Global Cleantech Innovation Programme (GCIP) to support countries to accelerate the uptake and investment in cleantech innovations

Part I: Project Information

Name of Parent Program
Global Cleantech Innovation Programme (GCIP) to accelerate the uptake and investments in innovative cleantech solutions

GEF ID
10461

Project Type
MSP

Type of Trust Fund
GET

CBIT/NGI
☐CBIT
☐NGI

Project Title
Global Cleantech Innovation Programme (GCIP) to support countries to accelerate the uptake and investment in cleantech innovations

Countries
Global

Agency(ies)
UNIDO

Other Executing Partner(s)
The Cleantech Group (CTG), The Network of Global Innovation (NGIN), REEEP on behalf of The Private Financing Advisory Network (PFAN), UNIDO

Executing Partner Type
Others

GEF Focal Area
Climate Change

Taxonomy
Climate Change, Focal Areas, Influencing models, Stakeholders, Gender Equality, Capacity, Knowledge and Research, Climate Change Mitigation, Technology Transfer, Financing, Sustainable Urban Systems and Transport, Renewable Energy, Energy Efficiency, Demonstrate innovative approache, Strengthen institutional capacity and decision-making, Convene multi-stakeholder alliances, Type of Engagement, Participation, Information Dissemination, Partnership, Private Sector, Individuals/Entrepreneurs, Capital providers, SMEs, Large corporations, Communications, Awareness Raising, Behavior change, Public Campaigns, Education, Civil Society, Academia, Beneficiaries, Gender results areas, Participation and leadership, Gender Mainstreaming, Sex-disaggregated indicators, Enabling Activities, Innovation, Capacity Development, Knowledge Generation

Rio Markers
Climate Change Mitigation
Climate Change Mitigation 2

Climate Change Adaptation
Climate Change Adaptation 0

Submission Date
2/23/2021

Expected Implementation Start
6/1/2021

Expected Completion Date
5/31/2026

Duration
60In Months

Agency Fee($)
160,638.00

A. FOCAL/NON-FOCAL AREA ELEMENTS

Objectives/Programs	Focal Area Outcomes	Trust Fund	GEF Amount($)	Co-Fin Amount($)
CCM-1-4	Promote innovation and technology transfer for sustainable energy breakthroughs for cleantech innovation	GET	1,784,862.00	18,675,000.00
		Total Project Cost($)	**1,784,862.00**	**18,675,000.00**

B. Project description summary

Project Objective

To promote coordination, ecosystems connectivity and accelerate the uptake of, and investment in, innovative cleantech solutions under the Global Cleantech Innovation Programme

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
Component 1. Transforming early-stage innovative cleantech solutions into commercial enterprises	Technical Assistance	1.1 Acceleration of early-stage cleantech innovations into enterprises	1.1.1 GCIP methodologies, guidelines, tools and training systems for cleantech innovation and entrepreneurship accelerators developed, applied and disseminated to GCIP partner countries 1.1.2 GCIP methodology (gender responsive) for training and certifying cleantech innovation and entrepreneurship experts (trainers, mentors and judges) developed and disseminated to GCIP partners countries 1.1.3 Four cycles of the global cleantech innovation and entrepreneurship competition-based accelerator conducted which mainstream gender and youth and support national accelerators 1.1.4 Four global innovation and entrepreneurship forums to showcase GCIP enterprises and	GET	400,000.00	2,400,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
Component 1. Transforming early-stage innovative cleantech solutions into commercial enterprises	Investment	1.2 Targeted business growth support, investment facilitation services and access to financing for growth-stage cleantech SMEs to commercialize	1.2.1 Enterprises in the growth and expansion stage mobilize investment after receiving investment facilitation support	GET	300,000.00	12,000,000.00
Component 1. Transforming early-stage innovative cleantech solutions into commercial enterprises	Technical Assistance	1.2 Targeted business growth support and investment facilitation services provided to growth-stage cleantech SMEs to commercialize	1.2.2 Mentorship and partnership support provided to cleantech enterprises for cross-border market expansion, including promotion of gender equality and the empowerment of women	GET	45,300.00	100,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
Component 2. Cleantech ecosystem strengthening and connectivity	Technical Assistance	2.1 Cleantech innovation and entrepreneurship ecosystems strengthened and networked	2.1.1 GCIP tools and guidelines for national capacity building for technology innovation and entrepreneurship institutions, industry associations and business platforms developed and disseminated 2.1.2 Policy recommendations and strategies (gender responsive) for cleantech innovation and entrepreneurship developed and disseminated at national and global levels 2.1.3 Knowledge creation, exchange and dissemination across GCIP countries to promote learning	GET	303,200.00	3,165,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
Component 3. Programme coordination and coherence	Technical Assistance	3.1 Standards and programmatic coherence to improve efficiency and sustainability of GCIP interventions	3.1.1 Programme level internal guidelines and standards developed and implemented for programmatic coherence across countries 3.1.2 Programme level, communication and advocacy strategy developed, implemented across GCIP countries (gender responsive) 3.1.3 Web platform established and operated to coordinate and consolidate GCIP operations at national and global levels and disseminate knowledge products	GET	387,102.00	500,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
Component 3. Programme coordination and coherence	Technical Assistance	3.2 Impact of GCIP tracked and reported at national and global levels	3.2.1 Methodologies of estimating global environmental benefits of GCIP (including GHG emissions) established, applied, and disseminated across GCIP countries 3.2.2 Impact performance of GCIP tracked and reported regularly	GET	112,000.00	200,000.00
Component 3. Programme coordination and coherence	Technical Assistance	3.2 Impact of GCIP tracked and reported at national and global levels	3.2.3 i. Programme monitoring and evaluation framework developed and applied across GCIP countries ii. Periodic Progress Reports including gender action plan, PIRs iii. External Mid-term Review iv. Independent Terminal Evaluation	GET	75,000.00	125,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
				Sub Total ($)	**1,622,602.00**	**18,490,000.00**
Project Management Cost (PMC)						
				GET	162,260.00	185,000.00
				Sub Total($)	**162,260.00**	**185,000.00**
				Total Project Cost($)	**1,784,862.00**	**18,675,000.00**

