



Promoting technology innovation and entrepreneurship to mitigate climate change and combat land degradation in informal settlements and peri-urban areas

Part I: Project Information

GEF ID

Project Type

MSP

Type of Trust Fund

GET

CBIT/NGI

CBIT No

NGI No

Project Title

Promoting technology innovation and entrepreneurship to mitigate climate change and combat land degradation in informal settlements and peri-urban areas

Countries

Namibia

Agency(ies)

UNIDO

Other Executing Partner(s)

Environmental Investment Fund of Namibia

Executing Partner Type

Government

GEF Focal Area

Multi Focal Area

Taxonomy

Focal Areas, Biodiversity, Community Based Natural Resource Mngt, Protected Areas and Landscapes, Infrastructure, Mainstreaming, Sustainable Development Goals, Land Degradation Neutrality, Land Degradation, Carbon stocks above or below ground, Land Cover and Land cover change, Community-Based Natural Resource Management, Sustainable Land Management, Sustainable Livelihoods, Ecosystem Approach, Income Generating Activities, Integrated and Cross-sectoral approach, Restoration and Rehabilitation of Degraded Lands, Improved Soil and Water Management Techniques, Sustainable Forest,

Drought Mitigation, Plastics, Chemicals and Waste, Hazardous Waste Management, Waste Management, Sustainable Urban Systems and Transport, Climate Change Mitigation, Climate Change, Financing, Agriculture, Forestry, and Other Land Use, Energy Efficiency, Technology Transfer, Renewable Energy, Nutrient pollution from Wastewater, Pollution, International Waters, Stakeholders, Beneficiaries, Civil Society, Academia, Non-Governmental Organization, Community Based Organization, Communications, Behavior change, Awareness Raising, Education, Local Communities, Type of Engagement, Information Dissemination, Partnership, Participation, Private Sector, Capital providers, Financial intermediaries and market facilitators, Large corporations, SMEs, Individuals/Entrepreneurs, Gender Equality, Participation and leadership, Gender results areas, Capacity Development, Sex-disaggregated indicators, Gender Mainstreaming, Gender-sensitive indicators, Theory of change, Learning, Capacity, Knowledge and Research, Innovation

Sector

Technology Transfer/Innovative Low-Carbon Technologies

Rio Markers

Climate Change Mitigation

Climate Change Mitigation 1

Climate Change Adaptation

Climate Change Adaptation 0

Duration

36 In Months

Agency Fee(\$)

85,316.00

Submission Date

4/13/2022

A. Indicative Focal/Non-Focal Area Elements

Programming Directions	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
CCM-1-4	GET	431,621.00	2,500,000.00
LD-1-4	GET	466,439.00	2,500,000.00
Total Project Cost (\$)		898,060.00	5,000,000.00

B. Indicative Project description summary

Project Objective

Promote the acceleration of high-impact clean technology innovation for large-scale deployment and creation of green jobs in informal settlements and peri-urban areas of Namibia.

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
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Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
1. Transforming early-stage innovative cleantech solutions into scalable, commercial enterprises	Technical Assistance	1.1 Cleantech solutions with high-impact potential are supported to reach commercialization	<p data-bbox="870 422 1036 751">1.1.1 GCIP methodologies, tools, training systems, guidebooks for cleantech innovation and entrepreneurship accelerator are adapted for Namibia</p> <p data-bbox="870 852 1036 1333">1.1.2 Pool of 20 cleantech innovation and entrepreneurship experts (trainers, mentors, judges) is trained and certified to support the Namibia Accelerator (with at least 35% women participants)</p> <p data-bbox="870 1434 1036 1793">1.1.3. Three cycles of the annual competition-based Namibia Accelerator are conducted (at least 50 enterprises with at least 35% women participants)</p>	GET	110,000.00	750,000.00

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
1. Transforming early-stage innovative cleantech solutions into scalable, commercial enterprises	Technical Assistance	1.2 Start-ups and SMEs are supported through advanced and gender-responsive business growth and investment facilitation services	<p>1.2.1 Targeted business growth support services are provided to selected cleantech enterprises</p> <p>(up to 15 enterprises with at least 35% women participants) towards commercialization</p> <p>1.2.2 Enterprises (15 enterprises with at least 35% women participants) are connected to financing opportunities and provided with tipping-point investment facilitation support</p> <p>1.2.3 Mentoring and partnership support is provided to cleantech enterprises (up to 10, with at least 35% women participants) for global market expansion in collaboration with the global GCIP network</p>	GET	170,000.00	900,000.00

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
1. Transforming early-stage innovative cleantech solutions into scalable, commercial enterprises	Investment	1.2 Start-ups and SMEs are supported through advanced and gender-responsive business growth and investment facilitation services	1.2.4 Innovative early-stage financing mechanism is designed to deploy innovative cleantech solutions to mitigate climate change and combat land degradation in informal settlements and peri-urban areas (up to 10 enterprises, with at least 35% women participants)	GET	120,000.00	1,500,000.00

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
2. Cleantech innovation and entrepreneurship ecosystem(CIEE) strengthening and connectivity	Technical Assistance	2.1 The CIEE in Namibia is strengthened and interconnected	<p data-bbox="870 415 1019 1052">2.1.1 CIEE analysis is conducted (market conditions, policy environment, development priorities), including mapping of supply of and demand for cleantech solutions and their prioritization in accordance with national strategies and action plans</p> <p data-bbox="870 1150 1032 1514">2.1.2. Cleantech innovation and entrepreneurship policies, regulations and recommendations are developed (gender-responsive)</p> <p data-bbox="870 1612 1019 1793">2.1.3 Linkages, collaboration, and synergies across CIEEs are promoted</p>	GET	277,060.00	750,000.00

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
3. Knowledge management and project coordination	Technical Assistance	3.1 Project outcomes are enhanced through use of guidelines, knowledge management, as well as communication and advocacy	<p>3.1.1 Guidelines for project management teams are adapted and implemented</p> <p>3.1.2 Knowledge management, communication and advocacy strategies of GCIP are adapted and applied</p> <p>3.1.3 National web platform is operated as part of the GCIP global web platform to maintain local and global community and network</p>	GET	80,000.00	300,000.00

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
3. Knowledge management and project coordination	Technical Assistance	3.2 Impacts and progress of the project are tracked and reported	<p>3.2.1 Environmental and social impacts of project are estimated, tracked and reported</p> <p>3.2.2 Project progress monitoring and reporting as per UNIDO and GEF guidelines including development and monitoring of Gender Mainstreaming Action Plan, the Environmental and Social Management Plan and Stakeholder Engagement Plan is ensured</p> <p>3.2.3 Independent mid-term review and terminal evaluation are conducted</p>	GET	60,000.00	350,000.00
				Sub Total (\$)	817,060.00	4,550,000.00
Project Management Cost (PMC)						
			GET	81,000.00	450,000.00	
			Sub Total(\$)	81,000.00	450,000.00	

Project Management Cost (PMC)

Total Project Cost(\$)

898,060.00

5,000,000.00

Please provide justification

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

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
GEF Agency	UNIDO	Grant	Investment mobilized	50,000.00
GEF Agency	UNIDO	In-kind	Recurrent expenditures	150,000.00
Recipient Country Government	Ministry of Environment, Forestry and Tourism	In-kind	Recurrent expenditures	1,000,000.00
Recipient Country Government	Environmental Investment Fund of Namibia	Grant	Investment mobilized	1,000,000.00
Private Sector	tbd	Grant	Investment mobilized	800,000.00
Private Sector	tbd	In-kind	Recurrent expenditures	1,000,000.00
Private Sector	tbd	Loans	Investment mobilized	1,000,000.00
Total Project Cost(\$)				5,000,000.00

Describe how any "Investment Mobilized" was identified

Recipient government: Through close consultations with the GEF Focal Point, the project concept is being presented to and in-kind contributions are being discussed with i) the Ministry of Environment, Forestry and Tourism, ii) Ministry of Industrialization and Trade, iii) Ministry of Urban and Rural Development, and iv) Namibia University of Science and Technology, v) Environment Investment Fund of Namibia. A confirmed structure of co-financing will be determined during the PPG phase. Private sector: Non-committal meetings were held with various private sector entities who showed great interest to provide co-financing. Estimates are based on initial consultations with the government counterparts and UNIDO's prior experience in mobilizing co-financing for projects with similar objectives and market conditions. Co-financing ratio of at least 1:5 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	Namibia	Climate Change	CC STAR Allocation	431,621	41,004	472,625.00
UNIDO	GET	Namibia	Land Degradation	LD STAR Allocation	466,439	44,312	510,751.00
Total GEF Resources(\$)					898,060.00	85,316.00	983,376.00

E. Project Preparation Grant (PPG)

PPG Required **true**

PPG Amount (\$)

50,000

PPG Agency Fee (\$)

4,750

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
UNIDO	GET	Namibia	Climate Change	CC STAR Allocation	25,000	2,375	27,375.00
UNIDO	GET	Namibia	Land Degradation	LD STAR Allocation	25,000	2,375	27,375.00
Total Project Costs(\$)					50,000.00	4,750.00	54,750.00

Core Indicators

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

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
6.00	0.00	0.00	0.00

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

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

Indicator 4.2 Area of landscapes that meets national or international third party certification that incorporates biodiversity considerations (hectares)

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

Type/Name of Third Party Certification

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

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
6.00			

Indicator 4.4 Area of High Conservation Value Forest (HCVF) loss avoided

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

Documents (Please upload document(s) that justifies the HCVF)

Title	Submitted

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 ₂ e (direct)	90000	0	0	0
Expected metric tons of CO ₂ e (indirect)	450000	0	0	0

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

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO ₂ e (direct)	90,000			
Expected metric tons of CO ₂ e (indirect)	450,000			
Anticipated start year of accounting	2024			
Duration of accounting	3			

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 ₂ e (direct)				
Expected metric tons of CO ₂ e (indirect)				
Anticipated start year of accounting				
Duration of accounting				

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	315			
Male	585			
Total	900	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

Methodology for estimating GHG emissions follows the GEF approved program GEF ID 10408. The figures mentioned in the indicators section are tentative and subject to potential changes. Methodology for estimating GHG emissions is to be further elaborated during the PPG phase while taking into account the approach applied in the approved GEF programme titled "Global Cleantech Innovation Programme (GCIP) to Accelerate the Uptake and Investments in Innovative Cleantech Solutions", GEF ID 10408 (further referred to as GCIP Global). Other environmental and socio-economic co-benefits are also expected and will be measured and tracked. During the PPG phase, together with the Shack Dwellers Federation and the Integrated Land Management Institute of Namibia, 2 pilot areas will be identified, suitable for the deployment of innovations developed under this project. Based on these areas, a methodology for calculating the area of landscape under improved practices will be developed. This methodology will include factors such as average shack sizes, amounts of waste and waste type disposed per household, amount of wood consumed for cooking and heating per household, contaminated areas due to non-availability of sanitation services, etc. The current estimation of 6 ha is derived by the following estimation: There is currently a total estimated 308 informal settlements in Namibia with a total of 228,000 shacks. This project is going to pilot in 2 informal settlements with an average of 740 shacks each or a total of 1480 shacks, each using an area of 40 m² (including housing, sanitation and forestland). Thus it is expected that through the piloting of technologies a total area of close to 6 ha will be managed under improved practices.

Part II. Project Justification

1a. Project Description

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

Global environmental problems

1. Namibia has a population of 2.55 million people that is very young (38% of the population under the age of 14), with roughly 50% of the population living in rural areas. Having one of the lowest population densities in the world (3 per km²), Namibia is also the driest country in Sub-Saharan Africa, rich in mineral resources including uranium and diamonds.

2. Namibia, despite socio-economic inequalities, has experienced an average annual economic growth rate of 4,4% between 1991 and 2015, allowing it to become an upper-middle income country (GDP per capita of USD 4,957 in 2019). Within the same period, the CO₂ emissions have almost quadrupled from 1,1 kt to 4,3 kt per year. Although Namibia contributes only a small fraction of the GHG emissions (0.01%), its per capita emissions have more than doubled between 1991 and 2018 and are above the world average. [1]¹

3. The COVID-19 pandemic alongside severe drought conditions in 2019 have had unprecedented impact on Namibia's economy. GDP contracted by 7.4% in 2020, including the mining sector (by 12.2%) which is central to the Namibian economy. The drought in 2019 has led to a sharp decline in harvest outputs, also affecting the electricity generation which heavily relies on hydropower. [2]²Namibia's primary energy supply is based of fossil fuels, mostly oil. Currently, less than 50% of the population has access to power. The country's traditional generation capacity consists of a mix of hydropower, coal, diesel and thermal, of which less than a third is supplied locally. Namibia is heavily reliant on imported electricity and coal. Furthermore, 80% of the rural population rely on wood fuel for cooking, which is a major driver for deforestation.

4. The Agriculture, Forestry and Other Land Use sector (AFOLU) represents the main source of GHG emissions (83%), followed by the energy sector (15%). Agriculture is a key sector of the Namibian economy. It is not only the largest employer that is critical to livelihoods, but it is also important for ensuring food security. Over two-thirds of households practice subsistence cropping and pastoralism, mostly on communally-held lands. Less than 10% of the land surface is used for crop production, while nearly 75% is used for livestock production. Irrigation for agricultural production is estimated to consume more than 60% of Namibia's surface water resources, as well as a significant fraction of extracted groundwater. Increasing demands from other sectors and areas, particularly cities, will increase competition for scarce resources such as water and productive land. While being the main

GHG emitter, the AFOLU also contributes to serious forms of land degradation, adversely impacting biodiversity, groundwater recharge and land productivity. Land degradation[3]³ in Namibia can be linked to four main drivers: population pressure, livestock density, rainfall, and erosion hazards.

5. Namibia is becoming an urbanized country.[4]⁴ This is illustrated by the fact that between 1990 and 2011, urbanization grew from 28% to 42% and current projections are that by 2030 more than 70% of the population will live in urban areas. As the urban population is growing, the need for serviced land and housing is also increasing. Namibia has failed to respond through appropriate strategies to facilitate this change in the human geography of the country, leading to poorly managed informal settlements. These settlements are often far from jobs, [5]⁵services and social and economic amenities, thus further increasing poverty levels in the urban areas. Due to the absence of electricity in these areas, residents require firewood for their heating and cooking needs, which has led deforestation to become widespread in peri-urban areas. Further, the lack of water and waste management systems has led to increased soil and water pollution and land degradation and caused the spread of diseases such as Hepatitis. More recently, settlement upgrading initiatives have emerged, bundling efforts across the country to improve livelihoods in settlements that are expected to remain in the long-term.

6. In 2021, Namibia has updated its Nationally Determined Contributions (NDCs)[6]⁶, increasing its commitment to a 91% reduction in GHG emissions compared to the Business as Usual (BAU) baseline over the 2015-2030 period. This follows the road to net zero emissions by 2050 that Namibia has committed to under the Paris Agreement. Therefore, as Namibia is looking for new ways to recover its economy, significant decoupling of economic growth from GHG emissions needs to happen.

7. The environmentally sound management of waste and sustainable land management are identified as national priorities in terms of Namibia's Fifth National Development Plan (NDP5)[7]⁷ which covers the period of 2017-2022. Furthermore, the areas of transport, energy, industrial production, agriculture, waste and water management are seen as central to moving towards a low-carbon and climate-resilient development. This is well aligned with Namibia's third national action plan (2019-2024)[8]⁸ to combat desertification and broader measures to promote sustainable land management and climate change adaptation across the country.

8. The national sustainable energy strategy of Namibia sees the main driver of the 2030 goal to reduce the deforestation rate by 75%, expecting a decrease in CO₂e by over 13.5 MtCO₂e over the next 10 years. Namibia has acknowledged that reforestation, agroforestry and urban forests are vital alongside introducing new emissions reducing technologies to encourage healthier practices, such as climate-friendly and energy-efficient refrigeration and air conditioning (RAC). In the waste sector,

energy utilization measures such as Municipal Solid Waste (MSW) transformation into compost and electricity are identified as the most important opportunities.

