Exchange, Peer-to-Peer, South-South, Capacity, Knowledge and Research, Innovation, Knowledge Generation, Training, Professional Development, Workshop, United Nations Framework Convention on Climate Change, Paris Agreement, Nationally Determined Contribution, Sustainable Urban Systems and Transport, Technology Transfer, Energy Efficiency, Financing, Renewable Energy, Convene multi-stakeholder alliances, Demonstrate innovative approache, Deploy innovative financial instruments, Strengthen institutional capacity and decision-making, Beneficiaries, Private Sector, Capital providers, Individuals/Entrepreneurs, Large corporations, Financial intermediaries and market facilitators, SMEs, Civil Society, Academia, Communications, Public Campaigns, Behavior change, Awareness Raising, Participation, Partnership, Information Dissemination, Gender results areas, Access to benefits and services, Capacity Development, Knowledge Generation and Exchange, Participation and leadership, Learning, Indicators to measure change

Rio Markers
Climate Change Mitigation
Climate Change Mitigation 2

Climate Change Adaptation
Climate Change Adaptation 0

Duration
60 In Months

Agency Fee($)
210,782.00

Submission Date
9/25/2020

A. Indicative Focal/Non-Focal Area Elements

Programming Directions	Trust Fund	GEF Amount($)	Co-Fin Amount($)
CCM-1-4	GET	2,342,018.00	12,000,000.00
	Total Project Cost ($)	**2,342,018.00**	**12,000,000.00**

B. Indicative Project description summary

Project Objective

Promote the acceleration of high-impact clean technology innovation from the private sector for market-based scale up, climate action, and creation of green jobs

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)
1. Transforming early-stage innovative cleantech solutions into commercial enterprises	Technical Assistance	1.1 Early-stage cleantech innovations accelerated into enterprises	1.1.1 GCIP methodologies, guidelines, tools and training systems for cleantech innovation and entrepreneurship accelerator adapted for Senegal 1.1.2 Pool of cleantech innovation and entrepreneurship experts (trainers, mentors and judges) trained and certified to support cleantech innovation and entrepreneurship accelerator in line with GCIP training system 1.1.3. 5 (five) annual national competition-based cleantech innovation and entrepreneurship accelerators conducted	GET	925,000.00	3,000,000.00

1. Transforming early-stage innovative cleantech solutions into commercial enterprises	Technical Assistance	1.2 Cleantech enterprises commercialize and mobilize investment to scale up their operations	1.2.1 Targeted advanced business growth support services provided to selected cleantech enterprises towards commercialization 1.2.2 Enterprises receive tipping-point investment facilitation support and are connected to investors and financing opportunities 1.2.3 Mentoring and partnership support provided to cleantech enterprises for global market expansion in collaboration with the global GCIP network	GET	250,000.00	2,000,000.00
1. Transforming early-stage innovative cleantech solutions into commercial enterprises	Investment		1.2.4 Innovative early-stage financing mechanism designed and established to support the deployment and scale-up of cleantech solutions	GET	475,000.00	3,000,000.00

2. Cleantech innovation and entrepreneurship ecosystems strengthening and connectivity	Technical Assistance	2.1 Cleantech innovation and entrepreneurship ecosystems in Senegal strengthened	2.1.1 National cleantech innovation and entrepreneurship support institutions (i.e. funding agencies and industry associations etc.) are trained to promote cleantech innovations and entreprenuership 2.1.2. Recommendations on policies and regulations to promote cleantech innovation and entrepreneurship developed (gender-responsive) 2.1.3 Meetings for ecosystem players organized to promote linkages, collaboration and to facilitate the generation, exchange and dissemination of knowledge products	GET	250,000.00	2,000,000.00
3. Knowledge management and coordination with GCIP at the programmatic level	Technical Assistance	3.1 Project outcomes enhanced through use of guidelines, knowledge management, and communication and advocacy	3.1.1 GCIP internal operational guidelines adapted and implemented for programmatic coherence 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 connect national ecosystem players and coordinate with global GCIP community	GET	230,493.00	600,000.00

4. Monitoring and evaluation	Technical Assistance	4.1 Impact of project tracked and reported	4.1.1 Environmental and social impacts of project estimated, tracked and reported 4.1.2 Project progress monitoring and reporting as per UNIDO and GEF guidelines 4.1.3 Independent mid-term review and terminal evaluation conducted	GET	100,000.00	309,091.00
				Sub Total ($)	**2,230,493.00**	**10,909,091.00**
Project Management Cost (PMC)						
				GET	111,525.00	1,090,909.00
				Sub Total($)	**111,525.00**	**1,090,909.00**
				Total Project Cost($)	**2,342,018.00**	**12,000,000.00**

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($)
GEF Agency	UNIDO	Grant	Investment mobilized	50,000.00
GEF Agency	UNIDO	In-kind	Recurrent expenditures	100,000.00
Recipient Country Government	Ministry of Environment and Sustainable Development (MEDD)	In-kind	Recurrent expenditures	1,000,000.00
Recipient Country Government	Fond National Climatique	Loans	Investment mobilized	6,500,000.00
Recipient Country Government	Fond National Climatique	In-kind	Recurrent expenditures	1,500,000.00
Private Sector	To be determined	Loans	Investment mobilized	2,850,000.00
			Total Project Cost($)	**12,000,000.00**

Describe how any "Investment Mobilized" was identified

Recipient government: Through close consultations with the recipient government, in-kind and investment mobilized contributions were discussed. As the envisaged lead executing agency, the Ministry of Environment and Sustainable Development will provide in-kind contributions. In addition, in extensive consultation with the GEF Focal Point held online, the National Climate Fund (Fonds National Climat) was identified as a key stakeholder that is expected to provide loans to support the uptake of cleantech enterprises in the country. Confirmed structures of co-finance will be determined during the PPG phase, where other funds will also be engaged. Private sector: Due to COVID-19 related restrictions, in-depth stakeholder consultations with the private sector were limited. UNIDO organized online meeting with potential funders from the private sector and potential sources for co-financing, who showed interest to provide co financing but cannot commit until a formal document is provided. There are many potential private sector stakeholders in Senegal with the appetite to invest in early-stage cleantech innovations. UNIDO has a strong relationship with the private sector in Senegal and has experience in mobilizing co-financing from the private sector for GEF projects. The current amount of 3 mil USD is indicative, estimated 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. 3 mil USD roughly calculated based on the conservative assumption that at least 15 enterprises will receive private sector investment of 200,000 USD. Co-financing ratio of 1:7 is expected to be achieved through robust stakeholder consultations during the PPG phase.

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($)
UNIDO	GET	Senegal	Climate Change	CC STAR Allocation	2,342,018	210,782	2,552,800.00
				Total GEF Resources($)	**2,342,018.00**	**210,782.00**	**2,552,800.00**

E. Project Preparation Grant (PPG)

PPG Required ☑

PPG Amount ($)

80,000

PPG Agency Fee ($)

7,200

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
UNIDO	GET	Senegal	Climate Change	CC STAR Allocation	80,000	7,200	**87,200.00**
				Total Project Costs($)	**80,000.00**	**7,200.00**	**87,200.00**

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_2e (direct)	225000	0	0	0
Expected metric tons of CO_2e (indirect)	1125000	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_2e (direct)				
Expected metric tons of CO_2e (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_2e (direct)	225,000			
Expected metric tons of CO_2e (indirect)	1,125,000			
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	412			
Male	763			
Total	1175	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

Indicator 6: Indicative expected results of 225,000 to 450,000 tCO2e of direct GHG emission savings and 1,125,000-2,250,000 tCO2e of indirect GHG emission savings at the end of project implementation. Methodology for estimating GHG emissions adapted from the GEF approved program GEF ID 10408. Indicator 11: 1175 beneficiaries (at least 35% women*) consisting of: - 125 enterprises accelerated under output 1.1.3 (25 enterprises per accelerator cycle, 5 cycles) - 50 cleantech experts trained and certified under output 1.1.2 - based on prior project experience and the scope of stakeholder engagement activities, estimated no. of stakeholders sensitized are approximately 1000 *Gender mainstreaming target of at least 35% women beneficiaries is set, based on experience in other similar projects. This may be revised at RCE stage based on gender analysis conducted during PPG.

Part II. Project Justification

1a. Project Description

a) The global environmental and/or adaptation problems, root causes and barriers that need to be addressed

Country context and environmental challenges

1. Senegal has a population of 14.54 million people, which is predominantly rural (64%), with a majority of women and youth (52% women, 71.2% under the age of 19). The country is experiencing high population growth rate of 2.8% annually and recording economic growth that is amongst the highest in Africa that between 2014 and 2018, the rate remained above 6% annually[1]. Accordingly, the country is experiencing a concomitant increase in GHG emissions.

2. GHG emissions from the energy sector have experienced the sharpest increase in comparison to the other sectors changing from 5.6 to 11,59 million tons of CO2e between 2000 and 2016 i.e. more than a 100% increase within 15 years. During the same period, CO2 emissions per capita increased from 0.402 to 0.727 tons. The energy sector currently contributes around 33% to the total GHG emissions generated within in the country. Senegal's primary energy supply is mostly based on fossil fuels (coal and oil) contributes to 64% of total primary energy supply[2]. Furthermore, around 55% of the population in both rural and urban areas is highly dependent on the use of wood fuel for cooking, which is a major driver of deforestation. While 66% of the population has access to electricity, the production of electricity is mostly based on fossil fuel powered plants, which makes the entire power generation dependent on fluctuating petroleum prices. Therefore, as the economy continues to grow, there will be simultaneous growth in energy demand and associated GHG emissions, unless significant decoupling between economic growth and GHG emissions happens.

3. According to the World Resources Institute, agriculture is the most GHG emitting sector in Senegal contributing 34% of the total emissions. Emissions increased since the 1990s by 36%[3], mostly caused by enteric fermentation, manure left on pasture as well as burning savannah. The increase in enteric fermentation is based on the steady expansion of livestock population increasing from some 3 to over 16 million within 10 years[4].

4. In the past decade, variability of rainfalls has increased to the point where farmers experience damaging effects within the agricultural sector including livestock. Only 7% of cultivated land is irrigated, making Senegalese agriculture heavily dependent on rainfall. These changes in climate are already forcing significant changes in agriculture in the country. As an example, the peanut industry, once the motor of the Senegalese economy, was affected by prolonged drought periods and has now been replaced by the production of cereals such as millet, rice and corn, as well as fruits, vegetables, and cassava. Additionally, increasing temperature causes droughts that take a toll on food security resulting in food shortage, such as witnessed in the past decades[5].

Barriers that need to be addressed

5. With a continuously growing economy and a steady population growth, Senegal is heading towards a high emission trajectory in the coming years. According to the latest Africa Energy Outlook of 2019, Senegal's economy can grow six fold while limiting its energy demand by a factor of three, if it increasingly integrates sustainable and renewable energy use[6].