C. 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($)
GEF Agency	UNIDO	In-kind	Recurrent expenditures	150,000.00
GEF Agency	UNIDO	Grant	Investment mobilized	60,000.00
Private Sector	NGIN ? Network for Global Innovation	In-kind	Recurrent expenditures	1,625,000.00
Private Sector	CTG ? Cleantech Group	In-kind	Recurrent expenditures	1,500,000.00
Private Sector	PFAN - Private Financing Advisory Network	Equity	Investment mobilized	12,000,000.00
Private Sector	NGIN ? Network for Global Innovation	Grant	Investment mobilized	1,375,000.00
Private Sector	CTG ? Cleantech Group	Grant	Investment mobilized	1,965,000.00
			Total Co-Financing($)	**18,675,000.00**

Describe how any "Investment Mobilized" was identified

The global executing entities were selected through open and competitive tender process. One of the key requirements was the provision of co-financing, both in cash and in kind. Therefore, the amounts shown in the table above include both in kind and cash co-finance. NGIN provides co-financing, in form of grants, that includes annual memberships of the Network for Global Innovation with a total monetary value of USD 275,000 per year, whereby over five years the total Investment mobilized from NGIN amounts USD 1,375,000. Similarly, the Cleantech Group (CTG) will provide co-financing in form of grants in the amount of USD 1,965,000 based on reduced fees for the Global Child Project amounting to USD 965,000 and in form of access to CTG platforms for selected start-ups (Cleantech Interactive, I3connect) memberships that are typically valued at USD 20,000 per year, which will be offered to selected start-ups of up to ten National Child Project countries over the 5-year course of the project which amounts to a total of USD 1,000,000. In the past, PFAN supported 10 GCIP alumni companies to mobilize USD 17,200,000. Under the GEF 7 Global Cleantech Innovation Programme (GEF ID: 10408), a strategic partnership will be established with PFAN, under which GCIP alumni companies will be referred to the PFAN for support. PFAN is not a legal entity and it conducts its business via subcontracting REEEP. In this instance REEEP will be the subcontractor (from now on referred to a s PFAN (REEEP)). PFAN (REEEP) will assess the

GCIP alumni companies against its pipeline entry criteria and provide support to those enterprises that meet the minimum requirements. PFAN (REEEP) is confident that at least 12 GCIP companies will get into the PFAN pipeline to access finance under this programme. Therefore, co-financing that is expected to be brought to GCIP in terms of investment mobilized amounts to an estimated USD 12,000,000 over the 5 year duration of the programme.

D. 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($)	Fee($)
UNIDO	GET	Global	Climate Change	CC Global/Regional Set-Aside	1,784,862	160,638
				Total Grant Resources($)	**1,784,862.00**	**160,638.00**

E. Non Grant Instrument

NON-GRANT INSTRUMENT at CEO Endorsement

Includes Non grant instruments? **No**

Includes reflow to GEF? **No**

F. Project Preparation Grant (PPG)

PPG Required

☐

PPG Amount ($)

50,000

PPG Agency Fee ($)

4,500

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)
UNIDO	GET	Global	Climate Change	CC Global/Regional Set-Aside	50,000	4,500
				Total Project Costs($)	**50,000.00**	**4,500.00**

Core Indicators

Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (direct)	0	180000	0	0
Expected metric tons of CO?e (indirect)	0	900000	0	0

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

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (direct)		180,000		
Expected metric tons of CO?e (indirect)		900,000		
Anticipated start year of accounting		2021		
Duration of accounting		10		

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

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (direct)				
Expected metric tons of CO?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		420		
Male		780		
Total	0	1200	0	0

Part II. Project Justification

1a. Project Description

Changes in alignment compared with the original child project concept note

Please note that **there are no major substantive changes** to the project outcomes and outputs from the child project concept note approved in December 2019. The project structure presented in this document is consistent with that presented in the child concept note. The project framework is essentially the same and is based on three components. There are some changes to the terminologies used in the project structure (Table B and accordingly in the alternative scenario) in order to better align this child project to the programme framework document (10408) and to be more gender responsive. The budgets associated with components and co-financing are now more realistically attributed. An overview of the main changes are detailed further in the two tables below[1][1].