9. The Small and Medium Enterprises (SME) sector in Namibia is small in comparison with other African countries, contributing about 11% of GDP and accounting for a share of the labor force employed full-time at about 20%. Nonetheless, the Namibian government estimates this sector as a great potential for the socio-economic development of the country in terms of economic growth and poverty alleviation. A special emphasis is given to the use of renewable energies for productive purposes. A study in 2017 found that between 2000 and 2016 a total of 15000 SMEs was registered in Namibia, with many of them experiencing challenges with regards to access to finance, employee turnover, and lack of start-up capital.^[9]

10. With a continuously growing economy and a steady population growth, Namibia is heading towards a high emission trajectory, further accelerated by deforestation and land degradation in the coming years. The need for a multi-pronged approach, targeting these interconnected challenges becomes apparent. Therefore, it is crucial to support the development and deployment of cleantech innovations across all sectors relevant to the economies in informal settlements, to reduce GHG emissions and to decrease deforestation rates as well as soil degradation. This project will promote the development and large-scale deployment of clean technology products, business models and services so as to provide much needed solutions to the key economic sectors of the country, especially in informal settlements relating to the provision of innovative approaches to waste management, renewable energy and energy efficiency, and efforts to combat land degradation and deforestation in peri-urban areas.

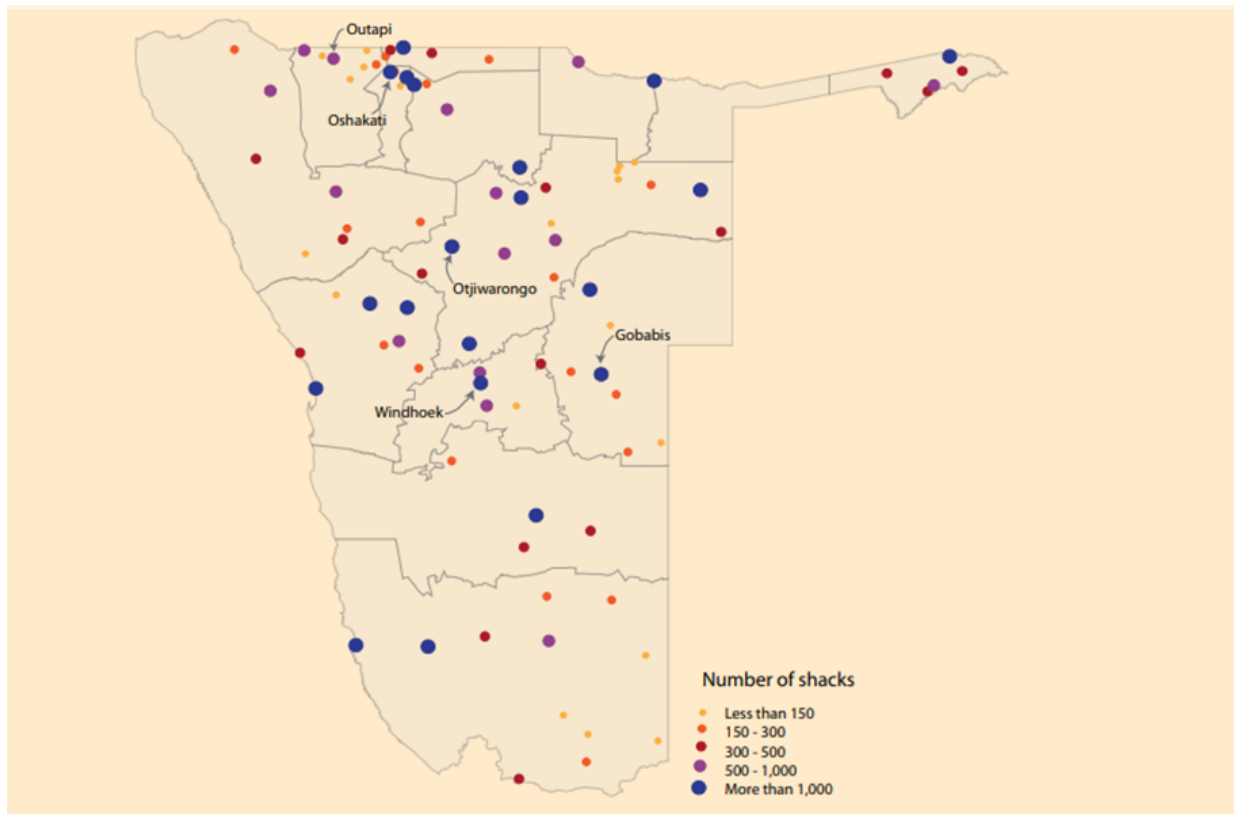


Figure 1: Number and size of shacks in Namibia (2011).

Root causes and barriers that need to be addressed

11. As stated in its fifth National Development Plan (2017-2022)^[10], Namibia plans to accelerate development by upgrading ICT infrastructure across the country and expanding bulk transmission and energy distribution infrastructure, as well as to strengthen research capacities and facilitate technology and infrastructure development.

12. The Global Competitiveness Index^[11] that analyses institutions; infrastructure; ICT adoption; macroeconomic stability; health; skills; product market; labor market; financial system; market size; business dynamism; and innovation capability, ranked Namibia at 94 out of 140 countries in 2019.

13. In the Global Knowledge Index^[12] published by the UNDP, Namibia's position stands as 98 among 154 countries in 2021. Although Namibia ranks considerably better in technical and vocational education and training as well as the general enabling environment, it ranks poor on pre-university education and ICT.

14. Despite the recognized importance of innovation in the national economy, there are still a number of challenges that limit SMEs from contributing towards the development and commercialization of cleantech solutions as presented in table below.^[13] Major challenges, that SMEs in Namibia face, cut across finance, training, government regulations, infrastructures, markets as well as technology. Barriers hampering a transition of innovative ideas into fully fledged formal business include poor infrastructure and considerably high costs of registering a business. In order for Namibia to realize the full potential of its SMEs, a lot still needs to be done by the Namibian government as well as the private sector and other cleantech innovation and entrepreneurship ecosystem (CIEE) stakeholders.^[14]

Barriers faced by start-ups and SMEs in developing and scaling-up innovative cleantech solutions

<p>Limited access to finance</p>	<p>Limited access to finance is a key barrier for start-ups and SMEs in Namibia in further developing their business activities. The limited access to finance, especially private sector finance, is due to a number of reasons:</p> <ul style="list-style-type: none"> a) difficulty to access capital for innovation projects that normally observe specific risks b) limited understanding of investors of opportunities and specific risk of investing in (local) cleantech markets c) limited awareness about financial schemes and respective requirements and procedures available to cleantech businesses as well as limited government financial incentives to support private sector in advancing and adopting innovation in the cleantech space d) limited knowledge about cleantech innovation and investment amongst local investors and subsequently a very low risk appetite e) lack of interaction between start-ups/SMEs and potential investors f) entrepreneurs lack the ability to prepare and present adequate business cases and financial models <p>In August 2016, Namibia put into effect the Namibia Investment Promotion Act (NIPA). However, the country has not yet enforced it due to substantive legal concerns raised by the private sector. Therefore, the Foreign Investment Act of 1990 (FIA) remains the guiding legislation on investment in Namibia.</p>
<p>Lack of capacity</p>	<p>A lack of capacity in start-ups/SMEs is observed in view of:</p> <ul style="list-style-type: none"> a) missing key skills and know-how on how to transform a technological innovation into a viable enterprise, leading to high rates of failure for early-stage cleantech enterprises b) insufficient capacity to develop robust business models, leading to high risk of failure of established businesses b) no awareness in the private sector of new developments and trends on innovations related to their operations, manufacturing and distribution locally or globally, which limits their deployment, and adoption c) limited access to international expertise and limited knowledge about markets and potential partners outside the country which could help expand their business
<p>Limited uptake of technologies in informal settlements</p>	<p>Informal settlements in urban and peri-urban areas are the main target group of beneficiaries for the technologies developed under this project. Informal settlement dwellers, at the same time, are often the poorest and most at risk fraction of the population. Innovations can thus remain unaffordable. Therefore, without adequate government initiatives such as settlement upgrading programs, the uptake of innovative technologies may remain limited.</p>
<p>Barriers related to cleantech innovation and entrepreneurship ecosystems (CIEEs)</p>	

Lack of institutional coordination	There is a lack of institutional coordination in Namibia in view of supporting entrepreneurs. There is still a need for establishing a well-interacting network which would serve as a basis to further enhance the CIEE of the country.
Limited enabling policy and regulatory environment	Fostering innovation and entrepreneurship demands a robust and enabling policy and regulatory environment that in turn is crucial for attracting investments. Therefore, it is of utmost importance to support the uptake of supportive policies and enabling business environments that encourage investments in cleantech products, businesses and services. Particularly, the legislative framework addressing private sector involvement in cleantech innovation is underdeveloped, registration procedures are long and costly, hampering potential investment in innovation.
Lack of clean cleantech innovation ecosystem	In Namibia, there is a lack of innovation ecosystem specifically tailored towards cleantech and SMEs. Although there is some innovation infrastructure established, such as the Tech Innovation Hub (ICTIH), Namibia Business Innovations Institute (NBII), and Start-up Namibia, there is still a need for an ecosystem that is exclusively dedicated to cleantech and SMEs.
Lack of public awareness	While climate change and land degradation are taking a toll on the country's economy and population, there is still a lack of public awareness regarding the market potential of cleantech. Awareness raising about cleantech is crucial in terms of enhancing the understanding of the public on benefits derived by the utilization of cleantech products, services and business models.
Lack of trained experts and information about cleantech	A potential barrier to a national innovation and acceleration programme for cleantech in SMEs and start-ups in Namibia is the lack of trained experts for mentoring entrepreneurs involved in cleantech innovations and also a lack of information about technology options, best practices, and benchmarks.

15. This project will also analyze the barriers faced by women in cleantech and fill the gap regarding their equal access to networks, market opportunities, and finance. In summary, Namibia's cleantech sector currently lacks capacity and coordination. There remains a need for further support in the field of advanced commercialization, incubation, access to early-stage financing, national networking, commercialization, and widening the geographical reach of and support to national partners.

The baseline scenario and any associated baseline projects

16. Within Namibia's **National Development Plan[15]**¹⁵ the country's lead strategy for economic and social development in the medium and long term ? the government prioritizes enterprise development to achieve inclusive, sustainable and equitable growth. It clearly calls for the decrease of the degradation of environmental resources and seeks to ensure the protection of biodiversity, as well as 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.

17. With the **Harambee Prosperity Plan II**[16]¹⁶ for the economic recovery of Namibia, Dr. Hage G. Geingob, the President of Namibia, recognized the importance of green economies as an enabler of socio-economic development. The economic recovery programme is set to generate new and diversified frontiers of growth and optimize the stewardship of natural resources and public assets, while proactively pursuing opportunities in the blue and green economy. One of the key activities is to develop an implementation plan to attract private sector investment into the green economy.

18. In 2021, Namibia ambitiously raised its target to reduce total GHG emissions from 89% to 91% by 2030, through updating its NDCs[17]¹⁷, and ? through that ? committing to enhance its mitigation efforts with policies and measures to be implemented in four key economic sectors ? Energy, Industrial Processes and Product Use (IPPU), Refrigeration and Air Conditioning (RAC), AFOLU and Waste.

19. Namibia?s **National Renewable Energy Policy**[18]¹⁸ aims to drive emerging technologies that reduce GHG emissions and support cleaner practices. The goal is the substitution of existing higher emission technologies with cleaner, more efficient, and lower-cost technologies. Namibia?s efforts seek to achieve a 30% reduction in the total quantity of electricity imported in 2018, which would result in 0.8 TWh (800 GWh) of new renewable energy generation per annum until 2030.

20. Published in 2013, the **National Climate Change Strategy & Action Plan 2013-2020** sets out strategies for mitigation, adaptation and cross-cutting issues. So far, the focus of Namibia?s climate change response has generally been on adaptation to moderate the negative impacts and to some extent exploit beneficial opportunities associated with the impacts of climate change. Although adaptation measures are set as key priorities in climate change action, the country is also committed to undertaking mitigation measures where they strongly contribute to national development goals.

21. Approximately 8.9% or about 7,290,000 ha of Namibia is forested and reducing the deforestation rate by 75% from 0.9% per year to below 0.25% is considered a major drive to achieving the 2030 target, with increasing resources being channeled towards this target. Namibia considers reforestation, agroforestry, and urban forestry as key emissions reduction strategies. In its **National Forest Policy**, Namibia recognizes the importance of promoting the sustainable and participatory management of forest resources and other woody vegetation, to enhance socio-economic development and environmental stability. This should particularly be done by reconciling rural development with biodiversity conservation by empowering farmers and local communities to manage forest resources on a sustainable basis.[19]¹⁹

22. There is not a specific strategy targeting informal settlements on the national level, but the **National Housing Policy**[20]²⁰ recognized it as a key challenge to create an enabling environment for

settlement upgrading by communities under the People's Housing Process. The policy is currently under review, aiming to have one policy that covers all relevant aspects of a sustainable approach towards urban development, including a national strategy for settlement upgrading. Due to a lack of data regarding informal settlements, the Shack Dwellers Federation of Namibia and the Namibia Housing Action Group agreed with the former Ministry of Regional, Local Government and Housing to conduct national profiling of informal settlements in 2006. The outcome was an estimate that there were 134,800 households established in 235 informal settlements across the country. It is recognized that more local infrastructure does not only necessitate the process of sheltering people, but also sustain the provision of basic services such as water, sanitation and energy to communities, for which the government of Namibia wishes to increase the amount of private sector financing.

23. **Vision 2030** [21]²¹ has been devised as a long-term framework for national development and is setting several targets, such as providing access to adequate shelter for 60% of the low-income population by the year 2025. Sanitation and waste management is of particular concern in rural areas. Vision 2030 projects a 100% access to adequate sanitation by 2030 in urban areas and 50% in rural areas. Overall, the main goal of Vision 2030 is enabling Namibia to be a fair, gender-responsive, providing affordable and good-quality health care, as well as maintaining stable, productive and diverse ecosystems that managed for long-term sustainability.

24. In 2016, the Ministry of Industrialization, Trade and SME Development published an updated **National Policy on Micro, Small and Medium Enterprises in Namibia 2016-2021** [22]²². The document states that SMEs are instrumental in contributing to job creation, economic growth and poverty reduction. Recommendations are given in the following areas: policy and regulatory framework, access to infrastructure, culture of entrepreneurship in society, access to finance, business development services, innovation and technology development and adaptation, access to local, regional and international markets, and enhancing state capabilities to manage and support SMEs.

25. In November 2021, the Ministry of Higher Education, Technology and Innovation, in collaboration with national science, technology and innovation (STI) stakeholders, launched a consultative process that led to the revised **National Science, Technology and Innovation Policy (NSTIP) 2020-2030**. [23]²³ The policy is designed to promote investment in R&D by integrating STI in all socio-economic sectors, aiming to reach the national development goals and to comply with international global efforts, such as the achievement of SDGs. The policy includes 20 approaches to restructure the R&D institutional configuration and create mechanisms for strengthening links between public R&D and industry. Objectives include the acceleration of research in the areas of technological advancement, improvement of research and innovation infrastructure provision, and an increase of scientific productivity and technological output.

National baseline activities and institutions include:

26. **The Ministry of Environment, Forestry and Tourism (MEFT)**, (former Ministry of Environment and Tourism) of Namibia is the key ministry to develop, update and implement climate related policies. Thus, the MEFT is the national entity with the overall responsibility for organizing and coordinating the compilation of National Communications, Biennial updated reports, GHG inventory and submitting them to the UNFCCC Secretariat. The MEFT hosts the Namibia Climate Change Committee (NCCC), a broad-based multi-stakeholder committee, established in 2001 in place of an ad hoc committee (the Climate Change Advisory Committee) led by the Directorate of Environmental Affairs (DEA) in the MEFT.

27. **The Ministry of Energy and Mines (MME)**, develops and implements energy sector policies, strategies and plans in support of government's commitment to efficiently ensure sustainable, reliable, affordable, and equitable electricity to all Namibians. To enforce and monitor quality issues, MME has formulated a National Technical Committee on Renewable Energy (NTCRE) with the role of certifying solar energy technologies and services. The NTCRE is the first technical committee (TC1) of the Namibian Standards Institution (NSI).

28. **The Ministry of Industrialization and Trade (MIT)** promotes economic growth and development through the formulation and implementation of appropriate policies to attract investment, increase trade, as well as develop and expand the country's industrial base. The ministry handles amongst others the import & export application processes as well as SME certificate applications.