6. SMEs[7] are the key driver of economic growth in Senegal, making up for 90% of local businesses represented by some 300,000 entities. The Agency for the Development and Framework of SMEs in Senegal (ADEPME) is the operational arm of the government responsible for the promotion and support of domestic SMES. Within its Support Program for Solidarity Initiatives for Development (PAISD), ADEPME is promoting the cooperation between banks and SMEs, providing a coaching program on business plan development as well as supporting SMEs in credit risk analysis. However, based on a 2017 survey by the World Bank, Senegalese SMEs regard the access to finance as the biggest barrier to their business, followed by unfair competition from the informal sector and a lack of reliable access to electricity.

7. Despite the recognized importance of innovation in the national economy, there are still a number of challenges that limit Senegalese cleantech SMEs from contributing towards the development and commercialization of cleantech innovations as presented in table 1 below.

- Table 1: Barriers faced by cleantech SMEs in Senegal

Barriers faced by cleantech SMEs in developing and scaling-up innovative cleantech solutions	
Lack of capacity	A lack of capacity by cleantech SMEs is observed in view of: a) lack of key skills and know-how on how to transform a clean 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 c) lack of awareness in the private sector of new developments and trends on cleantech innovations related to their operations, manufacturing and distribution, locally or globally which limits their development d) limited access to international expertise and limited knowledge of markets and potential partners outside their country which could expand their business
Limited access to finance	Limited access to finance is a key barrier for cleantech SMEs at early, growth and scale-up phases since the absence of collateral constitutes one of the biggest burdens in obtaining a loan or securing investments. The reasons include: a) difficulty to access capital for innovation projects that still have technology specific risks and need patient capital or seed and non-dilutive capital b)limited understanding by investors (including venture, impact, institutional investors)of opportunities and specific risk of investing in (local) cleantech markets and cleantech SMEs c) limited awareness of financial schemes and their respective requirements and procedures available to cleantech SMEs as well as limited government financial incentives to support private sector in advancing and adopting innovations 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 cleantech enterprises and potential investors f) entrepreneurs lack the ability to prepare and present adequate business cases and financia l models
Barriers related to cleantech innovation and entrepreneurship ecosystem	
Lack of institutional coordination mechanism	There is a lack of institutional support mechanism to coordinate the work of various ecosyste m players in promoting cleantech innovation that will bring about synergies, complementaritie s and identify opportunities for collaboration. As such, the country needs an institutional fra mework to anchor and also coordinate the work of various ecosystems players that include cl eantech SMEs, enablers (incubators) and pipelines (universities), which would serve as a basi s 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 regulat ory environment that in turn provides a basis for attracting investments. Therefore, it is of utm ost importance to support the development of supportive policies and enabling business envi ronment that encourage investments in cleantech products, businesses and services. Despite of the recently introduced Startup Act that was passed in December 2019, this law still need t o be operationalized. Therefore the operationalization of this Act will create the environment t hat will promote cleantech innovations, their scaling up and deployment.
Weak and disjointed clean technology innovation ecosystem	The cleantech innovation ecosystem in the country is in its formative stages where there are a lot of discontinuities and asymmetries. As an examples, institutions of higher learning do n ot consider themselves as sources of cleantech innovations. The finance sector is not activel y involved in supporting early-stage cleantech innovations as they are considered high risk. Fu rthermore, while the role of cleantech innovation is recognized in general, it is not systematic ally integrated across key economic sectors. Although supportive infrastructure like Kosmos I nnovation center exists, the weak ecosystem does not support the systematic transformation of cleantech innovations into enterprises that contribute towards industrial productivity gains and CO2 emission reductions.
Lack of public awareness	While there is no doubt that climate change is already affecting the country's economy and p opulation, there is still a lack of public awareness regarding the fact that cleantech innovation present an economic opportunity but also helps to reduce GHG emissions. Awareness raisin g of clean technologies is crucial in terms of enhancing the understanding of the public on be nefits derived by the utilization of cleantech products, services and business models as a me ans to put the country on a low GHG emissions trajectory
Lack of trained experts and information a	A significant barrier to a national innovation and acceleration programme for cleantech enter prises in Senegal is the lack of trained experts for mentoring start-ups and entrepreneurs invo lved in cleantech innovations and also a lack of information about technology options best pr

Information about technology	lved in cleantech innovations and also a lack of information about technology options, best practices, and benchmarks within the enterprises

8. Senegal has always accorded importance to the role of research and technology innovation as crucial to economic and social growth. Since the 1970s, the government has made efforts to foster science and technology innovation through creation of dedicated national entities. However, there is not a consolidated, nation-wide Science, Technology and Innovation (STI) policy document, and research mandates and associated institutions are distributed under the supervision of different ministries. At the regional level, Senegal has actively participated in the development and adoption of the STI policy for the ECOWAS. However, the fragmentation of research and innovation institutional frameworks and lack of a consolidated strategy results in the contribution of innovative technology solutions, business models and services to economic development being rather small[8].

9. The engagement of the private sector in STI and R&D is very minimal. Only few companies in the telecommunications sector contribute to the funding of research and innovation. Most R&D funding is provided by the State in the form of grants to the various research structures (universities, public scientific institutions, higher schools, etc.), postgraduate scholarships and competitive funds. In 2015, 85% for R&D in STI came from the Senegalese government, and only 2% from the enterprises[9].

b) The baseline scenario and any associated baseline projects

10. Within the Emerging Senegal Plan (Plan Sénégal Emergent (PSE)) – the country's lead strategy for economic and social policy in the medium and long term - the government prioritizes the promotion of green economy. It clearly calls for the decrease of the degradation of environmental resources and seeks to ensure the protection of biodiversity, encourages the sustainable valorization of natural resources while reinforcing institutional capacities to capture finance for green jobs, as well as calls for the uptake of renewable energy and energy efficiency measures[10].

11. In order to address the increasing pressure on the environment and thus to reduce emission, Senegal, within its Nationally Determined Contribution from 2015, seeks to cut emissions from energy, industry, agriculture and waste sectors by 23%, 10%, 0.5% and 28% respectively[11]. Priority interventions are based on market-based interventions in energy efficiency, utilization of waste, electricity production from bioenergy. The ambition of the NDC centres around the adoption of innovative technologies.

12. The Environmental Code 2001 constitutes the fundamental legal framework for the prevention and fight against pollution and waste as well as the protection of air, water and soil. Equally, the Forest Code 2005 calls for the protection of natural resources and the need to decrease deforestation in the country. Other decrees and orders, such as the national framework for strategic investment and sustainable land management or the biosecurity law call for the need of integrating sustainable management practices across various sectors.

13. According to the World Bank's Ease of Doing Business report, Senegal ranks 129th out of 190 countries in terms of doing business. While the country scores fairly well in terms of entrepreneurs starting a business and some getting a credit, there are several hurdles present for entrepreneurs in the country. One of the main challenges related to constraints related to trade across borders, access to reliable electricity as well as bureaucratic burdens imposed on tax payment procedures. Equally, entrepreneurs face challenges in the registration of property as well as when dealing with construction permits and the enforcement of contracts[12].

14. A strong focus is attributed to digital innovation in Senegal, underlined by public authorities promoting entrepreneurship and innovation through digital technology. The first digital forum was held in mid-2018 in Dakar promoting 'youth and the digital sector' with the aim of financing projects in the ICT sector with 1 billion CFA (USD 1.8 mil). This fiscal support is being used to mobilize proper tools to promote talent amongst the young population who have the assets to exploit new technologies such as cloud computing, big data, the internet of things and artificial intelligence. Existing ICT incubators such as ICTC are focusing on boosting growth of young companies, providing technical advice, business plan training as well as networking and logistics services[13].

15. In late 2019, Senegal became the second country in Africa to pass a Startup Act[14], which aims to promote innovations that support the national economy, by supporting a framework for startups, a legal regime as well develop as a package of incentives[15]. Specifically, the law creates a support and governance framework for startups, as well as a suitable legal regime for the registration and labelling of Senegalese startups. It also creates a resource centre dedicated to startups, and a package of incentive measures. Nevertheless, besides the passing of the Startup act, few initiatives support the uptake of startup companies and SMEs in view of expanding business opportunities. In particular, there is not dedicated support to cleantech entrepreneurs who have innovative technologies, products and business models that need special kind of support.

16. Under the Startup Act, the following provisions are available[16]:

a) Any registered or labeled startup[17] benefits from: customs, social, tax, financial benefits; according to conditions to be defined; providing guarantees for obtaining credit; the implementation of measures favourable to investment; facilitating access to public procurement; and the implementation of support, facilitation, development and capacity-building measures for the startup.

b) The legally registered startup benefits from: subsidies and support for formalization with the State; assumption of contributions and other social charges legally due under his status as an employer; special tax advantages as provided for in the general tax code; facilitation measures and customs procedures; and training and capacity building through the platform set up by the support and coordination committee;

c) Labeled start-ups will benefit from: funds, of public and private origin, intended to directly finance the eligible startups and to guarantee, the execution of contracts, the loans, financing or participations in the capital of startups, granted or made by investment companies, institutions of loans and other financial institutions up to a limit; customs advantages during the period of validity of the label; and a preferential regime for access to public procurement.

17. As energy constitutes one of the most polluting sectors, the National Action Plan for Renewable Energy 2015-2030 calls for the uptake of technology transfer through the integration of innovation efforts in the field of decentralized renewable energy solutions, such as micro and smart grids as to decrease the use of fossil fuels which that are all imported.

18. The Senegalese Agricultural Cadence Acceleration Program (PRACAS), as the main lead document for agricultural policy calls for doubling annual irrigated cultivation in a view of increasing food insecurity and lowering food imports through the use of modern equipment and technologies. Thus, there will be a need for the uptake of clean technologies that allow the sector to grow in a sustainable and green manner, reducing related GHG emissions, such as methane and nitrous oxide.

19. The National Committee on Climate Change (COMNACC) is the main national platform for climate change coordination. It is the body responsible for coordination, consultation, training and management of activities stipulated within the national communication to the UNFCCC. Additionally, the Ministry of Environment and Sustainable Development has initiated the National Climate Fund in 2015, pledging CFA 35bln (USD 65mln) per year to combat climate change focusing on marine protected areas, biodiversity, risk prevention, environmental education, air and climate change as well as sustainable development[18].

20. The African Innovation Outlook III report[19] produced by the African Union in 2019 did not include data regarding engagement and contribution of business and private sector in innovation in Senegal. This is indicative of the lack of data availability and collection efforts in Senegal, while robust data were presented for other countries more active in the innovation space. By inference from the analysis of other African countries in the African Innovation Outlook III, Senegal does not seem to have a significant relationship between STI R&D activities and the products and solutions provided by businesses that enter the market.