Table A ? Changes to Table B & Table F from the original child project concept note

Child project concept note version	CEO Endorsement version	Comment / Justification
Outcome 1.2 SMEs access innovative financing opportunities to grow and scale their business	Outcome 1.2 Targeted business growth support, and investment facilitation services and access to financing provided to for growth-stage cleantech SMEs to commercialize	Wording changed to reflect better the wording in the PFD and to reflect that the outcome relates to business growth support in addition to investment facilitiation and access to finance
Output 1.2.1 Investment facilitation support provided to high impact cleantech enterprises in the growth and expansion stages	Output 1.2.1 Investment facilitation support and investment mobilised for high impact cleantech enterprises in the growth and expansion stages so that they leverage funding	Wording changed to reflect better the wording in the PFD and to reflect that the outcome relates to business growth support in addition to investment facilitiation and access to finance

Output 1.2.3 SMEs leverage funding to grow and scale-up their enterprises	Merged into Output 1.2.1	During the PPG it was agreed the most effective use of GEF funds was in investment facilitation which would leverage finance. Therefore this output was merged into Output 1.2.1
Output 2.1.3 Documenting policy best practices and dissemination across countries at global level	Output 2.1.3 Knowledge creation, exchange and dissemination across GCIP countries to promote learning	The documentation of policy practices is seen as part of broader knowledge creation and exchange. However, more emphasis was put on how knowledge creation exchange and dissemination across countries leads to enhanced transformative changes at policy level .
Output 3.2.3 Program monitoring and evaluation framework developed and applied across GCIP countries	Output 3.2.3 i. Programme monitoring and evaluation framework developed and applied across GCIP countries ii. Periodic Progress Reports including gender action plan, PIRs iii. External Mid-term Review iv. Independent Terminal Evaluation	Further detail added for better clarification of output

Table B ? Changes to the project budget allocation

Child project concept note version	**CEO Endorsement version**	**Comment / Justification**
Outcome 1.1 budget: GEF: 470,000 Co-finance: 2,100,000	Outcome 1.1 budget: GEF: 400,000 Co-finance: 2,400,000	During PPG a more detailed budget was prepared for Component 1.1 in negotiation with the selected project executing entity (PEE), NGIN. The final budget is the minimum to deliver the project objectives and the co-finance amount is agreed with NGIN
Co-finance of 17,000,000 USD	Co-finance of 12,000,000 USD	PFAN?s foreseen co-financing contribution reduced in line with their conservative assumptions. It is clear that based on past experiences, this conservative assumption will be significantly exceeded and will be captured and reported through regular reporting and PIRs?.

Component 2 budget GEF: USD 300,000 Co-finance: USD 1,200,000	Component 2 budget GEF: USD 303,200 Co-finance:USD 3,165,000	During PPG a more detailed budget was prepared for Component 2 in negotiation with the selected PEE, CTG. The final budget is the minimum to deliver the project objectives and the co-finance amount is agreed with CTG
Component 3.1 budget: GEF: USD 300,000	Component 3.1 budget: GEF: USD 387,102	During the PPG detailed budgeting of Component 3.1 was carried out by UNIDO and the final GEF budget is the minimum to deliver on the project objectives.
Outcome 3.2 budget GEF: USD 200,000 Co-finance: USD 350,000	Outcome 3.2 budget GEF: USD 187,000 Co-finance: USD 325,000	During the PPG detailed budgeting of Component 3.2 was carried out by UNIDO and the final GEF budget is the minimum to deliver on the project objectives.
Project management budget: GEF: USD 169,562 Co-finance: USD 300,000	Project management budget: GEF: USD 162,260 Co-finance: USD 185,000	During the PPG detailed budgeting of project management was carried out by the PEE and the final GEF budget is the minimum to deliver on the project objectives. Co-finance reduced in line with more realistic assumptions.
Co-financing of USD 21,450,000 distributed across the different components	Secured co-financing of USD 18,675,000 redistributed across the different components	Co-financing distribution is revised in accordance to the secured co-financing - Co-finance contributions were finalized during the PPG following in-depth discussions with the PEEs. Some were higher than foreeen and PFAN?s foreseen contribution reduced in line with their conservative assumptions

The global environmental and/or adaptation problems, root causes and barriers that need to be addressed (systems description);

1. It is now globally accepted that climate change presents an urgent and existential threat to humanity. As such, governments, business and civil society need to systematically and rapidly embrace climate action to avoid detrimental impacts to people and planet. According to the most recent IPCC report, GHG emissions have continued to increase and the world is on track to surpass 1.5?C of global warming as early as 2040 unless drastic solutions are immediately implemented[2][2]. Business can play a key and central role in driving down carbon emissions by accelerating the development,

adoption and scale-up of innovative cleantech[3][3] solutions. In fact, the transition towards a low-carbon economy presents an economic opportunity for business, especially start-ups, entrepreneurs, Micro and Small and Medium scaled Enterprises (herein collectively referred to as SMEs), which by developing and adopting innovative cleantech solutions can increase the productivity and competitiveness of themselves, other industries and sectors, and create jobs.