29. **The Ministry of Agriculture, Water and Land Reform (MAWLR)** promotes the potential of the agricultural, water and forestry sectors towards an efficient and sustainable socio-economic development for a prosperous Namibia. The MAWLR administers several projects such as the a) Green Scheme, which encourages the development of irrigation based agronomic production in Namibia with the aim of increasing the contribution of agriculture to the country's GDP and to simultaneously enable social development and upliftment of communities located within irrigation areas; b) the urban and peri-urban horticulture project, which targets marginalized groups such as slum dwellers by promoting employment and access to quality fresh products.

30. **The Ministry of Finance (MoF)** together with the **Development Bank of Namibia** launched a strategy for SME financing and a skills-based lending facility for the youth in 2019. The aim of the strategy is to unlock the growth, job creation and self-employment potential of the SME sector. The lending facility should both enhance access to affordable finance and foster entrepreneurship and SME development across the broad range of economic sectors in all regions of the country.

31. **The National University of Science and Technology (NUST)** is the leading university in Namibia advancing innovation as well as cleantech and enterprise development. Some of its initiatives include: i) **The Innovation Design Lab** is a center of multi-disciplinary research applied to Namibia and, more broadly, Africa, pursuing the transformation of problems into a challenge, and a challenge into an opportunity. The goal is to foster a new generation of creative innovators through research; ii) **The Namibian Business Innovation Institute** provides training, mentoring and business support

services to innovative entrepreneurs looking to establish their own company as well to researchers interested in commercializing their technologies; iii) **The Tech Innovation Hub (ICTIH)** project aims at including minorities and vulnerable groups into innovation processes. Funded by the Finnish Embassy, the Hub seeks to enhance ICT innovation skills for a minimum of 300 young community members at selected rural and urban pilot sites. The project aims to ensure that products developed by marginalized young people enter the market successfully.

32. **The Center for Enterprise Development (CED)**[24]²⁴ was established in 2000. It spearheads short tailor-made training courses, offers accredited industry focused training, ICT courses, skills building for SMEs including vital soft skills for entrepreneurs such as financial and project management, and provides business consultation services for industry. The Centre develops and implements programmes that add value to the Namibian labor market. To date the Centre has transferred skills to more than 23,000 participants in Namibia.

33. **The Ministry of Urban and Rural Development (MURD)** coordinates and spearheads the decentralization process, which was set in the 1998 decentralization policy, directing central authorities to transfer full responsibilities for selected powers and functions to the subnational government level. Relevant directorates include the Regional and Local Government and Traditional Authority Coordination; Housing, Habitat, Planning and Technical Services Coordination; Rural Development; and Finance, Human Resources, Administration and Information Technology. These are supporting the decentralization either through direct decentralization measures or through more general ancillary services to the regional and local authorities.

34. **NamPro Fund** is an investment fund established to support SME that are suppliers and require funding to execute their contracts. The primary focus of NamPro is to provide required short-term working capital to SMEs that have been awarded supply contracts by large, reputable organizations.

35. **Environmental Investment Fund Namibia (EIFN)** is a recognized leader in the development and application of innovative financing mechanisms to support environmentally and technologically sound growth in the country. The Fund promotes sustainable economic development of Namibia through investment in and promotion of activities and projects that protect and maintain the natural and environmental resources of the country. The EIFN was identified as the Project Executing Entity (PEE) for this project by the GEF Operational Focal Point in Namibia.

International initiatives and institutions include:

36. Since 2011, UNIDO has been supporting cleantech companies in their development via GCIP which uniquely fosters an ecosystem approach that supports cleantech innovations proposed by SMEs and start-ups through the provision of catered tools and methodologies that enhance their

productivity and competitiveness while promoting the establishment of a supportive policy and regulatory framework.

37. By the end of 2017, GCIP accelerated over 865 start-ups/SMEs in 8 countries. The success of GCIP was confirmed through the GEF's evaluation in 2018. In its framework it was also recommended that: a) any future GCIP or similar programme should be structured using a more globally coordinated approach with appropriate choice of interventions based on strategic country selection; b) GCIP should actively support national-level coordination to maintain and advance the CIEE; c) there should be sufficient time allowed to customize and sharpen the focus on policy strengthening and regulatory frameworks to foster cleantech innovation and its adoption; d) the network of private sector partners should be expanded to address GCIP participant needs for business expertise and early stage technology validation; e) direct and indirect impacts of GCIP should be measured by establishing adequate monitoring and evaluation systems and ensure that they are implemented using standardized and relevant indicators; f) country engagement should be deepened during the project period, including a plan and resourcing to sustain activities and expand outcomes after project closure.

38. Based on the above-mentioned recommendations, UNIDO designed the GCIP Framework in 2019. The GCIP Framework consists of ten country child projects, all of which are based on three driving pillars, including a) Pillar 1. Transforming early-stage innovative cleantech solutions into commercial enterprises; b) Pillar 2. Cleantech innovation and entrepreneurship ecosystems strengthening and connectivity; c) Pillar 3. Programme coordination and coherence. The coherence within the GCIP Framework is ensured through the GCIP Global project. The GCIP Framework builds upon the achievements and key lessons learned from the implementation of the GCIP projects so far. In particular, it benefits from the collective feedback by various stakeholders including national counterparts, institutions and SMEs successfully participating in GCIP as well as strategic partners at the global level.

39. Since 2017, UNIDO has been implementing a project titled "Promoting sustainable bush-processing value chains in Namibia". The project aims at strengthening important sources of food and income through stimulating utilization of invasive bush species, e.g. in the animal feed, charcoal and food industry as well as in energy production sectors. The bush-processing value chains are promoted in Namibia and in the region to contribute to the sustainable development of the Walvis Bay Corridor. Direct outcomes of the project encompass the identification and testing of appropriate collection and manufacturing technology solutions which can further be used in Namibia for the effective and productive consumption of bush resources. In addition, the project encompasses a design of a processing plant to convert Acacia and other raw materials into coal, chips, high-value livestock feed, coal, chips, Arabic gum and other selected products. The sustainable utilization of invasive bushes like Acacia helps to mitigate bush encroachment as a form of land degradation. Through these measures, higher levels of agricultural productivity can be achieved, resulting in a better supply of food, increased resilience of farmers to droughts and reduced poverty, especially in rural communities.

40. **Agence Fran?aise de D?veloppement (AFD)** runs the SUNREF Namibia project whose objective is to facilitate access to affordable green technologies, thereby guaranteeing the achievement of a low environmental footprint and contributing to the mitigation of the causes of climate change and

other environmental disturbances in Namibia. A total investment of 15 million Euro for green investments in the sustainable agriculture, sustainable tourism, efficient technologies, and renewable energy market segments will be provided by 3 commercial banks to finance enterprises under this programme.

41. The **Climate Technology Center and Network (CTCN)** supports Namibia to enhance climate resilience efforts, limit water scarcity and provide a series of energy efficient technologies such as cooling appliances.

42. The **Green Climate Fund (GCF)** supports a paradigm shift in achieving low emission and climate-resilient development in Namibia. The GCF promotes Ecosystem-based Adaptation (EbA) as a cost effective and low risk approach to build climate resilience across eight targeted landscapes in Namibia. To reduce food insecurity, knowledge on conservation agriculture and climate-resilient agricultural practices is transferred to project beneficiaries. The Mashare Climate Resilient Agriculture Centre of Excellence (MCRACE) carries out demonstration pilots, including a fertilizer mixing plant, organic manure and guano trials. Farmers are provided with sustainable access to off-grid solar energy technologies including water pumping for small-scale micro horticultural systems, and refrigeration for harvested food, reducing the dependency on imported fuels.

43. In 2020, the **African Development Bank (ADB)** approved a total of USD 150 million in loans to Namibia to tackle shortcomings in the water and sanitation sector as well as to boost economic governance and competitiveness. The aim is to facilitate sustainable production and transfer of water resources to improve access to potable water and for agricultural and industrial use, enhancing sanitation in rural areas and advancing institutional capacity. The programme is building on innovative technology in sanitation in Namibia which treats its wastewater in Windhoek to potable standards and injects 30% of the recycled water into the system for distribution to consumers. Rural residents will gain better health from improved environmental and sanitary conditions. Special attention is given to vulnerable households within the programme areas for improved sanitation facilities. It also provides job opportunities and empowers women and youth to start businesses along the water and sanitation value chain. In particular, it seeks to increase access to sustainable water services from the current level of 85% and sanitation services from 54% to the universal 100% target by 2030.

44. **UNDP** supports the government of Namibia in identifying key challenges in meeting its Vision 2030 and the SDGs by improving capacities at the national, regional and local levels, including through the Integrated Landscape Approach for Enhancing Livelihoods and Environmental Governance to Eradicate Poverty and the SDG Investor Map for Namibia laying out 5 key sectors and 15 Investment Opportunity Areas (IOA) such as infrastructure, agriculture, services, health, and education. In 2020, UNDP introduced the **Namibia Accelerator Lab**^[25], as part of a network of labs in 115 countries finding new approaches to current development challenges by focusing on strengthening and fast-tracking climate change adaptation through locally and regionally sourced innovative interventions and knowledge.

45. The **GIZ** project **Start-up Namibia**^[26] runs an incubation and innovation center which seeks to improve the conditions for establishment and growth of start-ups in selected regions, spurring innovation and creating a competitive business environment. The center includes co-working spaces, maker-spaces, a community area and a small shop. It serves as a 'one-stop shop' for all the needs that start-ups face during their ideation, establishment, incubation and growth phases. The project also improves access to financial services for start-ups by making them investment-ready. The best-performing start-ups have access to Start-Up Namibia's 'Slingshot Fund', with milestone-based grants of up to 5,000 Euros.

46. **USAID** has been focusing on microenterprise development in Namibia. Business-to-business partnerships and linkages with larger firms were established and program-supported SEMs were able to obtain supplier credit from wholesalers, increasing business transactions. In 2021, the Namibia Investor Roadmap report was commissioned. Through the **Southern African Trade and Investment Hub**, USAID increases international competitiveness, intra-regional trade, and food security throughout the Southern African community. The Hub works closely with several relevant entities to provide technical assistance to both public and private sectors.

47. **EU** has established bilateral and regional cooperation programmes with Namibia, supporting the country's prosperity and stability by focusing on agriculture and education. The goal is to create more wealth from Namibia's agriculture sector, notably in the livestock sector, to enable sustained growth while also addressing issues of poverty and unemployment. What is more, better links between rural primary producers and markets are created, by helping rural entrepreneurs adapt to climate change and new business environments. Efforts include capacity building, by supporting civil society organizations and promoting good governance, guidance on a better public finance management, and enhancement of policy dialogue. Although there are programs and policies underlying the importance of innovation in Namibia, there are differences in the level of knowledge and understanding of green economy among the government, business community, and the general public. In addition, there is a lack of entrepreneurs that are able to bring proven concepts and validated technologies to market, especially in the cleantech sectors including waste management and renewable energies. Namibian entrepreneurs face several difficulties such as acquiring knowledge, identifying mentors and seed funding opportunities, expanding into foreign markets, accessing resources and infrastructure, and growing a team.

48. In addition, initiatives are lacking coordination and there is no strong CIEE to provide necessary services to entrepreneurs, resulting in a lack of availability of a project pipeline ready to access green finance. This proposed project will further strengthen Namibia's efforts to address domestic environmental challenges at the intersection of water, energy and land issues, leading to a greater competitiveness of the economy by achieving other socio-economic and environmental benefits. This will create economic opportunities and support a shift towards a sustainable development of the country. The proposed project is designed to directly address the barriers described above.

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

49. The proposed alternative scenario will be implemented in close coordination and coherence with the GCIP Framework and it will seek to support and nurture cleantech entrepreneurs and help them transform into fast-growing, scalable businesses that will attract funding. This project will support technological and business model innovation in the areas of clean energy and energy efficiency, sanitation, waste management, as well as forestry. SMEs and start-ups in Namibia are expected to develop and scale up, which would lead to an increased market adoption of cleantech innovations, and a reduction in GHG emissions and land degradation as well as to land restoration, especially in peri-urban areas. Furthermore, the nurturing of nascent industries will lead to an enhanced stakeholder capacity and competitiveness, job creation and cleantech market development.

Project Approach

50. The project will promote the CIEE in Namibia by: (i) identifying and nurturing innovative cleantech ideas into enterprises; (ii) strengthening the national capacity within institutions and partner organizations for the sustainable implementation of the cleantech CIEE and accelerator approach; (iii) supporting and working with national policy makers to provide a conducive policy framework for entrepreneurs; and (iv) engaging with GCIP Global with the aim to enabling international scale-up and networking opportunities.

51. Through the initial GEF grant funding the project will catalyze investment to support and accelerate start-up and SMEs towards development and commercialization of their innovative concepts. Accordingly, the project is structured into three components, as shown in the Theory of Change in Figure 2 below namely:

- 1) Transforming early-stage cleantech innovations into commercial enterprises;
- 2) Cleantech innovation and entrepreneurship ecosystems strengthening and connectivity; and
- 3) Strategic programme coordination and programmatic coherence.

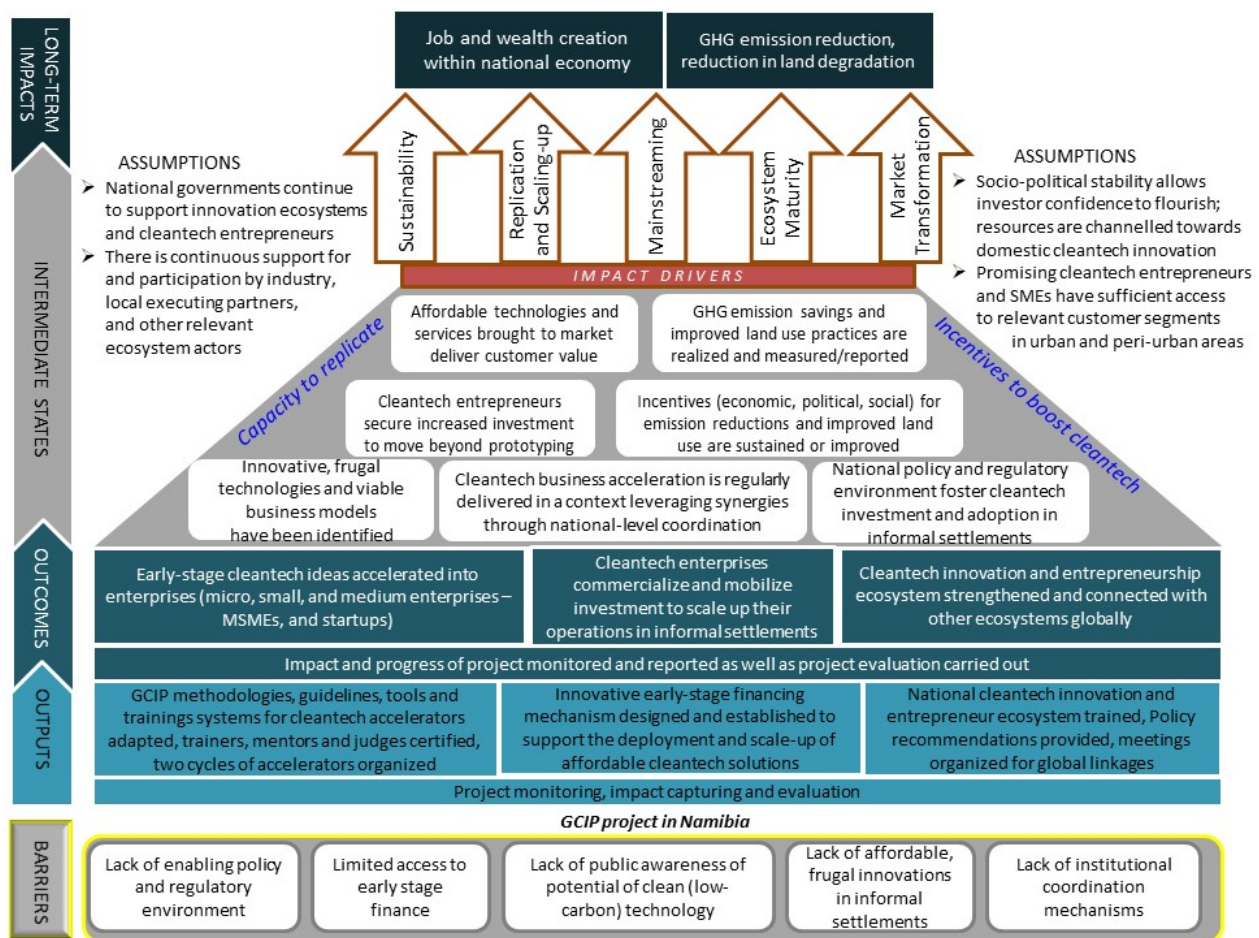


Figure 2: Theory of change.