21. Despite existing national strategies and priorities identified to foster the uptake of cleantech, the entrepreneurial environment in Senegal is, in general, in a nascent stage – even more so for the cleantech sector. Similar circumstances are witnessed within national policies for boosting innovation ecosystems in Senegal. Only a limited number of associated baseline projects could be found in Senegal. During the PPG phase, efforts will be made to further identify related ongoing initiatives and projects, and how this project will build on and complement them. Some associated baseline projects identified thus far are listed below.

22. As part of the UNIDO Programme for Country Partnership (PCP) for Senegal, UNIDO is assisting the government in mobilizing development partners, UN agencies, development finance institutions (DFIs) and the private sector, under the leadership and ownership of the Senegalese Government, to advance Inclusive and Sustainable Industrial Development (ISID), within the framework of the PSE. The PCP is focusing on three main areas: i) industrial policy development; ii) the establishment of agropoles for agricultural value chains; and iii) the operationalization of existing industrial parks and the development of new ones.

23. The GIZ project, ICT4Agriculture, focuses on putting e-agriculture into practice based on cooperation between ICT specialists and farmers to develop innovative solutions for the local needs of the community, including the awareness raising of the youth towards business possibilities in agriculture through creating a network to link them with successful local start-ups and training services. Ultimately this project will contribute towards the upswing of deprived agricultural sectors, such as the dairy sectors as well as seeking to provide farmers with adequate information on the use of organic fertilizers and products to grow fruits and vegetables[20].

24. Operated within the ACP-EU Cotonou Agreement, Technical Centre for Agricultural and Rural Cooperation ACP-EU (CTA), has established a farmer's hub in late 2019, supporting 22 selected youths from Senegal and Mali in investing in agriculture. The project included training sessions in greenhouse farming and business management, and equipped the agripreneurs with 13 greenhouses, technical equipment such as seedling trays and machinery, and agricultural inputs and plants. In Senegal, this interest and the performance of the agripreneurs has resulted ten hubs generating more than €20,000 in revenue[21].

25. The Innovation, Environment et Development (IED) is an NGO based in Senegal which organizes stakeholder meetings in the attainment of green economy initiatives in West Africa, specifically in Senegal. According to its 2018 report on the green economy initiatives in Senegal, SMEs are key in greening the economy from within, while taking into account the need to restructure the finance system to be more inclined towards green investments[22].

26. The Kosmos Innovation Center (KIC), seeks to invest in young entrepreneurs and small businesses. In partnership with Reach for Change, a global nonprofit, the KIC supports young Senegalese entrepreneurs in developing innovative solutions to challenges facing the agricultural sector. Five entrepreneurs have been selected to take part in the accelerator. KIC's startup accelerator supports entrepreneurs in commercialising their innovative ideas in the agricultural sector. The programme incorporates a selection process, resulting in ten finalists which participate in a boot camp with business specialists, whereas five of those will move on to participate in a six month programme, being guided through all stages of business growth with the ultimate goal to contribute towards a sustainable agricultural industry in Senegal[23].

27. In the absence of the below proposed project, the STI policies in Senegal are likely to remain fragmented, and Senegal's cleantech innovation ecosystem will lack capacity to systematically identify and support innovative cleantech SMEs, products and solutions for market entry. In addition, the early-stage cleantech SMEs will not receive business growth and investment facilitation support that will increase their likelihood of transforming their cleantech innovations into technically and commercially feasible products on the market and contribute towards CO2 emission reductions. Further, without ecosystem develop support, only a few SMEs in Senegal are likely to succeed in introducing cleantech solutions to the market at a price and quality comparable with conventional products with higher environmental footprint. Combined, the opportunity to engage the private sector, especially cleantech SME, in leading the transformative change towards a sustainable and low-carbon development trajectory will be lost.

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

28. 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. Therefore, the proposed alternative scenario aims to 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. Specifically, the project will support the increase of competitiveness of SMEs to develop innovation cleantech solutions and introduce them to the market. This is because market-based dissemination of cleantech products and solutions will directly create environmental benefits, and at the same time contribute to social and economic development of Senegal in line with the priorities outlined in the PSE.

29. In particular, the project will promote cleantech innovation by supporting the strengthening of innovation ecosystems and the acceleration of feasible cleantech innovations, products, services and business models. The above described baseline projects, such as the Kosmos Innovation Center will serve as the basis for this project's intervention by utilizing existing infrastructures such as stakeholders, existing technologies and businesses identified. Moreover, as the country is actively pursuing opportunities for digital innovation, this project will seek synergies in terms of digital applications within the cleantech sector.

30. As agriculture and energy sectors contribute to more than two thirds of GHG emissions in the country, this project will prioritize the uptake of cleantech products, services and business models aligned with these sectors. In particular, solutions that address multiple social, economic and environmental challenges will be given priority. An example would be an innovative clean energy technology solution to reduce carbon footprint in the agricultural value chain contributing to income generation in rural communities. Furthermore, the project will focus on innovations aligned with GEF 7 programming directions

31. The project will be implemented in coordination with the approved GEF project 10408 entitled GEF-UNIDO Global Cleantech Innovation Programme (GCIP) that seeks to support and nurture clean energy technology entrepreneurs and help then transform into fast-growing, scalable enterprises that will attract funding. This means that guidelines, tools and methodologies developed from project 10408 will be made available to this project in Senegal. In addition, by creating partnerships with the partner countries of GCIP, the project will enable Senegalese cleantech SMEs to connect with cleantech ecosystem actors globally. To ensure a sustainable and lasting impact, the project will be closely aligned with national priorities and strategies and will thus seek to coordinate with ongoing initiatives in the country. Furthermore, with Senegal experiencing high economic growth rates and keen on increasing the role of SMEs, the integration of cleantech SMEs into the growth trajectory of the country will effectively reduce the associated increase in GHG emissions.

32. Therefore, GEF funding is requested to remove the barriers currently present in the market and stimulate a long-term shift in SMEs and innovation towards clean energy technologies, and also to establish a sustainable national innovation ecosystem for acceleration and support of SMEs in the field of innovative clean technology to contribute towards a sustainable use of resources, decrease dependency on fossil fuels to reduce GHG emissions as well as lower the amount of waste generated and its associated environmental burdens.

Project Approach

33. The project seeks to strengthen and connect the cleantech innovation and entrepreneurship ecosystem in Senegal by: (i) identifying and nurturing early-stage cleantech innovations into fast-growing, scalable and investable enterprises; (ii) strengthening the capacities of national institutions and other ecosystem players and connecting them; (iii) supporting and working with national policy makers to strengthen the policy framework to support cleantech SMEs.

34. In addition, through connecting with the partner countries of GCIP, the project will enable Senegalese cleantech SMEs to connect with cleantech ecosystem actors regionally and globally and will link the national ecosystem to other ecosystems around the world to promote co-innovation, exchange of lessons, cross fertilizations of ideas and mobilize investments.

35. Through the GEF grant funding the project will catalyze investments to support and accelerate technologies, products and services by cleantech SMEs towards commercialization and mobilizing investment to scale-up. Accordingly, the project is structured into three complimentary components, as shown in the Theory of Change in Figure 1 below, namely:

- Transforming early-stage cleantech innovations into commercial enterprises;
- Cleantech innovation and entrepreneurship ecosystems strengthening and connectivity; and
- Knowledge management, and strategic coordination and coherence with GCIP partner countries

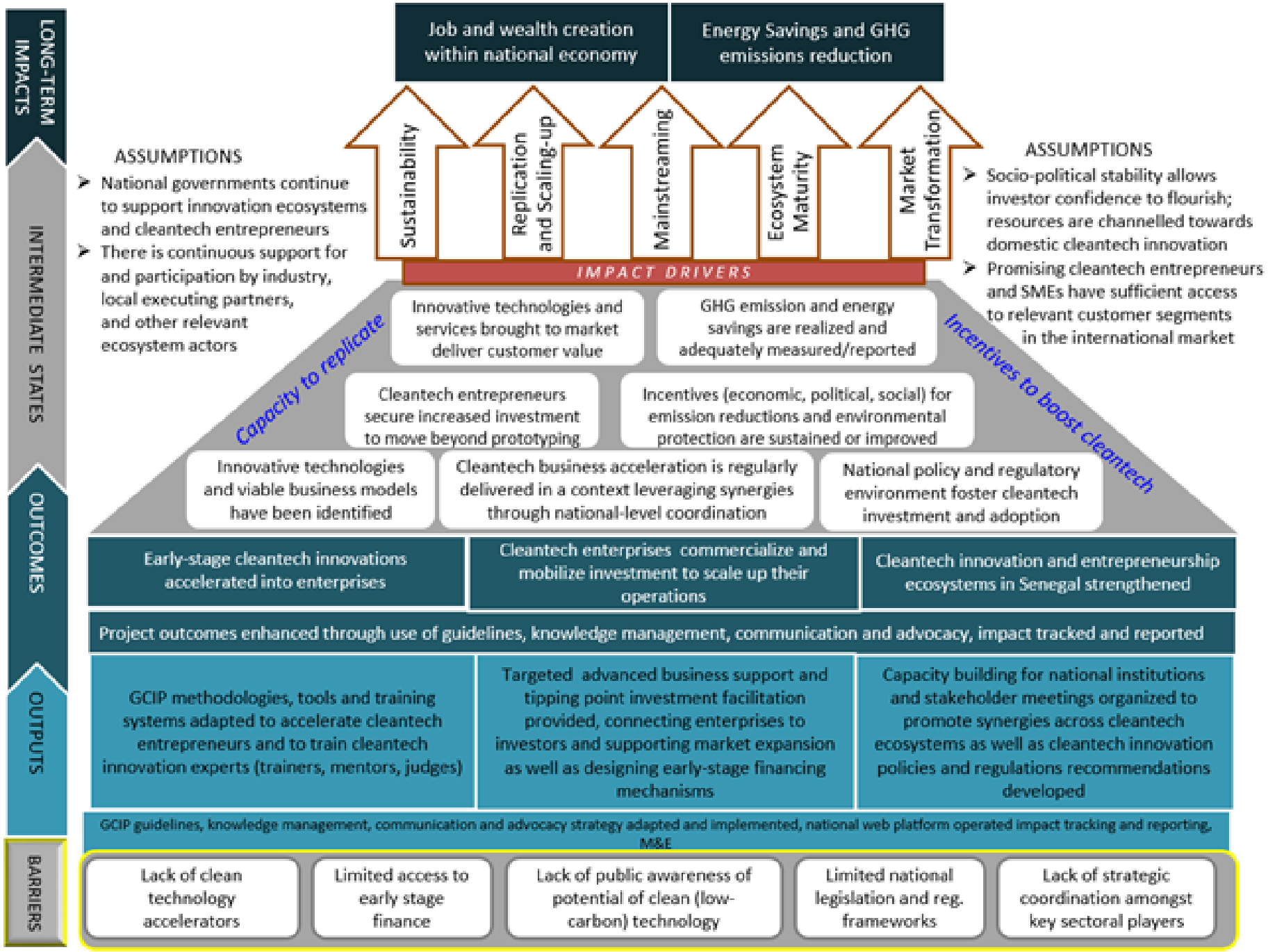

Figure 1: Theory of change

Project Description

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

36. Component 1 focuses on identifying innovative cleantech solutions and business model ideas, and providing entrepreneurial skills and business growth support. Providing direct support to early-stage cleantech SMEs to enhance the capacity and competitiveness for business growth, Senegal's private sector's potential and contribution as cleantech solution providers, and to leverage market opportunities embedded in climate change mitigation enhances. Outcome 1.1 focuses on very early-stage innovative cleantech solutions and provides business acceleration support related to entrepreneurship and business skills training. Outcome 1.2 provides targeted technical assistance to the cleantech SMEs at growth stages that demonstrate traction and sales evidence, and can benefit from specialized enterprise growth support. Furthermore, cleantech SMEs in the expansion stage will receive investment facilitation and mentoring services towards financing, piloting and commercialization.