2. Large-scale adoption of innovative cleantech solutions can ultimately transform entire economies and industries, and secure a sustainable and inclusive future. However, despite numerous innovative, and increasingly cost-competitive, cleantech solutions being developed, their adoption within many carbon intensive sectors (e.g. energy, industry, buildings, transport, agriculture and service sectors) is falling far short of the required scale and speed. This is due to a variety of reasons that include technology lock-in, lack of awareness, and lack of adequate support mechanisms. In developing countries, innovative cleantech solutions can also help to address existing infrastructure and service gaps such as access to sustainable energy through the deployment of renewables, promotion of energy use efficiency and the adoption of e-mobility solutions. This gap between the development of innovative cleantech solutions and their rapid deployment needs to be systematically addressed to reduce emissions of GHG whilst creating green industries and jobs.

Role of cleantech innovation SMEs in addressing global environmental problems

3. SMEs have the potential to drive transformational change towards resource efficient and low-carbon economies by actively developing and adopting innovative cleantech solutions. SMEs are the mainstay of the economies in developing countries and economies in transition. In these countries, SMEs employ between 60-90% of the total workforce and they provide goods and services across various sectors. Given the reach and operations of SMEs across various economic sectors, they can identify opportunities and develop appropriate and scalable innovative cleantech solutions, which reduce GHG emissions and create jobs and new clean industries. Furthermore, SMEs operate at very local levels and hence they significantly influence decisions and choices by society.

4. SMEs play an important role in developing key technologies to tackle climate change as highlighted in the Briefing Document #12 of the Technology Executive Committee of the UNFCCC[4][4] and the GEF has long recognized that the protection of the global commons requires full engagement and mobilizing of the private sector to leverage, technological know-how, innovation, investments and market access. The range of technological and market or business model innovations that SMEs can develop include breakthrough, architectural, disruptive and incremental innovations depending on the existing market opportunities, circumstances and technological needs. The

combination of artificial intelligence, big data and connectivity is expanding the opportunities and horizons for cleantech innovation even further and making these technologies even more effective and ready for market deployment.

Barriers to development, large-scale adoption and deployment of innovative cleantech solutions

5. In most developing and emerging economies, cleantech SMEs face serious barriers in transforming promising innovative cleantech ideas into viable businesses since the ?valley of death? they face is deeper and wider compared to those in developed countries. Therefore opportunities for SME innovations to contribute to climate change mitigation are missed.

6. SMEs in the cleantech innovation space are not systematically identified, accelerated and fostered. Cleantech SMEs often lack the skills and organizational capacity to transform innovative cleantech solutions into marketable products. This is compounded by the existing gaps between demand and supply of funding available for SMEs. Typically small and early stage cleantech SMEs require lower levels of funding and the provision of patient capital, whereas commercial banks, public markets as well as venture capital funds tend to invest in low-risk and tested technologies. Limited understanding of opportunities and capacity to assess risks in investing in innovative cleantech solutions as well as limited exposure and interaction between SMEs and potential investors are indicative of weak innovation and entrepreneurship ecosystems.

7. The quality and complementarity of support services available to SMEs is determined by the maturity of cleantech innovation ecosystems. The existence and enforcement of the supportive policy frameworks as well as interconnectivity of relevant ecosystem players from academia, industry and state organizations with complementary skills and competences are key. The status of the policy and regulatory framework varies enormously across economies but in many cases it is characterized by incentives that are too weak to sufficiently foster and mainstream innovative cleantech solutions across priority sectors. Accordingly, key policy makers have limited exposure to best practice examples and cross border policy dialogues, and they miss opportunities to learn. At the global level, the cleantech innovation and entrepreneurship ecosystem is characterized by disconnected and disparate sub-ecosystems and is missing a coordination supra-structure. This results in highly fragmented efforts and discrepancy in quality and availability of support services, misinformed investors and a lack of efficiency in global efforts. This means that opportunities to develop and grow cleantech businesses providing global environmental benefits are largely untapped and unexplored.

8. In particular, at a national level, SMEs face:

a. absence of an enabling policy and regulatory environment that would create the market-pull for cleantech innovations in SMEs;

b. weak and non-functioning innovation ecosystems where resources invested in the knowledge economy are not linked to changes in the commercial economy and institutions mandated to promote technological innovation lack capacity and policy guidance on accelerating cleantech innovations;

c. lack of coordination amongst sectoral players on market intelligence research (undermining decision-making regarding market opportunities and penetration strategies) and meaning they do not collaborate to support and foster cleantech SMEs to develop new innovations and commercialise their products and services;

d. limited access to finance, partly due to a mismatch of SME needs and offerings of financing institutions and a lack of interaction between SME innovators and potential investors;

e. limited knowledge of cleantech innovation and investment amongst local investors and subsequently a very reduced appetite for risk[5][5].

f. limited awareness of financial schemes, requirements and procedures to access financing for cleantech and limited government financial incentives to support industrial enterprises on the uptake of innovation in the cleantech space. In particular there is limited or no knowledge of potential international finance opportunities in their sector and it is difficult for them to access this finance;

g. lack of SMEs? and entrepreneurs? strategic business planning and marketing skills leading to high risk of failure;

h. lack of awareness in businesses and private sector of new developments and trends on innovations related to their operations, manufacturing and distribution, locally or globally; and

i. limited knowledge of markets and potential partners outside their country which could expand their business.