52. The project has been designed to address the barriers set out in the previous sections. Specifically, the barriers faced by innovators will be alleviated by the provision of support from concept through to commercialization while helping them adopt different approaches to entrepreneurship. This will include: provision of ideation and concept validation services, holding annual accelerators, advanced accelerators to provide follow-on support to the alumni as well as targeted support services, investment facilitation, mentorship and partnership support - across the country targeting at least 50 entrepreneurs.

53. In particular, the deployment and scale-up of frugal innovations with a focus on low carbon circular economy as well as in the priority sectors in informal settlements of peri-urban areas (clean energy, waste- and water management, and sanitation) will be pursued.

54. Capacity gaps will be addressed with targeted capacity building activities for policy makers and institutional actors, and the policy and regulatory environment will be strengthened. In particular, areas such as access to finance, behavioral change of consumers and in value chains, and circular

economy promotion will be targeted. Networking, advocacy, knowledge generation and exchange will enhance awareness amongst ecosystem stakeholders and increase impact of the project whilst close cooperation and linkage with GCIP Global will increase international opportunities for Namibian entrepreneurs and strengthen the CIEE as a whole.

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

56. **BY** identifying and supporting innovative cleantech and viable business models whilst increasing institutional capacity and ecosystem connectivity, the cleantech entrepreneurs are able to secure increased investment from more aware investors, **AND** they are enabled to commercialize their innovative products. At the same time, **IF** a supportive policy and regulatory environment, including incentives exists, **THEN** cleantech investment and adoption is fostered. **ALSO**, in turn these interventions will bring innovative cleantech to market and drive uptake, delivering customer value and contributing to the reduction of GHG emissions and to the mitigation of land degradation. Continued growth and the mainstreaming of the technologies will result in market transformation and job and wealth creation within Namibia, accompanied by global environmental benefits including GHG emission reductions and increased carbon sequestration through reduced deforestation rates as well as adequate bio-diversity habitats.

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

58. Accordingly, the project will be implemented in close collaboration with national and regional institutions to build an enabling CIEE for development and commercialization of innovative cleantech. Ultimately, this project will support Namibia's governmental actions towards expanding the opportunities for economic activities; enhancing human capacity; and developing and expanding access to reliable infrastructure. By doing so, the project will support the pathway towards sustainable growth and socio-economic transformation in Namibia.

59. While a large number of start-ups and SMEs have suffered during the pandemic, COVID-19 has also led to an increase in entrepreneurial activity. Innovative enterprises are undoubtedly essential for the future of innovation and supporting them is critical. Also, the current COVID-19 crisis also shows the importance of incremental approaches to innovation and the need for a sustained support

through well designed acceleration that is adapted to the 'new normal' while turning the crisis into a growth opportunity.

60. The economic recovery packages provide a possibility for countries to build back better, greener and in a more sustainable manner. Innovative cleantech start-ups and SMEs can not only make economic impacts in Namibia by creating jobs and wealth, but also they can enhance the CIEE capability to create new opportunities for green and sustainable development.

61. In order to safeguard the sustainability of the project and to ensure its successful upscaling in Namibia, several public and private sector stakeholders will provide co-financing to support the CIEE development. This will ensure country ownership and enable identification of areas of special interest to national counterparts.

62. The project builds on the collective feedbacks by various stakeholders including national counterparts, partner institutions, start-ups and SMEs successfully participating in GCIP, and strategic partners at the global level. The project will also work with new partners, at the regional and local levels.

63. In addition, the project approach, in particular within Component 2, enables acceleration of innovations that have highest GHG emission reduction and sustainable land management potential as well as have greatest chances to access the market and benefit from financing opportunities. This is also supported by partners like the Private Financing Advisory Network (PFAN) that de-risks the enterprise's business model in order to increase the likelihood of investor interest. The objective underpinning the linkages established between GCIP and PFAN is to offer the ventures supported by the project a continuum of services as they mature towards commercial viability and scaling up.

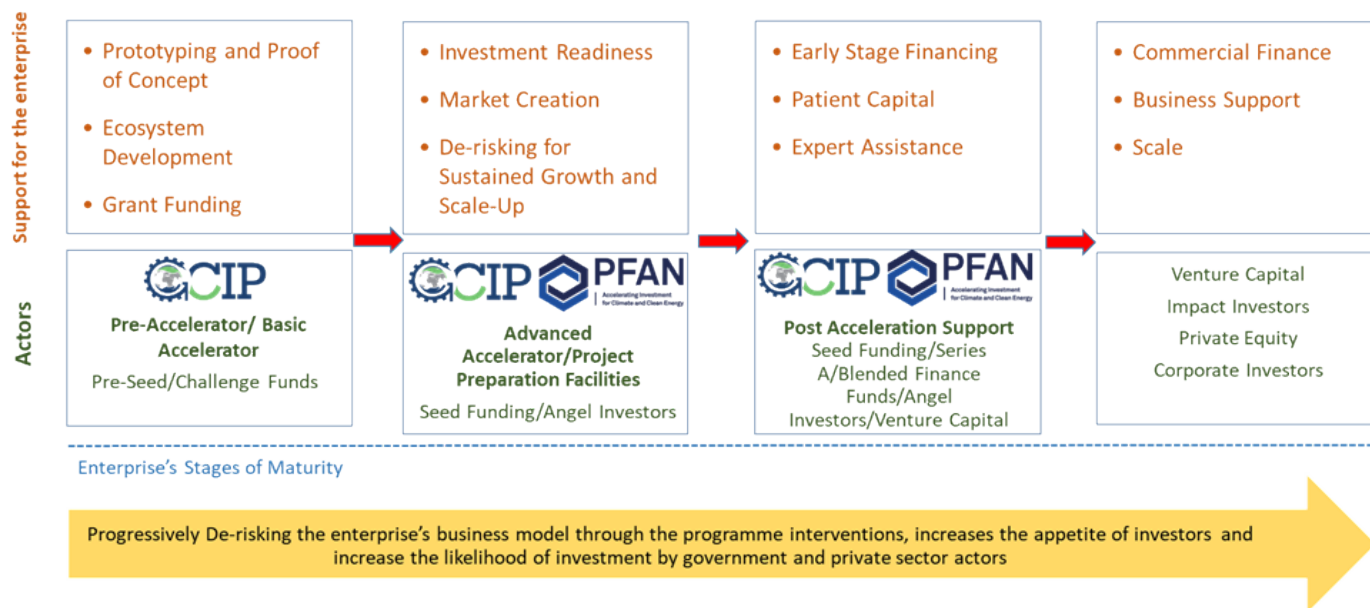


Figure 3: Start-up to scale-up journey.

Project Description

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

64. Component 1 focuses on providing direct support to early-stage enterprises to enhance the capacity and competitiveness of them as cleantech solution providers, and to leverage market opportunities embedded in the water-energy-land nexus and in the area of waste management. Outcome 1.1 focuses on entrepreneurial training and business access support. Outcome 1.2 pays attention to investment facilitation services for cleantech enterprises at a growth stage that demonstrate market traction and sales evidence, and can benefit from specialized support. The diagram below shows the types of assistance required by cleantech enterprises, depending on their stage of growth.

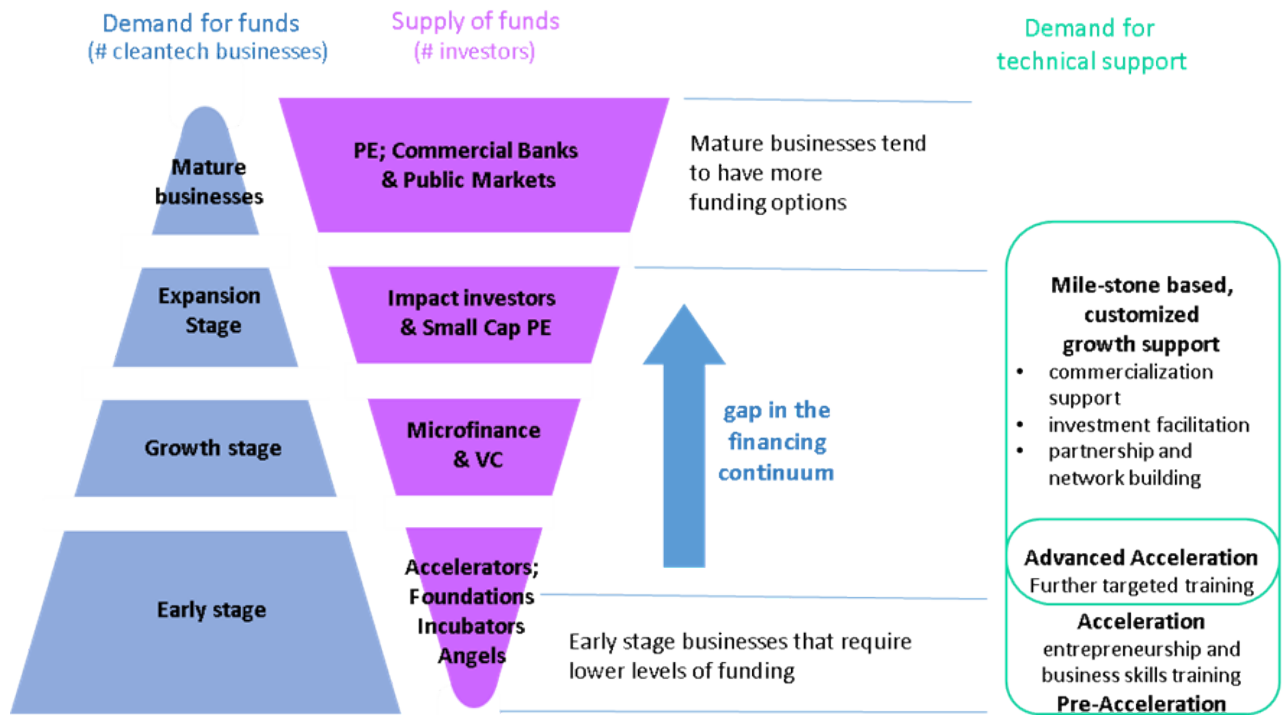


Figure 4: Demand for funds and technical support per development stage.

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

65. Early stage cleantech innovations with high impact potential will receive business acceleration support for increased market and investment readiness. To facilitate this, the project will benefit from the available GCIP package of tools and guidelines that elaborate on the approach and methodology on how to promote cleantech innovation and entrepreneurship in developing and emerging economy countries, as well as provide practical guidance for operation and management of the accelerator at a national level, among others.

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

66. Accelerator guidebooks will be made available as practical tools for the operation and management of the national accelerator in Namibia. These guidebooks will be reviewed and adapted by the EIFN to reflect the context of Namibia's CIEE including market conditions, policy environment, development priorities, technology priorities, local examples. Ultimately, three Accelerator guidebooks will be produced, i.e. for i) acceleration; ii) advanced acceleration; and iii) post-acceleration support.

The guidebooks will also entail references to the project selection criteria for the accelerator that might reflect specific priorities and focus, including on land degradation in informal settlements and peri-urban areas

Output 1.1.2 Pool of 20 cleantech innovation and entrepreneurship experts (trainers, mentors, judges) is trained and certified to support the Namibia Accelerator (with at least 35% women participants)

67. Developing a pool of CIEE experts to act as mentors, coaches and judges is critical to the effectiveness of accelerators in providing the right support to the participating teams. This is because the delivery of the accelerator curriculum and the effectiveness of facilitated connections and networks will to a large extent depend on the capacity of trainers, mentors, and judges. In order to ensure coherence of approach, a CIEE expert training system will be developed by UNIDO. Similar to the accelerator guidebooks, the training system will be reviewed by the EIFN and adapted to the national context, ensuring that the training materials accurately reflect market, business, policy and investment climate. The community of trained and certified experts is expected to positively influence the cleantech innovation initiatives at national level, and will contribute to the strengthening of the CIEE in general.

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

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

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

69. This outcome will support selected alumni to further develop their innovations to reach a commercial success. Thereby, a cost-effective path to directly support and monitor growth of alumni enterprises will be pursued while removing the overemphasis on the competition aspect of the accelerator, and allow entrepreneurs to focus on individual milestones and improvements.

Output 1.2.1 Targeted business growth support services are provided to selected cleantech enterprises

(up to 15 enterprises with at least 35% women participants) towards commercialization

70. 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 and courses on cleantech entrepreneurship, etc.

71. Additional business model validation may also be necessary to reflect the developments in technology/product readiness, business, market and manufacturing readiness. As each entrepreneur is different, extensive consultations will take place as part of the selection process to ensure that all their needs and expectations are fully understood and agreed on at entry into advanced and post acceleration support. A milestone-based approach will be employed to measure progress of each enterprise.

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

72. Mobilizing investment for cleantech products and services is a lengthy and iterative process. Therefore, selected enterprises with high replication and scaling up potential will benefit from tipping-point investment facilitation support. The project will support the establishment of a 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.

73. 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 success stories, including possible returns on investments.

Output 1.2.3 Mentoring and partnership support is provided to cleantech enterprises (up to 10, with at least 35% of women participants) for global market expansion in collaboration with the global GCIP network

74. Many cleantech innovations have potential for replication in other developing countries. Based on requests received from GCIP alumni enterprises, international mentors will be identified by the PEE through the network of mentors on the GCIP web platform to facilitate building of connections and networks for expansion into new country markets. Through the web platform, enterprises will also be given peer networking opportunities with GCIP enterprises globally, as well as other cleantech enterprises within UNIDO's partner network. As a result, the enterprises will be able to explore

opportunities for technology collaboration, product co-development, joint venture for market expansion, among others, in a business-to-business to context.

Output 1.2.4 Innovative early-stage financing mechanism is designed to deploy innovative cleantech solutions to mitigate climate change and combat land degradation in informal settlements and peri-urban areas (up to 10 enterprises, with at least 35% women participants)

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

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

Outcome 2.1 The CIEE in Namibia is strengthened and interconnected

76. The policy framework and institutional capacity 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 are sustained after project closure. Through this project it is attempted to build capacity in the PEE and other key national institutions in Namibia. Further, policy makers will be assisted to design suitable national policies and regulations that create an enabling business environment for cleantech innovation and commercialization. This will be an iterative process where relevant analyses and dialogue are conducted as well as recommendations made.

77. This project will benefit from GCIP Global frameworks, guidelines and tools which will be reviewed and adapted by the EIFN. These will include recommendations for enhancing capacity of national institutions to support cleantech innovation and entrepreneurship, a framework for CIEE mapping and analysis, strategies for facilitating meaningful interaction and collaboration among ecosystem players, and training material. Policy frameworks (including translatable policy recommendations and strategies) will be built based on research and analysis of countries with comparable socio-economic conditions to those in Namibia.

Output 2.1.1 CIEE analysis is conducted (market conditions, policy environment, development priorities), including mapping of supply of and demand for cleantech solutions and their prioritization in accordance with national strategies and action plans

78. An assessment will be conducted to analyze the strengths and weaknesses of the CEE in Namibia. 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. Since this project puts a special focus on informal settlements and peri-urban areas, special focus will be given to synergies with settlement upgrading programmes.

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

79. Policy remains a key determinant that influences the cleantech market and investment behavior. Through the project, multi-stakeholder policy dialogues will be facilitated to prompt discussion and collaboration among policy makers and other CIEE actors, and to guide them to create a conducive environment for commercialization of cleantech solutions. The conclusions of the dialogues will be captured as policy briefs and presented to relevant ministries and agencies. The government will be assisted in reviewing the existing policies and regulations relating to the promotion and support of cleantech, innovation and entrepreneurship as well as a gap analysis report on policy requirements will be prepared. Subsequently, stakeholder consultation will be carried out to validate and complement the findings.

Output 2.1.3 Linkages, collaboration, and synergies across CIEEs are promoted

80. At a national level, investor forums and awards event will be organized to encourage linkages, collaboration and synergies across the CIEE. UNIDO's annual GCIP Forum will also be an integral part of ecosystem connectivity and will be an opportunity for the project representatives and top performing companies to be connected with potential partners, customers, technology scouts and investors from around the world. This provides alumni enterprises in Namibia with exposure to the global community, and the opportunity to forge new partnerships for co-innovations and joint ventures.