Outcome 1.1: Early-stage cleantech innovations accelerated into enterprises

37. Early stage cleantech innovations with high impact potential for climate, environment and social benefits will receive business acceleration support for increased market and investment readiness. The selection criteria for innovations to receive support will be determined in alignment with the national priorities outlined in the Plan Senegal Emergent, the INDC targets, and other key policies and strategic documents in consultation with key stakeholders, and will be aligned with GEF 7 programing directions

38. This project will benefit from the GCIP tools, approach and methodologies on how to promote cleantech innovation and entrepreneurship in developing and emerging economy countries as developed under GEF project 10408. 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 Senegal within this project.

39. The diagram below shows the types of assistance required by cleantech SME, depending on their stage of growth, based on which the GCIP approach is built where outcome 1.1 focusses on early-stage cleantech SMEs while outcome 1.2 will focus on growth and expansion stage cleantech SMEs

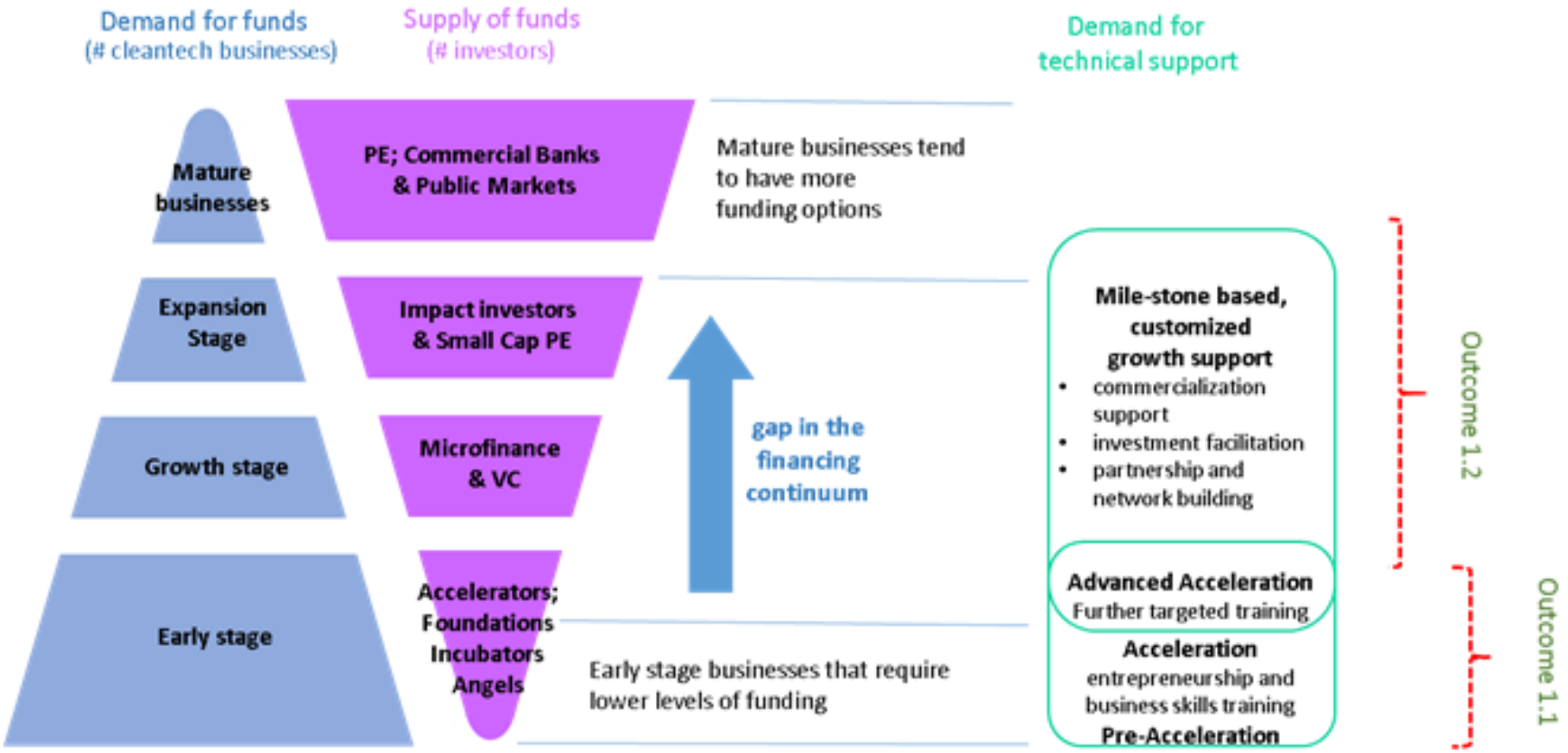

Figure 2: Demand for funds and technical support per development stage

Output 1.1.1 GCIP methodologies, guidelines, tools and training systems for cleantech innovation and entrepreneurship accelerator adapted for Senegal

40. 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 Senegal. These guidebooks will be reviewed and adapted by the national Project Executing Entity (PEE) to reflect the context of Senegal's cleantech ecosystem including market conditions, policy environment, development priorities, technology priorities, local examples etc., in particular, the 2019 Start-up Act. Three Accelerator Guidebooks will be developed on i) acceleration; ii) advanced acceleration; and iii) post-acceleration support. These guidebooks will define the scope, criteria and awards categories of the Accelerator in consultation with Senegal's ecosystem actors, including the government, business and civil organization stakeholders and so be aligned with their priorities and in line with the country's innovation potential. The level of innovation to be eligible to receive support through the Accelerator will also be specified during the review of the guidebooks, as well as the selection criteria of the Accelerator.

Output 1.1.2 Pool of cleantech innovation and entrepreneurship experts (trainers, mentors and judges) trained and certified to support cleantech innovation and entrepreneurship accelerator in line with GCIP training system

41. 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 as well as their long-term sustainability. 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 developed under UNIDO/GEF project 10408 will be employed by the project. Similar to the accelerator guidebooks, the training system will be reviewed by the Senegal PEE and adapted for the national context, ensuring that the training materials accurately reflect market, business, policy, and investment climates.

42. 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 Five annual national competition-based cleantech innovation and entrepreneurship accelerators conducted

43. Five annual competition-based cleantech innovation and entrepreneurship accelerators will be conducted, based on the guidebooks and tools developed under output 1.1.1. The GCIP Accelerator is a 4 to 6 month curriculum designed specifically to support cleantech innovations stemming from developing and emerging countries, to develop viable business models and grow cleantech enterprises. Typically about 25 enterprises are supported through each Accelerator cycle. Through the GCIP Accelerator, a cohort of cleantech SMEs with high-impact potential are identified and invited to receive intensive business and entrepreneurship mentoring and coaching to accelerate their growth as businesses. Support is provided to improve their business skills and investor pitch and in connecting them to potential business partners, financiers or investors. The goal is for participating enterprises to validate, among others, their market, product and technology leading to their first investment and customer. The tailored mentoring programme combines international expertise through an ongoing training programme with carefully chosen mentors to support the entrepreneur teams. Specific guidance will be provided to help the enterprises to maximize their potential climate benefits and to minimize any negative environmental or social impacts identified, particularly relating to local climate risks.

44. The national Accelerator cycle of Senegal will be guided by a general timeline recommended by UNIDO that aims to leverage the ongoing cycles across the global programme and allows Senegal to align with some GCIP-wide activities where possible (e.g. online webinars, participation at the global forum, etc.).

45. In terms of selection criteria, priority will be given to innovations with significant GHG reduction potential, which will be determined through the reduction potential of the innovation (technology or business model) itself, and the estimated market and business potential which will determine the up-take of the innovation. Accordingly, selection criteria of the Accelerator will include a threshold for the projected environmental impact per USD for supported technologies (see section 6). Women and youth empowerment and entrepreneurship will also be a key consideration in the selection process into the Accelerator (see section 3).

46. As energy and agriculture have been identified as key sectors responsible for more than two thirds of GHG emissions in the country, and at the same time as sectors with potential to contribute the most to economic growth of the country, the Accelerator will identify and support innovations in these sectors. Clean energy and agriculture technology categories will be in line with GEF7 priorities e.g. de-centralized renewable power with energy storage; electric drive technologies and electric mobility; accelerating energy efficiency adoption; and cleantech innovation.

47. Senegal may require pre-acceleration support activities to enable the early stage teams in their pipeline to develop their initial concepts, team and communication. This could consist of workshops, hackathons, start-up camps or mini-competitions. These activities and events would take place before the launch of the main national accelerator and would be focused on improving concept formation and proof of concept, leading to increasing the applicant pool whilst simultaneously improving the ability of each team to communicate and initially validate their concept.

Outcome 1.2 Cleantech enterprises commercialize and mobilize investment to scale up their operations

48. 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 advanced business growth support services provided to selected cleantech enterprises towards commercialization

49. The GCIP guidebooks adapted to Senegal's ecosystem context (under output 1.1.1) will be the basis of executing this output. The 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. Market conditions and market demand created by national policies and development priorities of Senegal will be an integral part of the business model development and market potential of the innovations, and will therefore innovations supported under this output will further contribute to the national development priorities of Senegal.

50. As each innovation and enterprise is different and will require customized support, 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 receive tipping-point investment facilitation support and are connected to investors and financing opportunities

51. 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. Two dimensions of investment facilitation are i) equipping the enterprises to address the investment decision criteria of the financiers, and ii) identifying the right type of financiers and vehicles most adequate for the innovation and development stage of the enterprise, and raising their awareness of investor and financial institutions of the investment potential and benefits in cleantech.

52. Therefore, in addition to increasing the competitiveness of the enterprises with the investment readiness, the 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.