9. In addition to the national challenges outlined above, there are clear systemic challenges at a global level which limit the potential growth and impact of these new businesses. These include:

a. Limited or no knowledge of potential international finance opportunities;

b. Limited sharing of knowledge between ecosystems and limited tracking or reporting of cleantech experience in different countries which undermines successful cleantech innovation and limits growth;

c. There is limited standardization and differing methodologies between different country support and between existing international support programmes so it is difficult to set specific baselines or targets which could support up-scaling and uptake of innovation and lead to really understanding the impact.

d. No standard performance scheme such as a label or badge which defines cleantech innovation quality; there are a number of different labels which are applied to aspects of the cleantech market but not something that is all encompassing which the financial markets will recognize;

e. Limited global support available which is open to developing and transition economies and which allows entrepreneurs to look beyond their borders, particularly when their own in-country support is not targeted at their sector. Technologies with potential are not able to progress to become viable businesses.

f. Lack of public awareness regarding market potential of cleantech and low-emission innovation technologies;

10. Ultimately, the global and national innovation and entrepreneurship ecosystems are weak and SMEs are not given the opportunity to transform their cleantech innovations into viable enterprises that can attract investment at local and global levels, which in turn would allow them to scale and to deliver transformational economic, social and environmental impacts and reduce the emission of GHGs.

11. This global child project aims to address these challenges by creating standardized GCIP global tools, methodologies, knowledge products and infrastructure to support national child projects and by creating extended market opportunities across different countries. This project provides global support and an internationally recognized standard for cleantech innovation as well as facilitates the connection of ecosystems across countries and promotes the missing partnerships amongst innovators, entrepreneurs, financiers, and policy makers.

2) the baseline scenario and any associated baseline projects,

Baseline Scenario

Global trends in cleantech innovation

12. The cleantech market opportunity in developing countries is expected to exceed $6.4 trillion over the coming decade, with $1.6 trillion of that investment accessible to SMEs[6][6]. While around 50 per cent of the entire value stream of these technologies originates from major equipment, the rest is generated by balance of system components, smaller replacement parts, assembly, installation, operation and maintenance services as well as civil works. The latter are the areas where there is room to develop local content and where local SMEs can play a key role as ancillary industries in addition to going further and creating new technological and business model innovations which solve local problems and have global environmental benefits. In particular, the convergence of the need for climate action and addressing energy access and security challenges in developing and emerging economies presents huge opportunities for SMEs to develop innovative cleantech solutions that can be a basis for inclusive and sustainable industrialization.

13. In the energy sector, mega trends, including decarbonisation, decentralisation, electrification and digitalization, are creating major technological and market disruptions and breakthroughs. Some of the key technological enablers of this rapid innovation include utility scale batteries, behind-the-meter batteries, e-vehicles smart charging etc. This, along with big data, block chain, artificial intelligence and the Internet of Things (IoT), is creating innovations in hardware and software solutions such as sensors, communication and optimisation technologies, which can increase energy efficiency, give customers more control as well as facilitating easier and more distributed generation, e.g. peer-to-peer off-grid energy trading. Distributed energy generation is an area of focus as is energy access with emphasis on low-cost intelligent off-grid systems. Innovations continue in the renewable energy space with new technologies that are efficient as well as technologies that optimise generation, grid connection and maintenance.

14. The role of the private sector in accelerating the innovation, development and wide-scale adoption of innovative cleantech solutions is central to the growth of the cleantech industry in developing and emerging economies. To be able to fully participate in this newly emerging economic space, developing countries need to design appropriate strategies and targeted support measures to foster home-grown cleantech innovations to capture a growing share of this expanding future market and the related employment and industrialization opportunities.

Growing demand of global investors for innovative cleantech solutions

15. The impact investment industry is rapidly growing. In 2018, a sample of just 266 investors committed more than USD 33 billion to impact investment and 13% more in 2019[7][7]. Estimates of the current size of the global impact investing market have been put at USD 502 billion at the end of 2018[8][8]. International impact investors are increasingly considering the opportunities that innovative cleantech solutions offer. These investors tend to be particularly interested in potential innovations that are scalable at global level, rather than those that tend to be constrained to national level. Although impact investors do show interest in investing across many countries, they are simply not aware of the opportunities in many emerging and developing economies, resulting in missed opportunities for scaling cleantech innovation in these countries, and for achieving significant global environment benefits. Global platforms allow impact investors to be introduced to enterprises in countries they may not previously have considered. With a critical mass of cleantech innovators on one platform, impact investors have a trusted place to identify and engage innovative cleantech solutions from different countries. International investors are looking for truly global innovative cleantech solutions that can have impact at scale, whereas national investors may have global aspirations but will settle for solutions with potential to scale at national or regional levels.