81. The GCIP Forum is further a culmination of innovation showcasing and investment matching among national counterpart institutions, and will continue to be an important annual milestone for networking, advocacy, and knowledge exchange among cleantech innovation ecosystem players.

Component 3 Knowledge management and project coordination

82. The activities under this Component seek to ensure that the successes of GCIP in Namibia are captured and communicated globally. The EIFN will remain in regular communication with the GCIP Global to ensure appropriate knowledge exchange and efficient coordination. Also, several tools will be shared by GCIP Global to facilitate coherence in project approach across countries, including Namibia.

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

Output 3.1.1: Guidelines for project management teams are adapted and implemented

83. GCIP internal guidelines will be disseminated by UNIDO and will include operational advice for the Project Management Unit (PMU) to be established within the EIFN. International training for the PMU will be an important activity, enabling interaction with PMUs from other GCIP countries, including sharing of practical experiences and insights. In addition, a sustainability and exit strategy specific to the Namibian context will be developed.

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

84. The communication and advocacy efforts will have three aims: 1) promoting visibility of the project and dissemination of information on achieved impacts; 2) increasing awareness of the catalytic role of cleantech in addressing climate change and land degradation and their profitability; and 3) showcasing cleantech innovations from alumni enterprises and enhancing their visibility and credibility.

85. The communication strategy will emphasize the importance of awareness raising and marketing materials for different kinds of audiences, including entrepreneurs and government officials. Also, briefing sessions, press releases, social media activity, events, among others, will be foreseen in the communication strategy. The GCIP Global knowledge management, communication and advocacy strategy will be made available to the EIFN to be reviewed and adapted to the country context.

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

86. A national web platform will be developed as a tool for four key functions. Firstly, it will serve to facilitate internal GCIP management and operations, as for example guidelines, tools and other knowledge products will be disseminated through the web platform. Secondly, it will be 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.). Thirdly, the web platform will enable maintenance of GCIP community at the national level. All alumni enterprises, as well as certified mentors and coaches will be invited to join the online network.

87. Also, a profile and impact potential of each supported cleantech solution will be showcased on the web platform. Therefore, it will serve as a gateway for potential investors and customers to

collect information on alumni enterprises. Fourthly, the national web platform will be linked to the global web platform to connect Namibia to the broader GCIP community globally.

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

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

88. A GCIP methodology for gathering information on achieved results and higher-level impacts will be provided and will ensure a shared understanding of GCIP associated terminology amongst all involved stakeholders to allow for extrapolation and comparison of gathered data. As a minimum, tracking will include global environmental benefits (GEBs), job creation and investment leveraged. Data will be gender disaggregated where possible and data on youth participation will also be recorded. The EIFN will receive online training on the use of the methodology and subsequently it will train all semi-finalists across the programme (as part of the accelerator) to provide GEB estimations of their innovations. Other relevant stakeholders can be included as necessary.

Output 3.2.2 Project progress monitoring and reporting as per UNIDO and GEF guidelines including development and monitoring of the Gender Mainstreaming Action Plan, the Environmental and Social Management Plan and Stakeholder Engagement Plan is ensured

89. 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 with other relevant stakeholders as well as the final project evaluation. A detailed monitoring plan for tracking and reporting of project time-bound milestones will be prepared by UNIDO in collaboration with the EIFN and project partners at the beginning of project implementation and periodically updated. In order to mainstream the environmental and gender dimensions, detailed environmental and social management analysis will be conducted during the PPG as well as a gender mainstreaming action plan will be prepared to serve as a basis for project's contribution to enhancing gender equality and women's empowerment (GEEW).

90. Efforts will be made to ensure that voices of both women and men are considered when discussions are held. As necessary, gender-disaggregated focus group meetings will be organized so that both men and women can lead, shape, participate in, contribute to and benefit from the project through mutual knowledge sharing. The operationalization of the gender mainstreaming action plan will be monitored and evaluated according to relevant indicators.

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

91. An external mid-term review will be conducted halfway through the project implementation period. An independent final evaluation will be performed six months prior to the project closure. The final evaluation will focus on assessing the achieved impact and sustainability of results, including

project's contribution to capacity development and GEBs. The final evaluation will also provide recommendations for follow-up activities.

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

92. The project's multi-sectoral approach catalyzes investments in technologies that help reverse global trends, specifically desertification and deforestation due to unsustainable practices in informal settlements, by promoting energy access as well as waste and water management good practices conducive to sustainable land management (SLM). The project will focus on providing frugal, innovative solutions to climate change mitigation, inevitably showing the interlinkages between both areas. GCIP Namibia will seek to support innovations that have the potential for contributions to GEBs – notably promoting technology transfer for sustainable energy breakthroughs for cleantech innovation (GEF Objective CC-1-4) and reducing pressures on natural resources from competing land uses and increase resilience in the wider landscape (GEF Objective LD-1-4).

93. This project is a multi-focal area project and is aligned with the following focal areas:

94. Land Degradation: This project supports the **GEF 7 Objective (LD-1-4)**, by building capabilities and harnessing capital and expertise to facilitate investments in innovation and technology, directed at the lives of informal settlement dwellers, ultimately contributing to sustainable land management practices (SLM). This project will seek to address the drivers of land degradation such as deforestation, and environmentally harmful practices related to the lack of access to clean energy sources and unregulated waste and water management in informal settlements in urban and peri-urban areas.

95. Affordable, innovative technologies will help to maximize global benefits for the environment by reducing pressure on soils and forests and also address the issues of biodiversity, climate change, and local livelihoods. Furthermore, by improving the living conditions of affected populations and enhancing ecosystems services, the project is considered to not only improve health and ensure food, energy and water security to local populations, but also to reduce degraded agricultural land, grasslands and restore drylands. By providing the technical assistance required to bring bankable projects to investment, this project seeks to create an enabling environment for affordable, frugal innovation, ultimately leading to better land use management practices. A list of preliminary technology areas, that have been identified as beneficial for SLM by the UNCCD, will be given priority in the development of selection criteria during the PPG phase:

a) water management technologies including the use of sustainable irrigation systems, water harvesting, and drainage to promote efficient use and protection of water resources from pollution and over-exploitation.

b) reducing deforestation through land use planning and reforestation in order to add to the emission reduction potential of GHGs. Measures can protect soil quality and preserve soil carbon stocks and biodiversity.

c) agroforestry measures have the potential to control soil erosion and improve productivity, as well as water retention and reduce nutrient losses. Agroforestry also has the potential to conserve soil fertility and functioning, while providing socio-economic benefits to land users through income generation opportunities and increased resilience to climate change.

96. Climate Change Mitigation: This project is also firmly aligned with the GEF Climate Change Focal Area in its focus on innovation and technology transfer for sustainable energy breakthroughs in line with the **GEF 7 Objective CCM-1-4** that 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 up, and ultimately to contribute to a low emission development pathway nationally and potentially globally.

97. The project supports innovation and transfer of technology at early-stage development while focusing on innovations delivering sustainable energy solutions that control, reduce or prevent GHG emissions. In particular, since this project seeks to address challenges specific to informal settlements, more attention will be given to frugal innovations, that can have a positive impact on the lives of informal settlement dwellers. The specific technologies supported will depend on the project selection criteria for the accelerator as defined by the key national stakeholders in consideration of Namibia's energy, climate change and land use priorities, but will be aligned with the GEF 7 programming direction priorities.

98. 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.

99. This project in Namibia will adopt an interdisciplinary holistic approach by engaging several stakeholders such as start-ups, SMEs, ministries and government institutions (especially settlement upgrade initiatives), academia and research centres, business associations, financing institutions, foundations, venture capitalists, etc. This project will also closely coordinate with the GCIP Global, as well as other similar national and international efforts, as it is critical to maximize synergies and share knowledge and best practices that can help in enhancing entrepreneurs' contributions towards climate change mitigation.

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

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

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

102. The private sector is key to the creation and expansion of the market for cleantech products and services, achieving GEBs, generating jobs, and supporting economic growth. In Namibia, a clear government prioritization is given to promote innovations and start-ups/SMEs and to put the necessary policies and strategies in place. However, significant barriers still exist for cleantech enterprises, leading to their very low success rate. In essence, the CIEE in Namibia is still weak, and if the GEF funding is not provided, it is very likely that cleantech innovations will not be adequately developed in Namibia in the near future.

103. This will result in many unrealized opportunities in reducing GHG emissions and land degradation, in strengthening partnerships with the private sector keen on investing in cleantech, in commercialization of cleantech enterprises, and ultimately in missed momentum for green economic growth and jobs.

104. As discussed in the baseline section, start-ups and SMEs with breakthrough cleantech innovations in Namibia have a low success rate due to lack of key skills and capacities to transform their innovations into viable, scalable, and fast-growing businesses. Furthermore, the CIEE in Namibia is not fully conducive and initiatives to support the entrepreneurs remain disjointed and uncoordinated. This project has been designed to learn from GCIP projects supported under GEF 5 & 6, to create opportunities for greater impact through providing well designed and proven commercialization support and investment facilitation services to expand opportunities for market growth. This project is designed to provide catalytic and effective interventions that galvanize private sector interest and investments in the cleantech innovation and entrepreneurship space and also strengthen the national CIEE and connect it at the global level. These interventions create a critical mass of interest in the cleantech sector, drive the transformation of cleantech markets and result in more cleantech start-ups and SMEs contributing to climate change mitigation, reduction of land degradation, and low-emission development.

105. The project will: a) adapt and institutionalize methodologies, guidelines, tools and training systems for the accelerator, advanced accelerator, and post-accelerator support and for mentors, judges, and trainers to be trained and certified in Namibia. This will ensure that the country will continue to run the accelerators long after the GEF project has ended; b) provide post-acceleration support and investment facilitation services so that cleantech innovators from Namibia will be able to commercialize their innovation and mobilize funding for scaling-up; c) ensure the uptake of frugal

innovations into informal settlements through close cooperation between government and private sector; d) support the design and establishment of early-stage financing mechanism; e) support development of policy and regulations on entrepreneurship and cleantech innovation at national level; f) enable participation of entrepreneurs in global events and networks such as for example investor networks; g) create bigger market opportunities for cleantech innovators to expand their businesses and hence increase their success rates and result in greater GHG emission mitigation as well as protection of land and soil.

106. Furthermore, through the link to the GCIP Global project, Namibia's CIEE will benefit from cross-border connectivity and synergies with ecosystems of other GCIP partner countries, leading to new market opportunities for Namibian cleantech start-ups and SMEs to expand their businesses. One of the many incremental services that the GCIP Global provides is access to global investors. As an estimate, evidence from GCIP under GEF 5& 6 shows that some GCIP alumni were able to mobilize considerable global funding. Episome Biotech (2017 semi-finalist) from Turkey raised EUR 1.7million in investment through 3 rounds from Diffusion Capital Partners based in The Netherlands. Seyisco (Turkey) in turn raised USD 100,000.

107. The GEF funding of 1 million USD is estimated to catalyze co-financing of 5 million USD from both public and private sectors which are interested in promoting solutions for low carbon, circular economy and sustainable development that contribute to GHG emission reductions and sustainable land use practices. The project activities are regarded as opportunities for growth for start-ups and SMEs in the country. The GEF resources will be used to bring best practices and international expertise to Namibia. The project will support at least 50 entrepreneurs. In addition, through national ecosystem strengthening activities, the project will create a basis for enhancing awareness and visibility of business and investment opportunities in the cleantech sector, thereby prompting further interest and financial flows.

108. In addition, the project will work with already existing funds, institutions and programmes, as mentioned in the baseline section, and develop targeted capacity building activities to which also experiences from other GEF projects will be brought in. By holding outreach and capacity building events in different locations, the project will enhance outreach of its activities throughout the country, while also being inclusive and engaging women and youth.

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

110. If GEF funding is not provided, it is very likely that innovative cleantech solutions will not be adequately developed in Namibia. Barriers for entrepreneurs lacking business skills will remain and supporting mechanisms to fully commercialize their products and services will not be developed. This will result in many unrealized opportunities for achieving GEBs, strengthening partnerships with the

private sector keen on investing in cleantech, commercialisation of cleantech enterprises, and ultimately in a missed chance for green economic growth and jobs.

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

111. The long-term lifetime of cleantech innovations introduced in the market and the strengthened and interconnected CIEE will be reflected in multiple GEBs including, primarily, GHG emission reductions and sustainable landscape management practices.

112. Land Degradation: The proposed project will generate a range of national and local benefits in the land degradation focal area. The project will support the achievement of commitments made under UNCCD, CBD, UNFCCC, as well as NDCs, by promoting the achievement of improved practices for land management and across degraded forest land and dryland that are important to meet commitments under these conventions. The project's global environmental benefits will include: (i) improved ecosystem stability and productivity, by adopting sustainable land management practices, and subsequent protection of degraded ecosystems for enhancing their structural and functional stability, while improving the livelihood of local communities; (ii) improved soil quality in urban and peri-urban areas, which would be achieved through the adoption of renewable energy technologies, waste management, recycling, as well as sanitation services; and (iii) conservation of existing forests that could benefit biodiversity and watershed functions and ameliorate climate impacts. This proposed project will measure the above mentioned global environmental benefits with the following indicators :
i) Area of landscapes under improved management practices in select districts of Namibia, ii) Area of degraded or degrading land restored

113. During the PPG phase, together with the Shack Dwellers Federation and the Integrated Land Management Institute of Namibia, 2 pilot areas will be identified, suitable for the deployment of innovations developed under this project. Based on these areas, a methodology for calculating the area of landscape under improved practices will be developed. This methodology will include factors such as average shack sizes, amounts of waste and waste type disposed per household, amount of wood consumed for cooking and heating per household, contaminated areas due to non-availability of sanitation services, etc. The methodology developed during the PPG phase will be closely linked to the impact criteria of the UNCCD land degradation neutrality initiative and specifically contribute to the following objectives:

- maintaining or improving the sustainable delivery of ecosystem services?
- Increasing the resilience of land and the populations dependent on it?
- seeking synergies with other social, economic, and environmental objectives?

114. Climate Change Mitigation: The GEBs achieved through the implementation of this project will be identified and quantified on the basis of the innovations marketed and their uptake. Given the

nature of the project, the low-carbon products and services developed and commercialized will contribute to the GEBs beyond the project life and scope.

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

115. In order to ensure that GCIP supports innovative cleantech solutions with high impact potential, and delivery of GEBs at the programme level, a target approach is applied. To achieve cost effectiveness of GEF funding for GEBs, a value of 5 to 10 USD/tCO₂e avoided is targeted (corresponding to an overall cost per ton at programme level of USD38-76/tCO₂e). A target for the minimum projected potential of avoided GHG emissions per enterprise is between 1,800 to 3,600 tCO₂e by 2030. The provided target range will enable the project to support a mix of technologies with different CO₂ emission reduction potentials, and in particular allow innovations into the GCIP accelerators that a) have a relatively low CO₂ reduction potential, but a considerable demand and market growth potential (that can lead to amplification of GEBs), as well as b) that create multiple benefits (including socio-economic, such as job creation, gender mainstreaming, etc.). Throughout the initial accelerator selection process and the early training on impact calculation, each entrepreneur will determine a baseline scenario for their technology.

116. To put this minimum target approach in context, a review of previous GCIP alumni GHG reductions was carried out. The review, based on three sources of information, shows that the proposed avoided emission target is plausible and quite conservative. It also demonstrates a likely variety of emission reductions due to the different country contexts and kinds of technology innovations. The review also shows that where an innovation has real market potential, the avoided GHG emissions are significant and that GCIP has experience in successfully identifying and accelerating such innovations. Firstly, a survey carried out by UNIDO of 14 of its GCIP alumni companies showed that these companies had already generated 600,000 tCO₂e savings by 2017 and projected to generate over 4.8 million tons of GHG emission savings by 2020 (or 340,000 tCO₂e/year per company). Secondly, the Independent Evaluation Office (IEO) report of 8 GCIP projects included a sample of alumni in its annex with projected avoided emissions between zero (either they had not been estimated yet or the cleantech was not related to CCM) and 5 million tCO₂e per year. A median for emission reductions that were reported (which occurred only for a small proportion of the total alumni, namely 60 out of 900) is 88 tCO₂ per year. If alumni with estimated but not reported reduction are included (34) in the calculations, then the median increases to 12,200 tCO₂/year with the interquartile range from 350 tCO₂ to 81,000 tCO₂/year. Thirdly, the Mission Innovation Framework for Assessing Avoided Emissions, in which a number of GCIP alumni (selected as part of Mission Innovation's 100 innovative clean energy solutions in 2019) were included, shows for example that Atomberg Technologies (which manufactures an energy efficient fan) is estimated to avoid 5 million tCO₂e/year by 2030. In turn BEAD, an energy management AI optimization enterprise, is estimated to avoid 319 million tCO₂e/year by 2030. These two companies were also covered by the IEO report mentioned above, but Atomberg had not provided an estimate (so was assumed zero) and BEAD's estimate was 5 million tCO₂e/year.