Output 1.2.3 Mentoring and partnership support provided to cleantech enterprises for global market expansion in collaboration with the GCIP network

53. Many cleantech innovations have potential for replication in other developing countries. In particular, cleantech SMEs in Senegal will have huge potential to expand their businesses and introduce their products in the ECOWAS region, as ECOWAS member states share similar environmental challenges, market conditions and industry structures especially in the energy and agricultural sectors. This is highlighted by the fact that ECOWAS region employs a consolidated approach in addressing energy challenges through the ECOWAS Renewable Energy Policy (EREP) and the ECOWAS Energy Efficiency Policy (EEEP), which provides strong policy signals to the region's energy markets and cleantech solutions therein. Therefore, under this output, the project will provide dedicated support to Senegal's cleantech enterprises to explore expansion opportunities in other ECOWAS countries. In addition, Senegal is considered a regional economic hub, and there is migration and market connectivity between Senegal and other Francophone countries like Mali, Mauritania, Guinea, as well as the Gambia. Oolu Solar (https://oolusolar.com) is an example of a successful cleantech company headquartered in Senegal that demonstrates regional replication potential of cleantech solutions in the ECOWAS region. Oolu provides off-grid solar solutions and scaled-up pay-as-you-go technology in the West African market. To date, the company raised 3.2 mil USD in series A funding and are currently closing their series B, and now operates in Mali, Burkina Faso, Niger and Nigeria. In addition to regional expansion opportunities, SMEs in Senegal will also be introduced to international mentors through the GCIP network of mentors on a needs-basis, in their respective target country of expansion to facilitate building of connections and networks for expansion into a new market. Through the web platform, enterprises will be given peer networking opportunities with GCIP 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

54. Early-stage investment funds and impact investment funds are required to support early-stage cleantech SMEs during and post acceleration. Under this output, the critical funding gaps within the early-stage cleantech SME journey will be identified, based on which a sustainable funding mechanism will be designed and resource mobilization will be conducted for its establishment and operation. The design of the financial mechanism foresees the active involvement and participation of domestic financial institutions as well as possible interaction with multilateral/regional development banks. There are several projects in Senegal financed by the African Development Bank, such as the South Agro-Industrial Processing Zone Project (PZTA-SUD), and Agropole Sud. National financial institutions including as micro-finance institutions will be consulted and involved in the design of the financing mechanisms as to include on the ground knowledge and networks. Such microfinance institutions may include FDEA, Fides Microfinance Senegal, Baobab Senegal, COFINA Senegal, Microcred Mbour and Groupe Cofina. Within stakeholder consultations, during the PPG phase, more information will be gathered, and suitable financial institutions will be identified. Depending on local needs identified, GEF funding will be leveraged for co-financing and investments.

Component 2 Cleantech innovation and entrepreneurship ecosystems strengthening and connectivity

Outcome 2.1 Cleantech innovation and entrepreneurship ecosystems in Senegal strengthened

55. 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 national institutional capacity in key national ecosystem players, as well as the national PEE, to engage in cleantech acceleration and commercialization in Senegal.

56. Further, the proposed project will assist Senegal 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. This component will be designed to complement national policies and processes, such as the 2019 Senegal Startup Act, to establish an incentive framework for the creation and development of startups in Senegal based on creativity, innovation, the use of new technologies, the achievement of high added value as well national and international competitiveness.

57. This component will also 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 Senegal. 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.

58. 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 National cleantech innovation and entrepreneurship support institutions (i.e. funding agencies and industry associations etc.) are trained to promote cleantech innovations and entrepreneurship

59. A cleantech innovation and entrepreneurship ecosystem (CIEE) assessment will be conducted to analyze the strengths and weaknesses of Senegal'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.

60. This output will also serve as a structured stakeholder consultation and engagement process at the start of project implementation. The CIEE assessment will be updated at least once during the project period as a means to measure impact achieved through project activities on the CIEE of Senegal.

Output 2.1.2 Recommendations on policies and regulations to promote cleantech innovation and entrepreneurship developed (gender-responsive)

61. 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 national government in developing policies, regulations and incentives required to promote cleantech innovations.

62. 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 that also provides policy requirements and recommendations. This analysis and recommendations will form the basis of policy dialogues and consultations, which will discuss operationalization of the recommendations, and also strategies on how the government can adopt selected recommendations into enforceable action plans that are fully aligned and integrated with Senegal's climate change, energy and agriculture policies and strategies such as the Plan Emergant, the renewable energy plan and the major agricultural strategies such as the PRACAS. Stakeholder mapping will be conducted to ensure that all key ministries, financial institutions and civil society organizations are engaged in such discussions so that the recommendations have a higher chance of influencing and being adopted into policy frameworks and action plans.

Output 2.1.3 Meetings for ecosystem players organized to promote linkages, collaboration and to facilitate the generation, exchange and dissemination of knowledge products

63. 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. National investor forums and awards event will be organized in conjunction with outcome 1 of the project to encourage linkages, collaboration and synergies across the CIEE.

64. Key stakeholders will be incited to the national GCIP Forum will be organized annually, to further facilitate ecosystem connectivity. It will be an opportunity for the project representatives and top-performing enterprises to be connected with potential partners, customers, technology scouts and investors. At the regional and global levels, Senegalese cleantech SMEs and key ecosystem players will be invited to participate in GCIP-wide events (including the global GCIP Forum) organized in and for GCIP partner countries around the world. This provides alumni enterprises with exposure to the global community, and the opportunity to forge new partnerships for co-innovations and joint ventures. The global 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 coordination with GCIP at the programmatic level

65. This component brings value addition to the implementation and execution of this project in coordination with GCIP, where all partner countries will contribute to and 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 national PEEs. 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: GCIP internal operational guidelines adapted and implemented for programmatic coherence

66. The project will benefit from coordination with the GCIP, and the programme's internal guidelines will be provided by UNIDO with operational guidelines for the Project Management Unit (PMU) to be established within the national PEE. Workshops and trainings for the PMU will be an important channel for coordination with GCIP-wide efforts, and therefore the Senegal PMU will be invited to review and discuss the GCIP approach and methodologies with GCIP national PMUs of other partner countries, and share experiences and insights. In addition, a sustainability and exit strategy of GCIP will be developed.

*Please note that the scope of output 1.1.1 is of a technical nature, that focuses on the best approach and methodology for supporting early-stage cleantech enterprises in developing countries. The tools and guidelines provided for review and adaption to Senegal will be specific to knowledge expertise and skills concerning the execution of the national cleantech business accelerator (output 1.1.3), and to the execution of post-acceleration support (outcome 1.2).

Output 3.1.1 is broader in scope, with emphasis on maximizing efficiency and synergies among projects benefiting from the GCIP's programmatic approach, and will contribute to coordination and coherence among GCIP projects. Tools and guidelines provided under 3.1.1 aim to support the PEEs with project execution and operationalization overall, and will also be a channel for PEEs of GCIP projects in different countries to share best practices and lessons learned.

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

67. 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.

68. 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.

69. The GCIP-wide knowledge management, communication and advocacy strategy will be made available and the national PEE will review and adapt the strategy for operationalization in Senegal as appropriate.

Output 3.1.3 National web platform operated as part of the GCIP global web platform to connect national ecosystem and coordinate the global GCIP community

70. A web-platform will be established and maintained, as a tool for four key functions:

o First as an internal management and operations tool. Guidelines, tools and other knowledge products developed will be disseminated through the web platform.

o 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.).

o Third is connecting national ecosystem players. 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.

o Fourthly, the website will be linked to the global web platform to connect Senegal to the broader GCIP community globally.

71. The web platform for GCIP Senegal will be designed and developed in conjunction wit the GCIP-wide guidelines and templates, to reap benefits of the plug-and-play approach of GCIP and to maximize synergies and efficiencies of linking with other GCIP partner countries.

Component 4 Monitoring and evaluation

Outcome 4.1 Impact of project tracked and reported

Output 4.1.1 Environmental impacts of project estimated, tracked and reported

72. The project will collect information on outcomes and higher level impacts/ results. At 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. A GCIP methodology will be used to monitor impact within this project.

73. Dedicated resources will be assigned to track and monitor the business growth, social and environmental impact of the GCIP alumni enterprises in Senegal. Alumni enterprises will be expected to periodically provide relevant data to the national organization for a period into the future, when the impacts will be primarily felt, and can be quantified and verified. The data will be used to create content for promotion and advocacy purposes (news articles, social

media posts, brochure and leaflets, videos etc.) that are tailored to diverse types of audiences (investors, national government agencies, donors, students). This will benefit the GCIP alumni enterprises by providing increased credibility and visibility. Monitoring data will be shared with UNIDO to consolidate the impact of GCIP as a global initiative.

74. The national 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.

Output 4.1.2 Project progress monitoring and reporting as per UNIDO and GEF guidelines

75. 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 national PEE and project partners at the beginning of project implementation and then periodically updated. GCIP M&E framework may be employed and adapted for this project as appropriate.

Output 4.1.3 Independent mid-term review and terminal evaluation conducted

76. A mid-term review of the project will be conducted halfway through the project implementation period. An independent terminal evaluation will be conducted three months prior to the terminal review meeting. The terminal 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.

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

77. 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.

78. 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.

79. 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 Senegal’s energy and climate change priorities but will focus on GEF 7 programming directions priorities i.e. mini grids with storage, energy efficiency, e-mobility etc.

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

80. Senegal has clearly prioritized the creation of green industries and jobs in its national development strategies. Simultaneously, the country's innovation strategy is pushing for the uptake of investments in the innovation sector. However, significant barriers still exist as cleantech SMEs with breakthrough cleantech innovations have a very low success rate. Barriers include a lack of key skills and capacities to transform their innovations into viable, scalable and fast growing enterprises and a lack of linkages between the support services required to facilitate innovation and entrepreneurship. In essence the innovation and entrepreneurship ecosystem in Senegal is weak and will continue to be so.

81. The project will coordinate and create synergies with associated baseline activities and the existing innovation infrastructure, such as the Kosmos Innovation Center. As there is an existing national innovation center, which has already conducted some accelerators and provided support to start-ups and SMEs helping young business leaders in Senegal to develop technical skills needed to grow successful and sustainable businesses – this project will further build on the lessons learned and experiences made from the innovation center.

82. The GEF funding of 2,3 million US$ is estimated to catalyze co-financing of 12 million US$ from both public and private sectors with the mandate and interest to invest in cleantech solutions. This achieves cost-effectiveness of approximately 5.2 US$ mobilized per 1 US$ of GEF grant funding. Co-financing will be mobilized from public and private financial institutions, investors and corporations interested to invest in or purchase solutions for GHG emission reduction will consider the project activities as risk mitigation measures when considering the enterprises and their cleantech solutions that received support from the Accelerator. The project is essentially providing a pipeline of cleantech solutions that have been pre-selected and nurtured for increased competitiveness in the market. In addition, through national ecosystem strengthening activities, the project will enhance awareness and visibility of business and investment opportunities in the cleantech sector, thereby prompting further interest and financial flows.

83. It is expected that the major part of co-financing will be provided by the National Climate Fund and other private sector investors that will invest in the cleantech SMEs and their project. The national climate fund is responsible for fostering investment in climate change mitigation and adaptation projects in Senegal. This fund has pledged to mobilize 60 million USD per year to combat climate change in Senegal. Further discussion will be conducted to concretize the co-financing during the stakeholder consultations of the PPG phase. Particular efforts will be made to engage other potential financiers and the private sector in general, and link them to cleantech SMEs supported by the project.