16. PFAN (the Private Financing Advisory Network)[9][9] is a global network of climate and clean energy financing experts and investors that aims to bridge the gap between entrepreneurs developing climate and clean energy projects and private sector investors. It achieves this by advising low-carbon, climate resilient businesses in developing countries, and matches projects to private financing. PFAN mobilizes private financing to reduce greenhouse gas emissions and build climate resilience ? contributing to Paris Agreement and SDGs i.e. SDGs 7 (Energy), 9 (Industry), 13 (Climate Action), and 17 (Partnership). A network of ninety-nine (99) incountry private sector experts in 39 countries are supported by network of forty-five (45) investment partners globally to provide investment advisory services, investment facilitation and financing. To date, PFAN has supported at least 127 climate and clean energy businesses to mobilise more than USD 1.7 billion of investment. Furthermore PFAN currently has a pipeline of hundreds of projects across the globe that are being supported. Further results demonstrate that through this investment, 3.3 million tonnes of CO2 has been mitigated annually and an additional 975 MW of clean power installed. This year already, PFAN has facilitated at least 69 investment-ready projects.

Growing sustainability commitments by business creates opportunities for innovative cleantech solutions

17. Many large corporations are adopting sustainability commitments and standards in their supply chains, internal processes and market linkages. These sustainability commitments include

reducing resource consumption, closing the materials loop, and adopting renewable energy and energy efficiency technologies and services. Furthermore, some private companies have started promoting partnerships with local companies and SMEs, to ensure compliance with sustainability standards and a more diversified pool of suppliers. Some commodity based corporations have gone a step further by linking their operations to efforts to promote entrepreneurship, innovations and achieving SDGs. This creates shared value, i.e. actions to create shareholder value also create value for society and tackle many of the global challenges that the SDGs are designed to address. At the same time large corporates are teaming up with accelerators and incubators to engage with thematic problem orientated entrepreneurs/solutions and are co-investing. This creates huge market opportunities for SMEs to develop cleantech innovations and partnerships with large corporations in support of sustainability efforts.

Global demand to ?build back better? post Covid-19 creates opportunities for cleantech innovation

18. The current coronavirus (Covid-19) pandemic is focusing minds on how the drive for incessant economic development is creating unsustainable pressure on the earth?s natural systems which, in turn, is exposing people to serious health risks with consequences for society and for the stability of national and global economies. With the understanding that the fundamental root cause of emerging zoonotic diseases, such as Covid-19, is the weakening of the services ecosystems, the only lasting solution to avert such diseases in the future is to promote transformational change to the human systems, be they energy, cities, food and production / consumption, so that a balance between natural systems and human systems can be restored.[10][10]

19. The transition to lasting transformation can be achieved through a green recovery which is consistent with sustainable and nature-based development. This could include the adoption of sustainable, inclusive, resilient, low-carbon, low-polluting and circular economy-based pathways. Not only does cleantech innovation have a clear role to play in these pathways, investment in cleantech innovation can also help to restart economies. Through supporting cleantech innovators and cleantech innovation ecosystems GCIP can play a key role in the green recovery.

Baseline Projects

20. Since 2011, interest in cleantech innovation has grown steadily, and the number of cleantech incubators and accelerators globally is now estimated at approximately 70[11][11]. Most of these are located in North America and Europe with very few working in developing or emerging economies. In addition, many focus on software solutions rather than hardware. While there is no

definitive figure, best estimates put climate-focused incubators/accelerators at less than 2% of all incubators/accelerators[12][12]. There are a number of initiatives helping cleantech SMEs but few focus on developing countries and few are truly global, i.e. they are multiple country initiatives, and none provide holistic support across and between the national ecosystems. To discuss this gap, GCIP was invited to contribute to a UNFCCC Thematic Dialogue on Incubators and Accelerators in Bonn in March 2018[13][13] to explore how to boost climate tech incubators and accelerators in developing countries. The dialogue discussed the missing link that can be addressed by cleantech incubators and accelerators in providing life-support to small cleantech based firms and entrepreneurs. Some of the key international initiatives/projects working in these economies are outlined in the following section.

Global Cleantech Innovation Programme (GCIP) under GEF 5 and GEF 6 and achievements

21. In 2011, UNIDO, in partnership with GEF, piloted the first Cleantech Innovation Competition for green entrepreneurs and SMEs in South Africa with innovative ideas and concepts in the areas of green buildings, energy efficiency, and renewable energy[14][14]. Building on the resounding success of this pilot, UNIDO and the GEF developed the Global Cleantech Innovation Programme (GCIP), which uniquely fosters an ecosystem approach that supports cleantech innovations in existing and new SMEs. Since the pilot in South Africa, under GEF 5 and GEF 6 cycles, GCIP has been implemented in a total of nine countries, namely Armenia, India, Malaysia, Morocco, Pakistan, Thailand, Turkey, Ukraine and South Africa[15][15].