117. In addition, indirect GEBs facilitated through the CIEE strengthening are also expected. In particular, indirect GHG emission reductions could result from: strengthened capacity of institutions and human resources to support commercialization and uptake of cleantech solutions at large;

investments mobilized for cleantech solutions due to reduced risk perceptions; as well as long-term emission reductions due to behavioral change of several CIEE stakeholders. An estimated factor of 5 is chosen to provide a projection for indirect GEBs. Where possible, efforts will be made to verify the indirect GHG emission reductions achieved at national and global levels through terminal evaluations.

118. A ten-year horizon was selected for estimating the GHG emission savings. However, assessing the GHG reduction potential of cleantech solutions (products, services) to be identified through GCIP has proven to be difficult, as by definition GCIP encourages open innovation, and the types and categories of cleantech products and services that will be supported can only be determined after the selection of semi-finalists as part of the GCIP accelerators. Also, expected difficulties include attribution of the incremental GEBs of the cleantech solutions to the GCIP support. However, the design of GCIP assumed in the past abatement costs (for GEF funding) of between 0.68 USD/ton CO₂e in Turkey to 29.77 USD/ton CO₂e in Armenia. As the targets were exceeded in those countries, and as the proposed benchmarks are within the same range, they are considered realistic and conservative.

119. This target-based approach for the estimation of GHG emission reductions will be applied to this project. A GCIP methodology for the calculation and monitoring of GHG reduction potential will be developed by the GCIP Global in the first year of the project implementation, as well as it will be shared with the PMU in Namibia.

120. This project will be unique in its approach compared to other projects under the same programme, since it will take a cross-cutting approach to reducing GHG emissions and improving land use practices. During the PPG phase, together with the Shack Dwellers Federation and the Integrated Land Management Institute of Namibia, 2 pilot areas will be identified that are suitable for the deployment of innovations developed under this project. In these areas, a methodology for calculating the area of landscape under improved practices will be developed. This methodology will include factors such as average shack sizes, amounts of waste and waste type disposed per household, amount of wood consumed for cooking and heating per household, contaminated areas due to non-availability of sanitation services, etc.

ii. Estimation of GEBs

121. This project will indirectly support up to 500,000 people, living in informal settlements. The project will play an important role in enhancing access to energy, waste management facilities and livelihood improvement in the selected areas in Namibia's urban and peri-urban areas. It will also contribute to water and food security & sustainable livelihoods and creating new jobs in rural areas. Land degradation related GEBs such as areas with improved land management practices which will be achieved through the implementation of this project, will be identified and quantified on the basis of the innovations marketed and their uptake in the selected areas.

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

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

124. For some technology categories, specific GEBs beyond GHG emissions reduction potential will be monitored and captured. For example, area with improved landscape management practices will be calculated, monitored and reported on. Other GEBs may include POPs reduction, reduction in air pollutants (e.g. NO_x, SO_x, PM and CO), improved water quality and reductions in material use.

7) Innovation, sustainability and potential for scaling up

Innovation:

125. The project is unique in its multi-tiered and multi-stakeholder approach to fostering the market expansion of innovative cleantech start-ups and SMEs. In comparison with other incubator or accelerator programmes, this project does not only focus on enterprises, but also on strengthening the entire CIEE by building capacity in national institutions, developing policy roadmaps, creating strong linkages between the most relevant ecosystem players, and by raising awareness of the society at large. The project support also focuses on additional advanced accelerator and post-accelerator support, which is an innovative approach based on the stated needs of alumni.

126. Importantly, the project also supports entrepreneurs across the whole innovation value chain to develop demand-driven and investment-ready cleantech solutions that will have an extensive positive impact in the global markets. What is more, it enables achievement of not only environmental, but also socio-economic benefits, in that it for example promotes gender equality and women's empowerment. Being included under the umbrella of the GCIP Framework, this project will link the national CIEE at global level to create market opportunities for start-ups and SMEs to enable them to grow their businesses beyond the national boundaries, promoting the sharing of experiences and policy

best practices to foster learning. This global connectivity, and the related opportunities it provides, is innovative and not being enabled by any similar projects or initiatives.

Sustainability:

127. The impact pathways of the project are carefully selected to address key barriers and galvanize continued actions by ecosystem players so as to achieve transformative impact in terms of GHG emissions reductions, improved land management practices and job and wealth creation in Namibia. The mainstreaming of affordable cleantech innovations that will continue beyond this project will ultimately result in the decoupling of economic growth from GHG emissions and land degradation.

128. 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. Besides, the comprehensive trainings conducted for participants, trainers, judges, and mentors will create a critical mass of experts with sound business and technical skills in different regions of the country. This knowledge can be easily transferred to create a virtuous cycle of enhancing the CIEE to identify and support innovations.

129. 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 CIEE actors, and their sustained interactions and networking post project closure.

130. Strengthening the capacity within the national PEE to conduct the national accelerator with public and private funding after project closure will also contribute to the project's long-term sustainability. Sustainability and exit strategy frameworks will be provided by GCIP Global to be reviewed and adapted for Namibia.

131. What is more, the sustainability of the project is reinforced by the following: i) During and after the Namibia accelerator the cleantech start-ups and SMEs will be guided through the development process of the concepts to ensure that they are sustainable and will have a long-term positive impact.

132. 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, trainers, mentors, and judges in the country; ii) Through investment facilitation, cleantech start-ups and SMEs will be able to mobilize investments from angel and impact investors as well as other sources of funding; iii) By generating and using methodologies, guidelines, tools and training materials for accelerators, the project will ensure that institutions engaged in running the accelerators have adequate materials to continue their work beyond the life of the project; iv) By linking the CIEEs across countries, the project will create a conducive business environment and incentives for cleantech start-ups and SMEs, policy makers, industry associations, and other stakeholders to work across countries, which will lead to establishment of partnerships and networks that are likely to be sustained in a long term; v) Through the establishment of a web platform that alumni and other stakeholders will use as a market place where global CIEE players will continue to share their updates on innovations,

investors will continue to scout for new solutions, as well as policy makers and regulators will continue to learn about policy and regulatory developments; vi) The open availability of knowledge generated from the project in terms of fact sheets, guidebooks, tools and reports on accelerating cleantech innovation will ensure that stakeholders can easily and continuously apply it to sustain the project approach; vii) Adherence to standardized materials, guidelines and tools will allow the project to transform to a recognized brand, securing long-term sustainability; viii) Development of long-term partnerships with the private sector, which will form part of the national exit strategy, will guarantee their continued interest in the project.

Scaling Up:

133. The project is implemented with close links to GCIP Global. Thanks to that, the project bears a considerable potential for local and regional networking and expansion as well as sectoral expansion through a possible shift of focus on cleantech in new areas, beyond land management. What is more, the stakeholders involved in the project are enabled to form international partnerships and to enter foreign markets.

134. The private sector will play an instrumental role in driving and sustaining cleantech innovation in land management, agriculture, renewable energy, energy efficiency, circular economy, etc. by providing finance and expertise. The public sector, in its attempt to improve the livelihoods of populations in underserved peri-urban informal settlements, is expected to facilitate and support the project efforts. The project approach is premised on mobilizing economic interest by stakeholders who will sustain the interventions of beyond the life of the project.

[1] <https://data.worldbank.org/indicator/EN.ATM.CO2E.PC?locations=NA>

[2] <https://www.worldbank.org/en/country/namibia>

[3] <https://knowledge.unccd.int/sites/default/files/inline-files/namibia-ldn-country-report-updated-version2.pdf>

[4] [FACT-SHEET-6-2018-Informal-settlements.pdf \(nust.na\)](#)

[5] <https://www.raison.com.na/sites/default/files/Informal-Settlements-in-Namibia-Book-Web.pdf>

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- [10] <https://www.npc.gov.na/wp-content/uploads/2021/11/NDP5.pdf>
- [11] http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf
- [12] <https://www.undp.org/publications/global-knowledge-index-2021#modal-publication-download>
- [13] <https://www.bon.com.na/CMSTemplates/Bon/Files/bon.com.na/09/09041404-a055-4dfe-911e-e93984ea4851.pdf>
- [14] <https://ir.nust.na/bitstream/10628/355/1/Ogbokor.%20Investigating%20the%20challenges%20face%20by%20SMEs%20in%20Namibia.pdf>
- [15] <https://www.npc.gov.na/wp-content/uploads/2021/11/NDP5.pdf>
- [16] <https://hpii.gov.na/>
- [17] https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Namibia%20First/Namibia%27s%20Updated%20NDC_%20FINAL%2025%20July%202021.pdf
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- [23] <https://ncrst.na/wp-content/uploads/2021/10/NAM-STI-POLICY.pdf>
- [24] <https://ced.nust.na/>
- [25] <https://acceleratorlabs.undp.org/>
- [26] <https://www.giz.de/en/worldwide/77863.html>

1b. Project Map and Coordinates

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

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



The geo-coordinates and location for Windhoek is as following:

-22° 33' 33.88" S, 17° 04' 59.63" E

2. Stakeholders

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

Indigenous Peoples and Local Communities

Civil Society Organizations Yes

Private Sector Entities Yes

If none of the above, please explain why: No

136. The Ministry of Environment, Forestry and Tourism (MEFT) has approached UNIDO with the request to deploy this project after consulting internally with relevant stakeholders from the private and public sectors as well as civil society organizations. A more detailed record of stakeholder consultations can be found in the Annex Evidence of Stakeholder Consultations.

137. At present, online discussions are ongoing between UNIDO and the Ministry of Environment, Forestry and Tourism (MEFT). In addition, internal discussions by the Ministry were held with public and private sector organizations such as the Ministry of Industrialization and Trade (MIT), Namibia University of Science and Technology (NUST) and civil society organizations such as the Recycle Namibia Forum. Youth and women empowerment initiatives that are interested in cleantech innovations will be engaged in the preparation of this project. Means of engagement will include communication over online channels as well as meetings between the stakeholders and UNIDO representatives in Windhoek.

138. The below table provides an indicative list of stakeholders to be engaged for successful implementation and execution of the project. A detailed stakeholder map and engagement plan will be developed during the PPG phase, including roles, means of engagement and responsibilities of key stakeholders.

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

Stakeholders	Envisaged role
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<p><u>Ministries:</u></p> <p>Ministry of Environment, Forestry and Tourism (MEFT)</p> <p>Ministry of Industrialization, Trade and SME development (MIT)</p> <p>Ministry of Agriculture, Water and Land Reform (MAWLR)</p> <p>Ministry of Mines and Energy (MME)</p> <p>Ministry of Urban and Rural Development (MURD)</p> <p>Ministry of Gender Equality and Child Welfare</p>	<p>Political, substantive and financial (cash /in kind) support will be sought from the relevant ministries. Said institutions are key in the design and uptake of policies and regulatory frameworks that enhance the innovation, entrepreneurship, research, as well as business and market conditions for start-ups and SMEs whose core business revolves around cleantech.</p>
<p><u>Academic Institutions:</u></p> <p>University of Namibia (UNAM)</p> <p>Namibia University of Science and Technology (NUST)</p> <p>International University of Management (IUM)</p> <p>Vocational Training Centers (VTCs)</p> <p>Integrated Land Management Institute (part of NUST)</p> <p>Institute for Domestic Science & Agriculture (IDSA)</p>	<p>Academic institutions constitute the backbone of R&D activities worldwide. Therefore, they are essential in the area of spurring of innovation, knowledge accumulation, and dissemination management.</p>
<p><u>Industry Associations</u></p> <p>Renewables Energy Industry Association of Namibia (REIA)</p> <p>Namibia National Farmers Union (NNFU)</p> <p>Namibia, National Commission on Research, Science and Technology (NCRST)</p> <p>Recycle Namibia Forum (RNF)</p> <p>Namibian Hydrogeological Association (NHA)</p> <p>Shack Dwellers Federation (SDF)</p> <p>Namibian Housing Action Group (NHAG)</p>	<p>Outreach to and involvement of target sectors and industries, that constitute an integral part of the CIEE in Namibia, is crucial in order to integrate and reflect their viewpoints throughout the project as well as to address the challenges that they face.</p>

<p><u>Relevant existing accelerators:</u></p> <p>Startup Namibia</p> <p>UNDP Namibia's Accelerator Lab</p> <p>Climaccelerator by Westerwelle Foundation (tbc)</p>	<p>Best practices and lessons learned can be exchanged with existing accelerators and incubators. Also, existing GCIP networks can be harnessed by these accelerators and incubators to expand their reach. What is more, synergies between the existing accelerators/incubators and GCIP can be sought to enable continuity of support services throughout the enterprise scale-up journey (e.g. enterprises graduating from existing incubators might be invited to participate in the GCIP advanced acceleration)</p>
<p><u>SME Development/Support Institutions</u></p> <p>Center for Enterprise Development (CED)</p> <p>Namibia SMEs (NS)</p> <p>Namibian Business Innovation Institute (NBII)</p> <p>The Tech Innovation Hub (ICTIH)</p> <p>SUNREF</p>	<p>Namibia has recognized the potential of start-ups and SMEs and it has established several programs to support them through provision of funding and capacity building.</p>
<p><u>Financial Institutions</u></p> <p>Namibia Trade Forum (NTF)</p> <p>Namibia Development Bank (NDB)</p> <p>Environmental Investment Fund Namibia (EIFN)</p> <p>NamPro Fund</p>	<p>Financial institutions will participate in training on investment in cleantech and gender-lens principles, they will be invited to investor connect events, as well as they will be potential partners in matchmaking activities. What is more, they are expected to provide investments to selected entrepreneurs. The EIFN was selected as the project executing entity for this project and will be responsible to set up the PMU.</p>

<p>Other relevant institutions:</p> <p>Namibia Energy Institute (NEI)</p> <p>Regional Center for Renewable Energy and Energy Efficiency (RCREEF)</p> <p>Southern African Science Service Center for Climate Change and Adaptive Land Management (SASSCCAL)</p> <p>National Committee on Sustainable Land Management (NCSLM)</p> <p>National Climate Change Committee (NCCC)</p> <p>Technical Committee on Renewable Energies (TCRE)</p> <p>Development Workshop Namibia (DWN)</p> <p>Sustainable Development Advisory Council (SDAC)</p> <p>Digital Transformation Centre Namibia (DTCN)</p> <p>Habitat Research and Development Centre (HRDC)</p> <p>Environmental Investment Fund Namibia (EIFN)</p> <p>Innovation Design Lab (IDL)</p> <p>Sam Nujoma Foundation (SNF)</p> <p>Desert Research Foundation of Namibia (DRF)</p>	<p>Other institutions will be kept informed of the project activities, as well as they will be invited to relevant events. What is more, synergies will be sought with their activities, so as to ensure the highest possible positive impact of the project.</p>
<p>Gender and youth Stakeholders:</p> <p>National Youth Council of Namibia (NYC)</p> <p>Namibian's Women Association (NWA)</p> <p>Rural Women in Energy and Environment, Namibia</p> <p>Namibia Women Agriculture Network</p> <p>Namibia Women in Business (NAWIB)</p>	

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).

139. Gender equality is a fundamental human right. While some progress has been achieved towards gender equality and women's empowerment globally, women continue

to suffer from discrimination and violence in some parts of the world. Gender issues need to be addressed by creating equal employment and capacity building opportunities, as well as social infrastructure and safe working conditions responding to the specific needs of women.

140. The importance of gender equality and women's empowerment, particularly women's economic empowerment, is at the core of UNIDO's mandate. Commitment of UNIDO towards gender equality and women's empowerment is demonstrated in its policy on Gender Equality and the Empowerment of Women (2019), and the UNIDO Strategy for Gender Equality and the Empowerment of Women (2020-2023). UNIDO has also developed an operational energy-gender guide to support gender mainstreaming within its sustainable energy initiatives.