84. If GEF funding is not provided, it is very likely that clean technology innovations will not be adequately developed in Senegal (or only at a very low levels). Cleantech enterprises will continue to lack key skills on transforming their innovations into enterprises. Furthermore, cleantech SMEs will not be able to secure growth and expansion stage funding. 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 commercialization of cleantech innovation and ultimately in missed opportunities for green economic growth and jobs.

85. Furthermore, through the link to the UNIDO/GEF programme 10408, Senegal's cleantech ecosystem will benefit from cross-border connectivity and synergies with ecosystems of other GCIP partner countries, leading to bigger market opportunities for Senegalese cleantech SMEs to expand their businesses and hence increase their success rates and results in greater GHG emission mitigation efforts. Market expansion potential for cleantech solutions from Senegal to the ECOWAS region is high, as the ECOWAS member states share similar environmental challenges, market conditions and industry structures especially in the energy and agricultural sectors. Therefore, the project will provide dedicated support to the cleantech enterprises under outputs 1.2.2. and 1.2.3 in exploring expansion opportunities in other ECOWAS countries. In addition, the project is expected to lead to a long-term shift in cleantech innovation and entrepreneurship in Senegal which will create green jobs while contributing to GHG emission reductions and global environmental sustainability. Specifically, the project will build capacity of key ecosystem players and connect them so that they can, in the long run, continue to systematically support the

development and commercialization of cleantech innovations. Approximately 125 cleantech SMEs will be supported for business acceleration, and 30 received investment facilitation services so that they reach financial closure and market expansion beyond Senegal; none of which would be achieved without the project.

f) global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF)

86. The long-term lifetime of innovative cleantech solutions introduced in the market will be reflected in multiple environmental benefits, and primarily as GHG emission reductions. The environmental benefits achieved through the programme will be measured and quantified on the basis of the innovations marketed and their uptake. Given the nature of the programme, the innovative cleantech solutions and products developed and commercialized will achieve environmental benefits beyond the project life and scope. By definition, this project encourages open innovation, therefore estimating a priori the emission reduction potential of innovations supported through the project has proven to be difficult since the types and categories of innovative cleantech solutions that will be supported will be determined during the selection of semi-finalists as part of the annual accelerators.

87. Based on a survey and review of current methodologies for estimating GHG emission avoidance from products and services, it was found that most methodologies for measuring GHG emissions mitigation related to company-based, location-based or project-based emissions rather than to the avoided emissions resulting from a new product or service which could have significant potential to contribute to reduce greenhouse gas (GHG) emissions in society.

88. There are 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'[24], UN Global Compact: Low-emission leaders: transformative calculations[25] 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.

89. Other initiatives include: Mission Innovation's (MI) Framework for Assessing Avoided Emissions[26] 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[27] 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.

90. Based on the review of existing GEB calculation methodologies, GCIP has developed a methodology for estimating GHG reduction potential of cleantech innovations. The project will employ the methodology and tools developed and approved under GCIP (GEF program 10408). The GCIP estimation methodology is described below.

91. In order to ensure that GCIP supports innovative cleantech solutions with high impact potential, and delivery of GEBs at the GCIP programme level, a target approach is applied. This will entail placing a benchmark for the estimated GEB potential of the cleantech innovations during the application stage of the accelerator, to ensure that the cleantech solutions supported under the GCIP have high-impact potential for GEBs, and that all solutions will cumulatively meet the target set for GCIP.

92. As this project benefits from the programmatic approach of its informal parent programme, (UNIDO/GEF programme 10408), the project's GEB estimate also employs the GCIP calculation methodology, where the target of between 5 to 10 USD/tCO2e avoided emissions is set in consideration of the cost-effectiveness of GEF funding in generating GEBs. To equate this to a minimum projected potential target for avoided GHG emissions per cleantech solution, the 5-10 USD/tCO2e was applied to the USD 18 million of GEF funding for the whole GCIP framework programme. This would mean delivering between 1.8 million and 3.6 million tCO2e by 2030. As almost 1000 cleantech solutions across ten countries are expected to be supported through the global programme, this equates to a target for the minimum projected potential of avoided GHG emissions per cleantech solution would be between 1,800 to 3,600 tCO2e by 2030. The provided target range for reduction 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. This will allow innovations into the accelerators with lower CO2 reduction potential, but which explore new market applications, as well as innovations creating multiple benefits (including social indicators such as job creation, innovations contributing to gender dimensions).

93. This benchmark will guide the project to take into account the GEB potential as a key criterion in accepting applications into the accelerator. Through awareness raising and promotional activities during the call for applications phase, the applicants will be supported in calculating GHG emission reduction potential of their innovations. If the projected GHG emission reduction does not meet the minimum requirement set, the innovation will not be accepted into the accelerator, on the basis that those innovations do not have high-impact potential[28].

94. In addition, indirect GEBs facilitated through the cleantech ecosystem strengthening are also expected. In particular, indirect GHG emission reductions could result from a broader impact of the outcomes of GCIP including: strengthened capacity of institutions and human resources and improvements to the policy and regulatory framework which 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. Broader adoption of GCIP impact can take place through several processes including sustaining, mainstreaming, replication, scaling-up and market change [29]. 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 through terminal evaluations.

95. Employing the above described GCIP methodology, as the project will support 125 enterprises through five cycles of the accelerator (approx. 25 semi-finalists per cycle x 5 cycles = 125 enterprises), the target range of GHG emissions avoided is as below. Please note that the lower range has been used as input to the GEF corporate core GHG indicator target (indicator 6) as a conservative estimation.

	Target range of for GHG emissions avoided (10 year horizon, tCO2e) **per innovation**	No. Of innovations to be supported through the accelerator	Target range* for GHG emissions avoided (10 year horizon, tCO2e) **through the project**	
			Direct	Indirect
Senegal	1,800 – 3,600	125	225, 000 – 450,000	1,125,000 – 2,250,000

96. During the accelerator, further training will be provided as part of the curriculum regarding estimating GEBs of cleantech solutions, and how to monitor and capture actual impact versus estimates. In order to report on the GEBs achieved, annual monitoring exercise of alumni will be conducted by the Global

GCIP platform.

97. 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. To ensure coherence in the calculation methodologies, the type of GEB and the corresponding calculation methodology will be identified and determined/developed under the global child project, and disseminated for application and data collection.

98. Other environmental co-benefits are also expected to result from this project. These are likely to include reduction in waste in the environment, reduction in air pollutants (e.g. Nox, Sox, PM and CO), improved water quality and reductions in material use.

99. Expected difficulties in the GCIP approach include, difficulty in determining the incremental GEBs of the cleantech solutions directly attributable to GCIP support. To facilitate future tracking all Accelerator participants will receive training (as part of the Accelerator) to provide global environment benefits estimation of their innovations.

g) Innovation, sustainability and potential for scaling up

Innovation

100. This project is unique in its approach of fostering the expansion of cleantech SMEs into cleantech products and markets. From the assessment of the current policy framework and the identification of innovative technologies to their development and commercialization, the project supports entrepreneurs across the whole innovation value chain to develop demand-driven and investment-ready climate solutions that will have a real impact in Senegal and global markets. In contrast to other accelerators and incubator programmes, this project not only promotes innovation per se 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.

101. In particular, this approach brings innovation to Senegal as there is currently no coordinated effort to increase the competitiveness of the SME sector in Senegal to develop and commercialize cleantech solutions and introduce them to the market.

Sustainability

102. 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 Senegal. The mainstreaming of cleantech innovations that will continue beyond this project will ultimately result in the decoupling of economic growth from GHG emission increase. 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. The comprehensive training and certification conducted under output 1.1.2 will create a critical mass of cleantech experts that will continue to impact the ecosystem to identify and support cleantech innovations through business growth and towards commercialization.

103. 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.

104. The ecosystem approach of this project also ensures sustainability of the project interventions. Component 2 focuses on strengthening the cleantech ecosystem of Senegal through developing suitable national policies and regulations that create an enabling business environment for cleantech innovation and commercialization. The policy framework that is built and strengthened through the project is expected to have long-lasting impact on Senegal's enabling environment to develop and disseminate cleantech solutions and their uptake in the market. To increase the likelihood of the project's activities leading to policy adoption, robust stakeholder mapping will be conducted to ensure that all key actors are engaged in the policy dialogues. Further, the iterative consultation processes and policy dialogues facilitated through the project will raise awareness and deepen understanding of institutions and individual experts that will have long-term impact on Senegal's cleantech ecosystem.

105. The project will closely work with the proposed project executing entity and associated agencies to strengthen its institutional capacity in order to effectively absorb the knowledge and technical capacity. In particular, strengthening the capacity within the PEE to conduct the national accelerator with public and private funding post project closure will ensure sustainability of the project's impacts, as shown through previous GCIP partner countries. Sustainability and exit strategies will be provided by GCIP as a template and guideline, which will then be reviewed and adapted for Senegal. The sustainability of the project is reinforced by the following:

- During and post the Senegal 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 Senegalese 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 finance thereby bringing their businesses into full sustainability;

- 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 an continuous access to these tools and apply them to sustain the GCIP 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 GCIP processes and practices so as to ensure adherence to the highest quality of norms. Such norms will guarantee that the GCIP 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

106. The post-acceleration support including investment facilitation and commercialization services will increase scale-up potential of the innovations identified by the accelerator. By continuously providing support to GCIP alumni enterprises and other eligible cleantech innovators, the project is expected to effectively increase job creation, competitiveness, wealth generation and GHG emission reductions. It is also expected that the project will serve as a catalytic force to advance the cleantech innovation and entrepreneurship ecosystem in Senegal as well as to coordinate and maximize the synergies with national and international relevant players.

107. An exit and scale- up strategy will be developed for Senegal based on the GCIP model. It is likely to include interventions outlined below such as:

- identify and work with institutions that will retain the knowledge and skills developed under the project;
- pursue country ownership through engagement of relevant public and private sector actors;
- build local capacities (trainers, mentors, judges) to sustain the ongoing organization of the accelerator;
- ensure access to training materials and infrastructure to manage applications (whether local, international, or centrally-shared);
- provide clarity about the point at which exit will take place, based on targets and outcomes; and
- engage in a handover process and transition where UNIDO support is phased out.

References

[1] https://www.worldbank.org/en/country/senegal/overview

[2] https://www.iea.org/countries/Senegal

[3] https://www.climatewatchdata.org/ghg-emissions?breakBy=regions-ABSOLUTE_VALUE&regions=SEN

[4] https://www.climatelinks.org/sites/default/files/asset/document/2016_USAID_Senegal%20GHG%20Emissions%20Fact%20Sheet.pdf

[5] https://cgspace.cgiar.org/bitstream/handle/10568/21195/Samari%202011%20Mali%20-%20State%20of%20climate%20change%20adaptation%20and%20mitigation%20efforts.pdf

[6] https://iea.blob.core.windows.net/assets/1d996108-18cc-41d7-9da3-55496cec6310/AEO2019_SENEGAL.pdf

[7] SMEs in the document are defined to mean entrepreneurs, start-ups, micro, medium and small scale enterprises

[8] http://www.tipconsortium.net/resource/developing-a-transformative-innovation-policy-approach-the-case-of-senegal

[9] ibid.