22. GCIP?s main objective was to promote clean technology innovations and innovative technology entrepreneurship through a Clean Technology Innovation Competition and Entrepreneurship Accelerator Programme that would catalyze the transformation of cleantech innovations by SMEs into viable investment businesses, and link them to financing opportunities. An integral part of GCIP is the development of an enabling environment for cleantech innovation and entrepreneurship. Each GCIP project has had the four following interventions: a) entrepreneurship and business acceleration of cleantech innovation SMEs; b) policy and regulatory strengthening; c) linking cleantech SMEs to private sector financing; and d) building capacity of national institutions.

23. By 2019 over 1200 cleantech SMEs had been trained, mentored, and linked to funding opportunities[16][16]. On average, about 25% of the innovators and companies are women-owned and operated, a significantly higher percentage than in most cleantech accelerators and incubators

worldwide. In many cases, the supported GCIP companies are already up and running, attracting investment, making innovative cleantech products and services, and delivering huge global environmental benefits. A small sample of just fourteen (14 out of 1200) GCIP alumni indicated that they have raised USD 22 million in investment and created over 300 jobs while mitigating 600,000 tCO2e between 2011 and 2017[17][17]. The leveraging effect of the GCIP is demonstrated by the fact that these 14 companies have such high growth prospects that they were projecting that by 2020, they would have generated revenues of over US$ 263 million, created over 1200 new jobs and generated over 4.8 million tonnes of GHG emissions savings. This was achieved from a total budget of US$ 12 million invested across 9 countries. This gives GCIP leverage effect of at least 21 times. With many more GCIP alumni SMEs commercializing and mobilizing more investments, this implies that GCIP leverage effect will continue to increase. GCIP has also successfully delivered outcomes beyond the level of individual businesses by nurturing the innovation ecosystems in each country and building up capacity in national organizations.

24. The independent evaluation of GCIP unequivocally concluded that GCIP under GEF 5&6 was very successful and highly innovative (https://www.gefieo.org/evaluations/evaluation-gef-unido-global-cleantech-innovation-programme-2018) . The evaluation further concluded that there is potential to increase impact and that the effectiveness of the approach could have been improved through programmatic delivery. More still needs to be done to link ecosystems across countries to identify more investment and market opportunities, and to engage with the private sector, to really create global transformational impacts and environmental benefits. Further details regarding the findings of the GEF IEO thematic evaluation of GCIP are provided in Annex N. These findings and feedback from participants has been used to design the activities of the GCIP global child project.

Other initiatives

World Bank?s InfoDev

25. This programme has included a number of Climate Innovation Centres (CIC) in the Caribbean, Ethiopia, Ghana, Kenya, Morocco, South Africa and Vietnam. CIC activities vary significantly by country, including the focus on physical space (incubation) versus acceleration services. However CICs have faced issues in delivery due to the limited time available from participants, difficulties in attracting investors and in finding trainers and mentors. Over time there has been knowledge sharing between the CICs but there is a need to improve on this aspect towards a truly global platform.

Cleantech Open (CTO)

26. Cleantech Open is a US based international accelerator and was a partner in GCIP under GEF 5&6. CTO provided the initial platform for the GCIP national accelerators. CTO provides support to entrepreneurs, investors, governments and stakeholders from across the ecosystem and links entrepreneurs to markets and investors and runs global events. Since its involvement in GCIP it is now no longer providing services in the developing and transition economies as it is looking to mainly focus on activities just within the North American market.

Climate KIC

27. Climate-KIC Accelerator is an EU acceleration programme focused on climate impact by cleantech commercialization. Every year, the Climate-KIC Accelerator supports over 150 start-ups in Europe through its three stage support programme including coaching, access to resources and tools, financial support and access to an extensive relevant international network. Climate-KIC?s Investor Marketplace, is a platform connecting investors with climate change start-ups across Europe. UNIDO will work with Climate ?KIC to ensure synergies and in connecting innovation ecosystems across GCIP countries..

UNDP Global Accelerator Labs

28. UNDP?s Accelerator Labs are designed to close the gap between the current practices of international development in an accelerated pace of change. They model a new capability to make breakthroughs on the future of development: inequality, decarbonization, the 4th industrial revolution and new forms of governance. The network started with 60 Lab teams covering 78 countries and are now expanding to 90 Labs covering 114 countries. In each country the Accelerator Labs choose the problems that they solve together with national partners across a wide range of sectors and topics, all looking to accelerate progress towards the 2030 Agenda. As a result the work is different in each lab. The labs focus on specific challenges and carry out analysis and experimentation with national partners to address the challenge ? for example in the Caribbean the Labs are exploring whether sargassum seaweed could be used as a biodegradable alternative to single-use plastic and inNamibia the lab is testing out electric vehicles to reduce costs of ownership and explore options for using the cars to provide energy backup during local outages. This is different from open calls to local cleantech innovators and providing support to them. However GCIP will liaise with the Accelerator Labs when defining the GCIP accelerator challenges and categories.