141. Gender equality enhances economic growth, reduces household poverty, and enables human development. Women's entrepreneurship, that can directly contribute to the economic empowerment of women, is often seen as crucial for increasing the quality of life of women in the developing world, as well as a trigger for changes of the status-quo of women and for re-addressing the balance of power within the family.

142. The focus of dialogue on gender and cleantech is shifting from women being identified as part of the vulnerable groups to them becoming key agents of change as consumers, entrepreneurs, distributors and decision makers across the value chain. Women have the potential to play a critical role in contributing to the SDGs. A large number of women are engaged in entrepreneurship, with a women ownership of 30-70% of all SMEs in emerging markets (IFC and McKinsey, 2011). Nevertheless, the enterprises led by women in developing countries tend to be concentrated on a relatively narrow range of activities. Moreover, they are often very energy intensive, rely on biomass fuels and have disproportionately low rates of return compared to the activities undertaken by men.

143. A guiding principle of this project is to ensure that both women and men can equally lead, participate in and benefit from the project (UNIDO Gender Policy 2019). Particularly, in the advanced accelerator and post-accelerator, gender-responsive activities will be streamlined to ensure the achievement of this goal. 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. at all stages of project implementation. Previous GCIP projects have already shown higher levels of women's participation than other acceleration and incubation programmes, with 25% of the 900 alumni supported to date being women-led enterprises. This project aims at continuation of this trend and even at an increase of the proportion of women beneficiaries (with a target of at least 35% women beneficiaries).

144. UNIDO's Guide on Gender Mainstreaming in Energy and Climate Change Projects will serve as a framework for the project implementation, as to ensure that both UNIDO and GEF requirements are fulfilled. Accordingly, attention will be paid to:

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

2) Consideration of gender dimensions in all decision-making processes (e.g. efforts to achieve gender balance/representation in such processes), including PSC meetings;

3) Collection of gender-disaggregated data;

4) Consultations with and involvement of stakeholders focusing on gender equality and women's empowerment issues, such as gender experts and organizations, CSOs and NGOs.

5) providing opportunity for women and men to equally lead, participate in and contribute to the project activities. This includes for instance applying a gender-lens investing approach.

6) Develop a Gender Analysis Report and draft Gender Mainstreaming Action Plan during the PPG phase, which will also influence the ultimate project design. In the project design UNIDO will ensure that the gender dimensions are considered, and that the project log-frame reflects key gender dimensions in the respective outputs, activities, indicators and targets.

7) enhancing awareness on gender dimensions to reduce gender bias.

Supporting Youth

145. In addition to gender dimensions, this project will support youth entrepreneurship and employment. 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 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 added value. This means that youth entrepreneurs are on a level

playing field with more experienced entrepreneurs. Through the training and mentoring curriculum offered within this project, youth entrepreneurs may further advance necessary business skills specific to the cleantech sector in order to strengthen their competitive advantage.

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

147. It is important to engage youths in the cleantech sector, as they experience environmental problems differently compared to older generations. As many cleantech solutions are developed based on personal experiences as well as depending on behavioral and lifestyle aspects, fully engaging the youth is important for ensuring comprehensiveness of approach to tackling the environmental problems. To promote application from early-stage R&D cleantech innovators, GCIP engages with universities, students and youth associations such as the SD7YC. What is more, many youth entrepreneurs are showcased in GCIP communications materials, and the public is exposed to success stories of young entrepreneurs. Seeing peers as entrepreneurs may indirectly influence other youths to also consider embarking on entrepreneurship.

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; No

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.

148. The private sector is key to the creation and expansion of market of cleantech products and services, achievement of GEBs, generation of jobs and economic growth. The proposed project is designed in line with the GEF policy on Stakeholder Engagement that sets out the core principles and mandatory requirements for the stakeholder interaction. In order to shift markets towards low-carbon economy there is a need for full engagement in mobilising the private sector to leverage innovation, knowledge transfer, investment and market access. In this context, it also needs to be noted that the widespread adoption and utilization of innovative cleantech has significant potential to address the serious environmental problems and risks faced globally. Cleantech innovations can fuel the next industrial revolution that will shape tomorrow's global economy, environment, and job market. The private sector engagement is key for the success of this project and will be confirmed in stakeholder consultations in the PPG phase. The project foresees several areas of interaction with the private sector, as described below.

149. There will be direct interactions with and support for entrepreneurs (SMEs and start-ups) offering innovative cleantech solutions. The entrepreneurs are considered as agents of change that bear the potential of instigating a market transformation. The SMEs and start-ups will be supported in the framework of advanced accelerator and post-accelerator, as described before. Under the GCIP Global there will be an annual GCIP Global Forum organized as an integral part of efforts to ensure connectivity between CIEEs. The GCIP Global Forum will bring selected participants of national GCIPs together for recognition and awards, and for opportunities to be connected with potential partners, customers, technology scouts and investors from around the world. Importantly, the GCIP Global Forum will also serve as a platform for innovation showcasing, and investment matching, and will be an important annual milestone for networking, advocacy, and knowledge exchange among CIEE players. The GCIP Global Forum will not be a stand-alone event, but it will be organized on the margins of highly visible global gatherings, such as for example the UNFCCC COP, Cleantech Group forums, etc.

150. The SMEs/start-ups are supposed to play a vital role in catalysing breakthrough cleantech innovations. SMEs/start-ups are well positioned to participate in future cleantech markets. They are instrumental (but often underrecognized) in furthering growth, innovation, and development. Coupled with a growing cleantech sector, they can help build prosperity in low- and middle-income countries. It is estimated that SMEs make up over 90% of cleantech entrepreneurial endeavours in most countries. Nevertheless, failure rates are high, capital requirements are a barrier, reliance on government policy is a risk, and the technical and commercial capacity required of cleantech SMEs can be a challenge. Despite opportunities for SMEs in cleantech markets, many businesses still fail. While there are no definitive statistics on cleantech SMEs failure rates, they can be estimated as comparable to those in the ICT and biotech sectors (80-90% failure rates).

151. Next to working closely with start-ups/SMEs, there will be corporate partnerships formed to connect the project participants with various companies with the aim to create joint venture opportunities across borders, to facilitate market expansion and product co-development. This has already been successfully piloted with the Korean Financing Technology Corporation (KOTEC) with collaborations established between Korean SMEs and GCIP alumni from Morocco, Pakistan, Thailand

and Turkey. Similar partnerships are expected under this project. In addition, as part of the GCIP Framework, the national PEEs might receive membership in the Network for Global Innovation for the duration of the project. This will provide them with access to international best practices and with opportunities to build cross-border connections with partners in additional countries, including private sector stakeholders.

152. The project will also partner with corporations that seek to identify and invest in innovative cleantech. More specifically, the Global Innovation Challenge will connect selected corporations ? looking for concrete demand-driven solutions ? with GCIP entrepreneurs. Moreover, the private sector is a key source of co-financing, thus the project will work together with financing institutions, venture capitalists, and angel investors that seek to invest in cleantech solutions. More specifically, Investor Connect events, National Forums and Global Forums will be organized to connect potential financiers (public, private, national, regional, global) with entrepreneurs and to facilitate investments. What is more, the project will provide pre-seed and seed financing to selected SMEs and start-ups (disbursed in the framework of the financing mechanism to be designed, validated, and operationalized), which will have a leverage effect, i.e. additional private finance will be crowded in and de-risked.

153. The project will also cooperate with industry and business associations and the to leverage their know-how, capital and interest in cleantech innovations, as well as to build their capacity. In addition, industry experts will be engaged as mentors, trainers, and judges to support the accelerator.

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	Based on the high growth rate of start-ups/SMEs in the country, it can be concluded that there is a high level of commitment shown by entrepreneurs to progress and move their businesses to a marketable proposition.
Lack of interest and involvement by government/institutional partners to improve existing ecosystem	Low	Namibia stipulated in numerous strategies on sustainable development initiatives to demonstrate a clear interest of governmental institutions to promote climate change mitigation and sustainable land management practices in core sectors of critical importance.

Incentive and financial support are insufficient	Medium	Due to the COVID-19 crisis, the financial support might be slightly hampered as a result of economic restrictions and less active international economic cooperation.
Climate change	Low	In order to mitigate any potential climate change risks to project activity sites, the project will include criteria related to such risks, and if a risk is identified, develop a mitigation strategy before implementation begins.
Lack of absorptive capacity by the national counterpart	Low	The project is in line with national policies and will thus be executed in close coordination with respective ministries and key stakeholders.
Lack of effective coordination between various project partners	Low	The Project Steering Committee (PSC) will ensure effective coordination and collaboration among project partners and key stakeholders.
Low success rate of new innovative cleantech businesses	Medium	Linkages to other financing schemes for clean energy technology promotion and innovation programmes will be established as early as possible. The establishment of the financing mechanism will be of the high priority.
Social/ Gender Risk	Low	To ensure gender inclusiveness of all project activities, UNIDO methodology for gender assessment and gender responsive communication showing the benefits of gender equality for both women and men will be applied. To mainstream women and youth entrepreneurship, adequate and gender responsive communication strategy will be implemented and sensitization workshops will be organized. A full Gender Analysis Report was prepared and conclusions resulting from it were incorporated into the project design.

Climate Change Risks

154. Namibia is one of the most vulnerable countries to climate change due to its geographical location, economic structure, and lifestyle. The effects of climate change are increasing the risk and burden on economic sectors that are highly dependent on nature, causing drought and degradation of soil and agricultural land, for example due to the invasion of bush species. The total annual rainfall is projected to decrease across the country, which might result in the increasing expansion of the hyper-arid zone into the arid south, and the loss of land suitable for rain-fed agriculture and livestock grazing.

155. Climate warming is adversely affecting water resources through intensive evaporation. High solar radiation, low humidity, and high temperature lead to very high evaporation rates which

vary between 3,800 mm per annum in the south to 2,600 mm per annum in the north. Over most of the country, potential evaporation has been at least five times greater than average rainfall, which is further increased by rising temperatures due to global warming. Since the 1960s, increased mean, maximum and minimum temperatures have been observed, with a more rapid increase in nighttime. Warming in Namibia has been higher than the global average. There have been significant increases in the frequency of days with maximum temperatures above 25°C and 35°C, with decreases in the frequency of days with minimum temperatures below 5°C.

156. This has adverse effects on livestock, agriculture, infrastructure, construction industry, and human health, which are largely dependent on nature and climate. About 70% of Namibia's area is livestock production land and it is at risk of desertification and degradation.^[1] In addition to climate change, desertification and land degradation is exacerbated by human factors such as pasture capacity overload, wasteful use of land in farming, mining and infrastructure sectors, use of outdated technology, creation of many informal roads and unplanned urban expansion. According to desertification assessments conducted, in some areas (Ondangwa) stocking density exceeds carrying capacity by over 40%. Soil degradation is considered an increasing problem, caused by erosion from wind and water, and associated with declining fertility and loss of organic matter. However, soil health is not systematically monitored throughout Namibia. Impoverished soils and cases of soil compaction have been identified in northern Namibia due to dryland cropping over many years with limited nutrient inputs or soil fertility management under subsistence agriculture and through unsuitable tillage methods.

157. Extreme droughts and heavy rainfalls, increase in livestock loss and decline in livelihoods are expected to especially adversely affect small-holder farmers and people living in informal settlements in peri-urban areas. The improper use of arable land is one key factor influencing the increase of desertification and damage to soil fertility and moisture, which is a precious resource formed over thousands of years. Inappropriate drought aid (particularly the expansion of poorly planned permanent water points and fodder subsidies) contributed to overstocking, especially during drought periods when it was warranted to reduce livestock numbers in order to relieve pressure on the land.

158. Researchers say that 49% of degradation is caused by human activity and 51% by natural factors. Future climate projections indicate the likely increase of intensity of droughts and heavy rainfalls. What is more, the phenomenon of bush encroachment is particularly prevalent in the central and eastern parts of Otjozondjupa and Omaheke where intensive commercial cattle farming predominates and where the density of plants varies between 2,500 and 10,000 bushes per hectare, and hence is considered 'encroached'. Bush encroachment is believed to be a result of a number of complex interacting factors such as overgrazing and reduced browsing in favor of cattle production, exclusion of veld fires, and climatic and soil moisture conditions caused by prolonged droughts. Overall, it is estimated that around 26 million hectares of land are affected.

159. Deforestation poses a serious threat to habitats, reducing capacity for carbon sequestration, as well as hydrological and nutrient cycling functions. It is most prevalent in the North and North Central regions and is largely due to unsustainable uses of trees to build houses and provide fuel, clearing of land for dry-land cropping, and unsuitable fire management. It is estimated that wood

is the primary energy source for at least 60% of Namibia's population. Several studies reveal that for example in the Zambezi Region, 96% of all households use wood for fuel and 80% of all dwellings are made from wood.

Observed and projected temperature changes

160. Very high rates of historical warming are reported in Namibia's Fourth National Communication to the UNFCCC. Between 1901 and 2016 average temperatures rose by 1.4°C. As would be expected, this rise has been associated with a decline in frost days and an increase in hot summer days. Research has suggested that temperature trends can vary locally, influenced by altitude and by biome (i.e. the type of land cover).

Precipitation trends

161. Unlike temperature, there are no obvious trends in precipitation during the reference period. However, the majority of models predict that Namibia will become drier, that rainfall variability will likely increase, and that extreme events such as droughts and floods are likely to become more frequent and intense. With regards to precipitation, mid-century, and end-century projections respectively show, with low confidence, a 7% and 14% reduction from the baseline period. While most zones will have increasing strong rainfall events, the hyper-arid zone will either have the smallest increase or experience decreases. In terms of the amount of rain falling within extremely heavy events, the zones will experience an increase of 15% but this will be reduced to increases of 3% by 3°C.

Water Resources

162. Namibia^[2] relies on dams, ephemeral rivers and aquifers for its water supply. These water resources are supplemented to a limited extent by unconventional sources such as reclaimed water and desalination. The absence of perennial rivers in Namibia's interior means that the country is reliant on rainfall as its natural water source. The semi-arid climate over most of the country coupled with high evaporation rates make the country one with a net water deficit (mean annual rainfall minus potential evaporation). The drivers of climate risks and vulnerabilities in the water sector are well known, namely i) Escalating financial/economic costs of supplying adequate water to agriculture (mainly crop irrigation), mining/industry, commerce, and an expanding, urbanizing population; ii) Increasing concentrations of pollution which threaten the quality of diminishing water supplies; iii) Increasing water scarcity and competition with neighboring countries for available water; iv) Environmental damage resulting from the unsustainable removal of water from underground aquifers; v) Increasing water demand and water pollution by irrigation schemes. Temperature increases will lead to an increase in evapotranspiration in Namibia placing considerable strain on water by reducing soil water, groundwater and surface water availability. Global temperature increases of 1.5°C and 2°C will result in 10-14% more evaporation in the country, with further increases of up to 20% by 3°C.

Health

163. Climate change is one of causes of infant and adult mortality. The following are the observed/projected climate change risk and vulnerabilities in the health sector: i) Higher rainfall in areas that were previously not used to receive these amounts will increase populations of disease-carrying insects in these areas; ii) Flood incidences, whose frequency is increasing, are usually accompanied by outbreaks of water-borne diseases and infections, such as cholera and diarrhea; iii) Higher temperatures are likely to increase mortality among the elderly, infants and others whose health is already poor, and also increase the incidences of disease epidemics that are linked to high temperature; iv) Drought decreases the nutritional status and the availability of clean water. Reduced safe water provision and secure nutrition would increase the rate of respiratory and gastrointestinal infections and other water-borne diseases.