[10] https://www.ipar.sn/IMG/pdf/plan_senegal_emergent_pse_et_changements_Climats.pdf

[11] https://www4.unfccc.int/sites/submissions/INDC/Published%20Documents/Senegal/1/CPDN%20-%20S%C3%A9n%C3%A9gal.pdf

[12] https://www.doingbusiness.org/content/dam/doingBusiness/country/s/senegal/SEN.pdf

[13] https://www.cticdakar.com/incubaction-ictc-dakar-welcomes-new-incubates/

[14] http://www.numerique.gouv.sn/mediatheque/documentation/loi-relative-%C3%A0-la-cr%C3%A9ation-et-%C3%A0-la-promotion-de-la-startup-au-s%C3%A9n%C3%A9gal

[15] https://disrupt-africa.com/2019/12/senegal-becomes-2nd-african-nation-to-pass-startup-act/

[16] https://www.nkac-audit.com/en/resume-des-dispositions-et-incitations-de-la-loi-startup-act-au-senegal/

[17] For the purposes of the Start-up, the following definitions apply:

•Startup promoter: Any natural person carrying an innovative project with very high potential and whose realization intervenes within the framework of a company of Senegalese law legally constituted;

•Startup: Innovative and agile company, legally constituted for less than eight years, with a strong growth potential in search of a disruptive economic model and financing mechanisms adapted to its specificity in order to deploy its exceptional capacity for value creation.

•Registered startup: The startup that registers with an approved or public private support structure;

•Labeled startup: The startup to which the competent body issues the label referred to in article 7 of this law.

[18] http://www.environnement.gouv.sn/lesactualites/fonds-national-climat-35-milliards-fcfa-par-pour-lutter-contre-les-d%C3%A9r%C3%A8glements

[19] https://au.int/sites/default/files/documents/38122-doc-aio_3rd_edition_final_eng_repro.pdf

[20] http://www.innovation-factory.info/ict4agriculture/ict4agriculture-senegal/

[21] https://www.cta.int/en/blog/all/article/farmers-hub-introducing-young-agripreneurs-from-the-sahel-to-innovative-greenhouse-farming-sid0caf1299c-aef1-4f22-bc89-010a03a81949

[22] http://www.iedafrique.org/Barometre-de-l-economie-verte-du-Senegal-2018.html

[23] https://www.kosmosinnovationcenter.com/senegal/

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

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

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

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

[28] The GHG reduction estimations will be one of the selection criterion, and other criteria such as market potential, business growth potential etc. will be employed in the selection process.

[29] As the indirect, consequential emission reductions will be achieved after end of GCIP activities, and will occur outside of the project logical framework, the difficulty in providing an estimation of the indirect GEBs achieved must be noted.

•

1b. Project Map and Coordinates

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


Senegal
100 Km
100 Miles
N
Rosso
Senegal R
Parc national des oiseaux Djoudj
Saint-Louis
Kaedi
Northern Senegal
MAURITANIA
Atlantic Ocean
Louga
Matam
Cap Vert-Thies
Touba
Thies
Dakar
Diouribel
Fatick
Central Senegal
Kayes
Saloum Delta
Kaolack
MALI
Tambacounda
Banjul
Gambia R
GAMBIA
Tambacounda
Casamance
Kafountine
Bignona
Kolda
Nikalo-Koba NP
Casamance R
Kedougou
Ziguinchor
GUINEA-BISSAU
GUINEA

2. Stakeholders

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

Indigenous Peoples and Local Communities No

Civil Society Organizations Yes

Private Sector Entities Yes

If none of the above,please explain why:

108. UNIDO conducted online discussions with private sector companies that would be interested in innovations around mini-grids storage, energy efficiency and e-mobility as well as other cleantech innovation sectors. In addition, initial discussions were held with civil society organizations with mandate on 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 Dakar. Furthermore, additional stakeholders were engaged on margins of other meetings related to ongoing UNIDO projects, such as "Environmentally Sound Management of Municipal and Hazardous Solid Waste to Reduce Emission of Unintentional POPs" (GEF ID 4888) and the Senegal Sustainable Cities Initiative (GEF ID 9123). 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 and responsibilities of key stakeholders.

Stakeholders	Envisaged role	Means of engagement*
Ministry of Environment and Sustainable Development	The Ministry of Environment and Sustainable Development is nominated as the main project executing entity.	Email communications, periodic progress reporting meetings (conference calls), PSC meetings
United Nations Industrial Development Organization (UNIDO)	UNIDO, as a GEF Agency, is responsible for the implementation of the project/program, which entails oversight of project execution to ensure that the project is carried out in accordance with agreed standards and requirements.	Email communications, periodic progress reporting meetings (conference calls), PSC meetings
Relevant Ministries: National Climate Fund (FNC) Ministry of Industrial Development and Small and Medium Industries	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	Email communications, PSC meetings (online or offline)

Ministry of Commerce and SMEs Ministry of Petroleum and Energy Ministry of Agriculture and Rural Development Ministry of Economy and Cooperation Planning Ministry of Microfinance and Social Economy Ministry of Youth	nologies.	
Academic Institutions: Alioune Diop University of Bambey Cheikh Anta Diop University Gaston Berger University Thies University Ziguinchor University	Academic institutions constitute the backbone of research and innovation activities worldwide. Therefore they are essential in the area of knowledge accumulation and dissemination management.	News letters, project website, social media platforms (linkedIn, Twitter etc.), invitation to webinars and/or workshops
Industry Associations and Civil Society Organizations Agency for Industrial Property and Innovation Technology (ASPIT) ANER National Agency for Renewable Energies SME Development and Framework Agency (ADEPME) Agency for the Develop	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 Senegal.	News letters, project website, social media platforms (linkedIn, Twitter etc.), invitation to webinars and/or workshops, invitation to attend PSC meetings as observers as appropriate

ment and Promotion of I ndustrial Sites (APROSI) Bureau de Mise a Niveau (BMN) <u>Gender mainstreaming i nitiatives</u> L'Association des Femm es de l'Afrique de l'Ouest (AFAO) l'Association Nationale des Sages Femmes d'Et at du Sénégal FAWE Senegal Réseau Africain pour le S outien à l'Entrepreneuriat Féminin - RASEF Senega l Women's business and i nvestment networks		
<u>Relevant existing acceler ators:</u> Kosmos Innovation Cent er Technical Center for Agri cultural and Rural Coope ration	Best practices and lessons learned can be s ought from existing accelerators and incubat ors. Further, existing networks can be used a s a foundation for clean technology accelera tors and incubators, thereby integrating alrea dy established stakeholder groups in Senega l into the post-accelerator support.	Conference calls, news lett ers, project website, social media platforms (linkedIn, T witter etc.), invitation to we binars and/or workshops,

*These means of engagement are indicative, and will be further details in the stakeholder engagement plan, to be submitted at the CEO endorsement stage.

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.

Stakeholder consultation is a key element of the PPG phase, and approximately 15,000 USD is allocated to ensure extensive consultations are conducted as part of the project design finalization.

A robust stakeholder engagement plan will be developed for the project and submitted at CEO endorsement request stage.

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).

109. Senegal ranks in the lower quarter of each of the major global and regional gender inequality indices. Its overall score has improved since 2009 in the Global Gender Gap Report (GGGR) by the World Economic Forum, due to improvements in political empowerment and educational attainment. Out of the four sectors covered by the GGGR, political empowerment shows the largest gender gap, followed by the economic, education and health sector. Within the past decades Senegal has made legal advances in addressing women's equality, such as through introducing the 2010 Parity Law, ensuring parity between men and women in electoral lists. Further, the country has adopted the National Strategy for Equity and Gender Equality (2016-2026) with a view of tackling inequality encountered by women, including aspects such as mandatory budgeting at national levels. With respect to the science and innovation sector, Senegalese women constitute 45% of ICT specialized baccalaureate students, whereas there is a 5% increase of women enrolled in science tracks. Female researchers are most represented in medicinal sciences with 31% followed by social, agricultural and natural science, with 26%, 24% and 16%. Nevertheless, there are a number of Science and Technology innovations and initiatives developed by women in Senegal, such as the mobile application 'SIGESTE' a tool for land management as well as women led hackathons organized. Therefore, this project will contribute towards the continuous education of women in the field of cleantech innovations, as to grant Senegalese women the opportunity to accelerate their innovative cleantech ideas into marketable businesses with the potential of large scale deployment.

110. 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. Previous GCIP experience with partner countries has already shown higher levels of women's participation than other accelerator and incubator programmes with 25% of the 795 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.

111. 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.

112. 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.

113. 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.

114. 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.

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.

115. Private sector engagement is key for success for this project with the private sector being the main target group. GCIP in Senegal includes four areas of private sector interaction; all of which are integral to the GCIP approach to identifying and supporting cleantech innovation:

- Direct interaction and support for SMEs and start-ups with technology and market innovations. Innovative technology SMEs are agents of change and by supporting them, markets can be transformed. In this project support will be provided to SMEs identified as part of the national accelerator. Furthermore, support will be provided to, inter alia, help companies test their products, commercialize, to end markets and to end investment and partners. Investment facilitation support will be provided by linking the accelerator alumni enterprises with potential investors and by "de-risking" them for financial institutions.

- Corporate partnerships will be formed to connect accelerator alumni with other cleantech 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, within GEF program 10408. Similar partnerships are expected under this project. Depending on the local appetite, the project will partner with corporations with commitment to identify and invest in specific technology innovations.

- Thirdly, the Senegal project will bring financiers together with cleantech SMEs and will engage with financiers to transform investment decisions to consider socio/economic benefits in addition to profit. Financing institutions, venture capitalists and angel investors will be a key target group for the communications and outreach activities. The project aims to bring together a robust network of national investors (and international investors through the Global coordination project) to raise awareness and sensitize various stakeholders on the opportunities and risks associated with cleantech products and market trends. This will result in greater appetite for investment in cleantech start-ups and to crowd in private sector investments. Investor Connect events will be organized for accelerator alumni with targeted impact investment funds and venture capital funds and targeted investment / financing vehicles will be connected with selected alumni.

- This project will also engage with industry and business associations to leverage their knowhow, capital and interest in cleantech innovations. In particular, this project will also build capacity of national industry associations in the acceleration of cleantech innovations. Furthermore, it will engage captains of industry as mentors, trainers and judges in the acceleration processes.

116. This project focuses on cleantech 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 at least 100 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.