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

Key Project Outcomes	Potential effect of climate risks on project implementation and outcomes	Risk Level	Mitigation Measures
<p>? Promote the acceleration of high-impact cleantech innovation for large-scale deployment and green job creation</p> <p>? Implement national cleantech innovation competition-based accelerators</p>	<p>? Participation at events due to heat stress/flooding</p> <p>? Cleantech supported increase the likelihood of adverse effects that exacerbate climate risk</p> <p>? Failure of businesses supported</p>	<p>Moderate</p>	<p>? Some of the support is intended to be face to face. However, if this is not possible due to climate events then the training/events will be organized on-line with the aim of providing an experience as close as possible to the physical events, with side events and one-on-one meetings also possible.</p> <p>? To safeguard against climate change risks the screening of cleantech will include an assessment of the climate risks, over the next 30 years, and where a risk is identified it will be necessary for the entrepreneur to propose suitable adaptation or management measures.</p> <p>? GIZ's Climate Expert Tool[3] could be used as a tool by entrepreneurs. Once selected, the cleantech will continue to be reviewed against local climate risks.</p>

<p>? Enhance access to financing through investment facilitation support targeted for start-ups and SMEs in early and growth stage to support commercialization and deployment of cleantech solutions with highly transformational impact for the global commons</p>	<p>? In-country financing diluted or diverted to disaster and resilience</p>	<p>Low</p>	<p>? New categories of cleantech might be introduced to address some of the prevailing climate risks.</p> <p>? Connectivity of ecosystems and greater opportunities for scaling-up of innovations will be facilitated across different countries through GCIP Global.</p> <p>? Awareness of PMUs to assess climate risk on an annual basis will be raised.</p> <p>? Impact tracking and monitoring of climate risk profile will be conducted through tools like Think Hazard?.</p>
<p>? Build a cleantech community consisting of relevant ecosystem players at national and global level and build strategic partnerships with key actors that can lead and guide policy and business decisions in the cleantech space</p>	<p>? Human and political resources and stakeholder attention diverted to disaster and resilience measures</p>	<p>Low</p>	<p>? Visibility, credibility and understanding of identified solutions by the local political community will be enhanced through the stakeholder engagement plan and communications plan.</p> <p>? Policy roadmaps that anticipate the effects of possible climate risk factors will be developed.</p> <p>? Through GCIP Global knowledge and experience sharing will be facilitated on how to anticipate and mitigate the risks identified.</p>
<p>? Develop, scale up and deploy cleantech innovations</p>	<p>? Floods and droughts endangering cleantech development, deployment and scale-up</p>	<p>Low</p>	<p>? Thanks to availability of domestic Early Warning Systems, cleantech entrepreneurs will be able to avoid severe risks to the development, deployment and scale-up of their products and services.</p>

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

161. Potential responses to the climate risks in the target sectors, i.e., energy, water and agriculture, include:

- Ensuring favorable market conditions for cleantech (e.g., support to an enabling environment for cleantech; identification of incentives for innovation);
- Providing policy environment to regulate energy production, waste management and recycling, cleantech innovation in industry sectors and in water and forestry management;
- Including mitigation and adaptation considerations in the planning of infrastructure;
- Ensuring appropriate urban management (e.g., natural ventilation for cooling, safeguarding critical infrastructure; creating rainwater storage and flood retention areas)
- Land-use planning (e.g., protecting high-yield agricultural land, environmentally sensitive areas and natural landscapes from urban sprawl; planning greater inter-connectivity between different land uses and transport; intensifying land uses where appropriate; revising flood lines);
- Implementing soft adaptation options, e.g., livelihood protection, social safety nets, promotion of women and women's needs;
- Awareness-raising and education, communication of climate information and early warning systems, which in turn requires institutional cooperation and coordination across sectors, particularly in planning and development practices that reduce vulnerability to climate hazards.

COVID-19 Risk Analysis

<u>Risk</u>	<u>Rating</u>	<u>Mitigation</u>
Technical expertise is not readily available due to the pandemic	Low	Necessary efforts will be made to identify alternative technical experts in case it is required. Planning will be flexible enough to reschedule activities onsite that require specific expertise.
Possible re-instatement of COVID-19 containment measures limits available capacity or effectiveness of project execution	Medium	The capacity of stakeholders, and especially the beneficiaries, for remote-work and online interactions will be strengthened by securing access to commercially available conferencing systems. The current design of the curriculum for entrepreneurs is based on online interactions and deliverables, using webinars and web platforms, and therefore COVID-19 is not expected to pose a significant risk to the conduct of the acceleration cycles.

Some project supporters, co-financiers or beneficiaries may not be able to continue with project execution	Low	The situation will be closely monitored in order to find alternate supporters or co-financiers, or to readjust the list of beneficiaries if needed.
Price increases for procurement of goods/services	Medium	The project team will undertake efforts needed to find alternative providers and make sure that competitive pricing is obtained.

COVID-19 Opportunity Analysis

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

[1] <https://knowledge.unccd.int/sites/default/files/naps/Namibia-2014-2024-eng.pdf>

[2]

http://www.assar.uct.ac.za/sites/default/files/image_tool/images/138/1point5degrees/ASSAR_Namibia_global_warming.pdf

[3] <https://www.climate-expert.org/en/home/>

6. Coordination

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

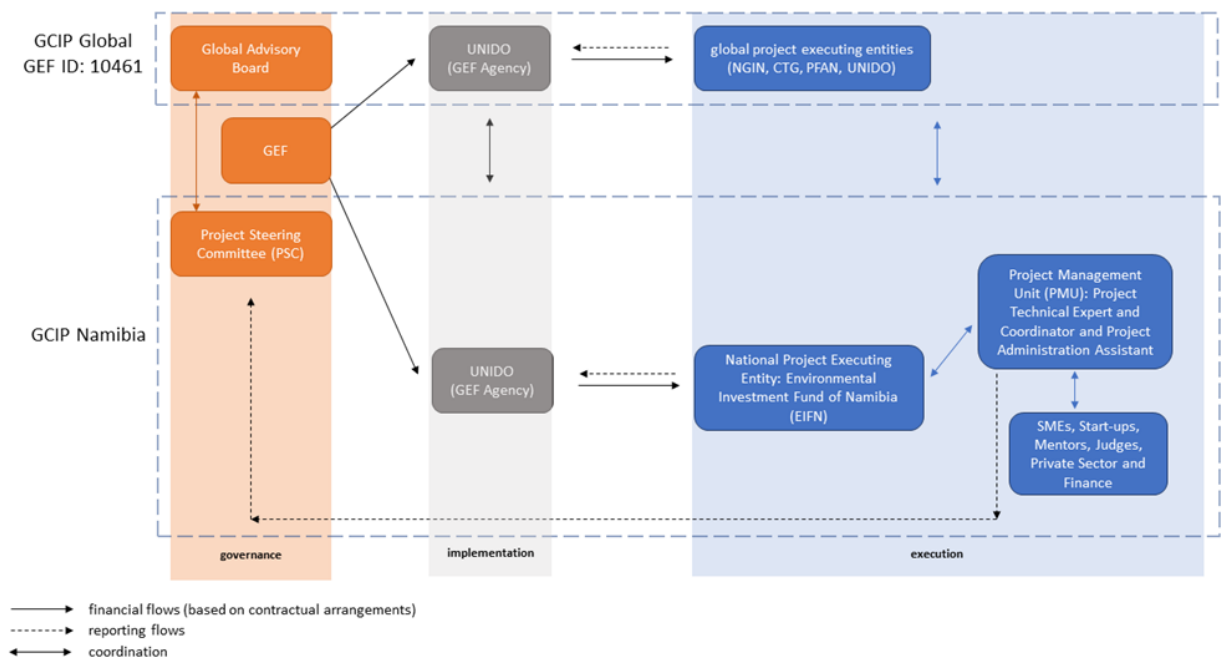


Figure 5: Project implementation arrangement

164. This project will be implemented by UNIDO. The Environmental Investment Fund of Namibia (EIFN) was indicated as prospective national PEE by the GEF OFP, which will be confirmed during the PPG phase. Should any capacity constraints be identified during the PPG phase, related provisions will be added in the project document to ensure adequate adjustments are made. The implementation function lies with the designated UNIDO Project Manager in UNIDO's Climate Technology and Innovation Division in the Department of Energy. UNIDO will not be supporting any executing functions.

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

Execution

166. The national PEE will designate internally, or recruit directly, project management personnel to form the Project Management Unit (PMU). The PMU will consist of the National Project Technical Expert and Coordinator (NPTEC) and a National Project Administration Assistant (NPAA). The PMU will be responsible for the day-to-day management of project execution according to the agreed workplan. The PMU will also coordinate all project activities being carried out by project national experts and partners[1].

167. In addition, the national PEE will sub-contract qualified service providers for the execution of certain additional activities. An open and competitive process will be used to select service providers.

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

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

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

Project Steering Committee

170. 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 Focal Point. 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. The PSC will meet twice per year to review the project implementation and execution progress and confirm the workplan for the subsequent year. Any changes/amendments proposed to the project and/or to the workplans and budgets by the PSC are done in accordance with the approved project document, the GEF policy, and UNIDO rules and regulations. Minutes of meetings are signed by the PSC Chairperson(s) and UNIDO.

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

Transfer of assets:

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

Legal Context:

173. ?The Government of the Republic of Namibia agrees to apply to the present project, mutatis mutandis, the provisions of the Standard Basic Assistance Agreement between the United Nations Development Programme and the Government, signed on 22 March 1990.?

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

174. The project will benefit from robust linkages with GCIP Global, as well as several methodologies, guidelines, tools for acceleration, and training systems. These will be developed and harmonized at the global level and the project will focus on adapting these to the national circumstances. Experiences in applying the tools and systems across other national projects will be used to improve them.

175. Through GCIP Global, national cleantech start-ups and SMEs will be supported to expand their businesses to other countries. In addition, investment facilitation services will be provided to national enterprises so that they can be linked to investors (impact, venture, angels, and commercial) in EU and globally. Furthermore, GCIP Global will provide support in establishing market enabling frameworks to promote investments in cleantech.

176. GCIP Global will also provide methodologies for training of national institutions and guide the development of policies on cleantech innovation and entrepreneurship. By linking policy makers, institutions, financiers and entrepreneurs across countries, GCIP Global will facilitate knowledge exchange and documentation of best- practices as well as peer-to-peer networking and learning. What is more, GCIP Global will develop programme guidelines as well as a global web platform, communications and advocacy materials, and methodologies for impact tracking and monitoring and evaluation. The project will also seek to collaborate with the UNFCCC Climate Technology Centre Network (CTCN) and the Private Financing and Advisory Network (PFAN) which are initiatives co-hosted by UNIDO that are specialized in technology transfer and investment facilitation.

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

7. Consistency with National Priorities

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

Yes

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

- National Development Plan
- National Action Programme (NAP) under UNCCD
- National Biodiversity Strategies and Action Plan
- National Communications (NC) under UNFCCC
- National Action Programme to Combat Desertification
- Nationally Determined Contributions (NDC)
- Harambee Prosperity Plan II
- Vision 2030
- National Climate Change Strategy & Action Plan 2013-2020
- National Renewable Energy Policy (2005-2020)
- National Waste Management Regulations (2011)
- National Agriculture Policy (2015)
- National Forest Policy
- National Housing Policy
- National Policy on Micro, Small and Medium Enterprises in Namibia (2016-2021)
- National Science, Technology and Innovation Policy (NSTIP) (2020-2030)

177. Particularly, this project is in line with the goals set within Namibia's Development Plan and Vision 2030 which seeks to achieve a high level of sustainable and inclusive growth, focusing on the preservation of the environment and the promotion of a green economy as well as on mobilizing financing and creating 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, the strategy seeks to increase the integration of renewable energy into the national energy mix, as to lower the dependency on fossil fuel for power generation and on energy imports. Equally, the framework underlines the need to promote energy efficiency initiatives in commercial buildings. Aligned with the Vision 2030, 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 Namibia. Also, this project will support, amongst others, the identification of cleantech innovations as to support the livelihoods of dwellers in informal settlements, and effectively decrease deforestation and land degradation in urban and peri-urban areas.

178. Through the Vision 2030, Namibia seeks to promote employment, develop entrepreneurial skills, and improve the competitiveness of SMEs. This project will support the related policy measures, by assisting cleantech innovation startups and SMEs in their commercialization and scale-up as to reach market maturity.

179. This project is also well aligned with the principles of the National Policy on SMEs in Namibia. Equally, it is in line with National Renewable Energy Policy that seeks to build energy security of the country, assure sustainability of the energy sector development and create the basis for enhanced deployment of renewables like solar and wind energy, biomass, liquid or gaseous, thermo energy, fuel cells, and others, as well as to strengthen the policies on energy supply in the future.

180. The project is equally well aligned with the National Action Programme to Combat Desertification and Land degradation, in particular in its approach to improve energy access, waste management, agricultural practices and livelihoods of populations in peri-urban areas to decrease deforestation and land degradation.

181. The project also well complements the National Agriculture Policy in its approach to support innovative technologies to combat diverse issues in the agriculture and livestock farming sector. Further, this project will support the implementation of Namibia's NDCs which aim at conditionally reducing GHG emissions in energy, construction, transport, agriculture, industry and waste.

182. The project's focus on innovative cleantech and supporting SMEs and startups is in line with, and complements, many of the national priorities of Namibia as well as those of UNIDO. The project will also invest in the establishment of comprehensive policy frameworks and in the creation of an extensive network of clean entrepreneurs.

8. Knowledge Management

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

183. A key tool for knowledge management will be the online web platform, used primarily by the PEE to collect data associated with the accelerator. This will naturally create a community of the participating enterprises, trainers, judges, and mentors, and foster continuous exchanges in the GCIP community as well as enable archiving of all project deliverables. The web platform will also serve as a depository and dissemination tool for all knowledge products generated and collected through the project. All knowledge management material will be gender responsive. For instance, gender responsive training and advocacy material will not perpetuate gender stereotypes through presenting women only in their traditional roles.

184. The project will also benefit from and contribute to the GCIP-wide knowledge management efforts. Under GCIP Global a ?knowledge management, communication and it as appropriate. In particular, the following key elements of knowledge management are relevant: 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 programme 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 key stakeholders in Namibia 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, including Namibia, will have opportunities to learn as well as share lessons and experiences.

Plans to learn from relevant projects in Namibia:

185. As described within the section on baseline projects, lessons learned will be incorporated from successfully completed and ongoing projects. This project in Namibia will interact with various stakeholders and projects, including start-up/SME support initiatives such as accelerators/incubator programs (Start-up Namibia, UNDP Accelerator Labs initiative), financial and non-financial institutions, local start-ups/SMEs to better understand the needs and leverage the potential of cleantech in Namibia.

186. This project will build on experiences learnt through the recently ongoing **UNIDO** project ?promoting sustainable bush-processing value chains in Namibia?, especially how

strengthening important sources of food and income through reducing land degradation can improve the livelihoods of the local population.

187. Lessons can also be learnt from the ongoing **GIZ** project 'Business Scouts for Development 2021-2023' on how to best utilise synergies within networks, and to assess needs of businesses and cooperation partners.

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

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

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

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

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

191. GCIP guidebooks and methodologies will be adapted for Namibia. This includes training and certification of cleantech experts, supported through the development of methodologies, tools and training materials. They will guide the operation and management of the acceleration, advanced acceleration and post-acceleration in Namibia, and will include proposed schedules; eligibility requirements and selection criteria for the participants; competition rules; training curricula and handbooks for applicants, experts (mentors, trainers and judges). Moreover, at the global programme level, monitoring and evaluation frameworks, knowledge management, communication and advocacy strategy frameworks and well as impact calculation methodologies will be developed and shared, as a blueprint for the development of country-specific strategies.

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

193. The knowledge and learning will contribute to the overall impact and sustainability in the following ways: a) the dissemination of relevant documents, e.g. operational guidelines, guidebooks for impact determination, and frameworks, the PMU is empowered to strengthen their project management capabilities; b) through the web platform and the adoption of international best practice communications and sustainability strategies, the community at national levels, e.g. investors, enterprises, alumni, and experts, will be maintained locally; the continued connectivity in-country and across borders broadens market entry and financing opportunities for cleantech; c) by providing a knowledge depository for the general public (all relevant knowledge, communication, and advocacy materials will be available on the website), the brand, lessons and successes encourage further innovation in cleantech and enhance consumer awareness.

194. The communications strategy will include the development of awareness raising and marketing materials for a wider public, entrepreneurs, investors, and government officials. They will include briefing sessions, press releases, social media activity, attendance at events, etc. The table below provides a general overview of deliverables relevant for knowledge management.

Overview of deliverables relevant for knowledge management

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

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

ES_Screening_Template_UNIDO_GCIP_Namibia
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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
Teofilus Nghitila	Executive Director	Ministry of Environment, Forestry and Tourism	2/4/2022

ANNEX A: Project Map and Geographic Coordinates

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



The geo-coordinates and location for Windhoek is as following:

-22° 33' 33.88" S, 17° 04' 59.63" E