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)

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	The post-acceleration support and alumni network facilitation are activities that are included in the project as per demand and requests from GCIP alumni enterprises that participated in GCIP accelerators in other countries between 2013 and 2019. Therefore, this risk is very low. And based on the high number and growth rate of SMEs in Senegal, a high level of commitment and drive is expected from alumni enterprises to receive this post acceleration support. The risk will be further mitigated by ensuring that the selection criteria and milestone to be achieved by enterprises to benefit from outcome 1.2 of the project will screen enterprises that have a real demand and commitment for the services to be provided.
Lack of interest and involvement by government/ institutional partners to improve existing ecosystem and/or risk of non-adoption of policy recommendations	Medium	Through base line analysis, it is already established that there is high interest in the government to introduce innovative technology and business solutions to address environmental challenges, as well as the country's priority for sustainable development in energy and agricultural sectors. Therefore, the key risk mitigation measure would be to raise awareness on the relevance and effectiveness of the project's approach in strengthening the cleantech ecosystem and in providing direct support to the cleantech enterprises. Component 2 of the project is designed to ensure that this awareness is fully recognized and embedded in the co

		untry's policy frameworks, and therefore all project ac tivities envisioned under component 2 are mitigation measures against this risk. Particular attention will b e paid to design component 2 to further minimize thi s risk during the PPG phase.
Climate Change Risks	Low	Assessment: According to the Köppen climate classi fication scale, Senegal is divided in three climate zon es, namely hot semi-arid, hot desert and tropical sava nna climate. All three climate zones are observed to have only little rainfall throughout the year with avera ge of 500mm and temperatures ranging from 24.9°C to 27°C. Climate projections foresee an increase of 1 -3°C in temperature by 2060, sea level rise of 1m by 2 100 as well as increased unpredictability of seasonal rains and increased intensity of rainfall events. Partic ularly vulnerable sectors include the sector of agricult ure where such conditions would act inhibiting to cro p quality and yields. Decreased livestock productivity and increased incidence of locust invasions were als o mentioned to be consequences of climate change. Regarding weather impacts on the energy sector, exc essive rainfalls, also recorded within September 202 0, bear strong impacts for power plant infrastructure s, such as the power plants. 10% of Senegal's power mix is made up of hydropower, and increased temper atures can lead to higher evaporation rates which can on the long term reduce the water availability. The ex posure to these vulnerabilities in this project are low t o moderate. Mitigation: The ultimate goal of the project is to supp ort the identification and uptake of cleantech product s, services and business models with a view of reduci ng GHG emissions and increase environmental bene fits within the sector of agriculture and energy. Theref ore, targeted SMEs will receive support to assess risk s from climate change on their businesses and to ad opt appropriate mitigation strategies A more in-dept h climate analysis will be undertaken, in line with the

		key steps outlined by the GEF/STAP climate risk guid ance, during the PPG stage to further identify risks of climatic contingencies and their possible impact and risks related to this project.
Lack of absorptive capacity by the national counterpart	Low	The cleantech programme is in line with national poli cies and will thus be executed in close coordination with the respective ministries and key stakeholders.
Lack of effective coordination bet ween various project partners	Low	The Project Steering Committee will ensure effective coordination and collaboration among project partne rs and key stakeholders.

COVID-19 risk analysis

Risk	Risk level	Reduction measure
PPG work plan is not execute d as per expected timelines d ue to the pandemic, leading to a delay with the CEO endorse ment request	Low/ Medium	Some delays in communications and consultations with counterparts and stakeholders are expected, in the case meeting/travel restrictions are enfo rced in Senegal to contain the spread of COVID-19. In addition, level of unc ertainty introduced to the market due to the pandemic and post-recovery measures may result in difficulty with mobilizing co-financing within define d the PPG phase. The PPG work plan will be developed in consideration of such risk factors, and initial communications with the stakeholders will pro vide extra emphasis on the timelines so that the counterparts and stakeho lders are fully aware of the timelines within which the project development must take place. Also, opportunities in post-recovery measure of COVID-1 9 will be communicated to increase level of confidence of stakeholders in how the project can support Senegal in addressing not only its climate cha llenges, but also in supporting growth of the SME sector. In the case that d elays are still foreseen, UNIDO will immediately inform the GEF Focal Point of Senegal and the GEF Secretariat to seek support and guidance.
Technical expertise is not rea dily available due to the pand emic	Low	The project should identify alternate technical expertise in case it is requir ed. Planning should be flexible enough to reschedule activities onsite that require specific expertise. This is particularly important if government exp erts are not available due to emergencies.
Possible re-instatement of CO VID-19 containment measure s limits available capacity or e ffectiveness of project executi	Medium	The project must be ready to strengthen the capacity of the stakeholders, and especially the beneficiaries for remote work and online interactions by securing access to commercially available conferencing systems. In partic ular, the PEE will be requested to procure strong IT infrastructure for execu

on/ implementation		tion of project in anticipation that a significant portion of project activities may be conducted online. Regarding impact to the GCIP accelerator, the current design of the curriculum relies on online delivery and interactions (through webinars and the web platform) and therefore the pandemic is not expected to pose a significant risk in conducting of the accelerator cycle. Therefore, in the case of strict restrictions against in-person meetings, the accelerator cycle is ready to be conducted remotely. Before the start of the accelerator, internet access and connectivity of the semi-finalists will be checked, and if some enterprises are not able to participate due to weak electricity and/or IT infrastructures, the project will provide support to ensure their full participation in the accelerator.
Some project supporters, co-financiers or beneficiaries may not be able to continue with project execution/implementation.	Low	The project will have to monitor closely the situation of these counterparts in order to find alternate supporters or co-financiers, or to readjust the list of beneficiaries.
Price increases for procurement of goods/services	Medium	The project team will have to work harder in finding alternate providers and making sure that competitive pricing is obtained.

COVID-19 opportunity analysis

Opportunity	Opportunity level	Opportunity optimization measure
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 levels and shared with the GCIP entrepreneurs as part of the market intelligence information. 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-innovators-take-covid-19
New business opportunities to build back better for business continuity and economic recovery post-COVID-19	High	By design, the GCIP projects engage the private sector (especially start-ups and SMEs) to promote energy efficiency and renewable energy technologies, business models with resilience to climate change, and circular business practices. New business opportunities and policies and regulations will be added to the Accelerator curriculum so that the entrepreneurs are fully informed of the market and policy environment trends.

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.

117. This project will be implemented by UNIDO and executed by a Project Executing Entity. The GEF Focal Point in Senegal has nominated the Ministry of Environment and Sustainable Development as the Project Executing Entity. During the PPG phase, an assessment of the Ministry's capacity and capabilities for project execution of the project will be conducted, based on which its nomination as the PEE will be confirmed.

118. Following the assessment and the approval of the Ministry of Environment and Sustainable Development as the PEE at CEO endorsement of the project, collaboration between UNIDO and the Ministry 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.

119. The confirmed PEE will be requested to designate internally, or recruit directly, project management personnel to form a 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. The PEE provides all related information to the evaluation experts for any mid-term review and final evaluations.

120. Project management will be funded in part by the GEF budget as well as in-kind funding and co-financing from the project counterparts.

121. 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. The PSC is set up to provide advisory inputs for the project and make decisions on the projects once it is approved. 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 workplans and budgets by the Project Steering Committee are conducted in accordance with the approved project document, the GEF policy, and UNIDO rules and regulations. Minutes of meetings are signed by UNIDO and the PSC Chairperson(s). The PMU forms the secretariat of and reports to the PSC on the progress of the project.

122. The project will benefit from robust coordination with the GCIP global framework programme which will help to maximize synergies, knowledge and information exchange, as well as to facilitate market access and expand financing options. Particular focus will be given to promoting active interaction among the GCIP partner countries and strengthening the GCIP community at the global level, which is expected to result in the emergence of a strong and organic network among ecosystem players including entrepreneurs and investors.

123. 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. Innovation, Environment et Development (IED) and Kosmos Innovation Center (KIC) are national initiatives with similar mandates as this project, and collaboration with such initiatives are expected to create synergies in supporting cleantech enterprises as well as in cleantech ecosystem strengthening. During the PPG phase, IED and KIC will be consulted extensively to identify concrete areas of collaboration, and their expected roles and contribution to the project will be detailed in the stakeholder engagement plan. In addition, other similar national, regional and international initiatives active in Senegal will be further identified and cooperation envisaged.

124. Additionally, this project will be conducted in coordination with ongoing GEF projects in Senegal, as to reduce duplication efforts as well as to build upon lessons learned and experiences gained, including the below. During the PPG phase, best mode of coordination will be identified to achieve synergies among the GEF projects, through consultation with the relevant implementing and executing agencies of the GEF projects in Senegal, and the GEF OFP in Senegal.

- GEF-6, 2015, IFAD: Food-IAP: Agricultural Value Chains Resilience Support Project (PARFA)
- GEF-6, 2015, World Bank: Cities-IAP: Sustainable Cities Initiative

Legal clause

125. The Government of the Republic of Senegal agrees to apply to the present project, mutatis mutandis, the provisions of the Standard Basic Assistance Agreement between the United Nations Development rogramme and the Government, signed on 4 July 1987 and entered into force on 31 July 1991.

Transfer of assets

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

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

126. 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 Senegal 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.

127. Particularly, this project is in line with the goals set within Senegal's central strategic framework, the Plan Senegal Emergant (PSE), 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 Plan Senegal Emergant, 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 Senegal.

128. The Senegalese Agricultural Cadence Acceleration Program (PRACAS), as the main lead document for agricultural policy calls for doubling annual irrigated cultivation in a view of increasing food security and lowering food imports through the use of modern equipment and technologies. Thus, in line with PRACAS this project will support, amongst others, the identification of agriculture related cleantech innovations as to support the attainment of food self-sufficiency in Senegal.

129. Equally, this project is in line with the Renewable Action Plan of Senegal, which seeks to increase renewable energy installed to 31.8% by 2030 while aiming to increase the production of renewable energy to 23% until the same year. 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.

130. Further, this project will support the achievement of Senegal's Nationally Determined Contributions (NDCs) which aim at conditionally reducing GHG emissions in the energy, agriculture and waste sector.

131. The recently launched Start-up Act in Senegal seeks to promote the innovation ecosystem in Senegal through creating a specific support and governance framework for startups, through a legal regime for registration and labelling of domestic startups. Additionally, the Act foresees to create a resource center and a package of incentive measures that is dedicated solely to start ups. This project will support these measures foreseen within this act, by supporting cleantech innovation startups and SMEs in their commercialization and scale up as to reach market maturity.

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.

132. 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.

133. 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.

134. 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 Senegal 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 Senegal 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.

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.

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
200257 ES screening Sep2020 signed	

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. Baba Drame	Operational Focal Point of the GEF Senegal	Directeur de l'Environnement et des Etablissements classes Ministere de l'Environnement et du Developpement Durable	8/21/2020

ANNEX A: Project Map and Geographic Coordinates

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