Endeavor

29. Endeavor is a global high-impact entrepreneurship initiative which aims to drive long-term economic growth and build strong entrepreneurship ecosystems in growth markets by selecting, mentoring, and accelerating the best high-impact entrepreneurs. Endeavor looks for entrepreneurs leading innovative companies that are solving real problems at significant scale. Like GCIP it is global in nature but its staff select entrepreneurs in each market rather than being an open call to all entrepreneurs. Endeavor does not have a cleantech focus but operates across enterprise software and services, fintech, food & beverage, education, healthcare, agriculture, retail and consumer tech, and

smart cities. The selection process is rigourous and many endeavor entrepeneurs are further developed than those that are the focus of GCIP.

Climate Technology Centre & Network (CTCN)

30. CTCN is co-hosted by UNIDO and UNEP and promotes the accelerated transfer of environmentally sound technologies for low carbon and climate resilient development at the request of developing countries. They provide technology solutions, capacity building and advice on policy, legal and regulatory frameworks tailored to the needs of individual countries. Each project supported is relatively small and support is provided at the national level rather than for cleantech entrepreneurs/SMEs. The CTCN GEF-5 pilot project is under the umbrella of the programme entitled ?Joint UNEP-UNIDO Programme to host and manage the Climate Technology Centre and Network (CTCN)?. Five years after becoming operational, the CTCN is working alongside 550 network members and 160 national climate technology focal points to meet the needs for climate technology identified by developing countries.

31. The second CTCN Programme of Work (2019-2022) aligns the country-driven services provided by the CTCN with the actions and activities specified in the technology framework of the Paris Agreement. The framework establishes principles and puts forward actions and activities across five key themes: innovation, implementation, enabling environment and capacity-building, collaboration and stakeholder engagement, and support.

Network for Global Innovation (NGIN)

32. NGIN is dedicated to building a global commercialization ecosystem focused on helping clean technology entrepreneurs collaborate and prosper. It offers the following: a global membership organization that includes incubators, technology parks, research institutes, universities and corporations; matchmaking between customer and company, between investor and opportunity; assistance to members in locating, incubating, growing and expanding portfolio company solutions; and it acquires mentors, advisors, trainers, and interim executives to assist entrepreneurial creativity. NGIN is the closest initiative to GCIP and will be a technology and knowledge partner in designing and running the GCIP accelerator programmes and will be a partner in connecting innovation ecosystems across GCIP countries.

Private Financing Advisory Network (PFAN)

33. PFAN provides investment facilitation services for scaling-up of climate and sustainable energy technologies at large-scale for positive environmental impact. It supports developing and emerging economy country cleantech projects until they reach financial closure. Its figures show that more than half of the sources of investment to reach financial closure are international in nature. Thus,

there is evidence that international investors have an appetite to invest in cleantech SMEs in developing countries, if they have a valid technology, a strong team, validated business model and customer traction.

Global Innovation Fund (GIF)

34. GIF is a non-profit innovation fund that invests in the development, rigorous testing, and scaling of innovations targeted at improving the lives of the world?s poorest people. Through grants and risk capital, it helps innovative solutions to global development challenges from for-profit firms, non-profit organisations, researchers, and government agencies to maximise their impact and affect meaningful change. Support is provided at all stages of their life cycle through grants, loans (including convertible debt), and equity investments ranging from $50,000 to $15 million. Support is not limited to cleantech but is limited to innovations that have clear social impact at a large scale, i.e. they improve the lives of those living on less than $5 a day.

Mission Innovation (MI)

35. MI is supporting eight international innovation Challenges[18][18]. The challenges support Research Development and Demonstration (R&DD) working with a mixture of prizes and facilitating of exchange between member country researchers. Support is focused more at early stage R&D.

Ideas to Impact

36. This programme is designing, implementing and testing five innovation prizes inducing innovative solutions to development challenges in Climate Change Adaptation, Energy Access and WASH. Some are international and some national. Prize winners receive cash but do not get the sort of mentoring, coaching and support that GCIP provides. Besides just the prizes, there is no work on policy and regulatory frameworks, and institutional capacity building that GCIP provides.

Africa Enterprise Challenge Fund (AECF)

37. The AECF supports businesses to innovate, create jobs, leverage investments and markets in an effort to create resilience and sustainable incomes in rural and marginalized communities in Africa. AECF runs a business plan competition for RE and climate change projects and provides investment capital. They do not support early stage technological innovations nor provide coaching,

mentoring and training services. They also do not work on policy and regulatory innovations. (https://www.aecfafrica.org)

The Solar Impulse Foundation

38. The Foundation awards technologies with a label, which provides the applicant with international recognition and showcasing opportunities. Importantly, they do not provide the mentoring or training support that GCIP provides. UNIDO has signed a Memorandum of Understanding with Solar Impulse Foundation to ensure that some of the GCIP alumni will be able to get the label from Solar Impulse Foundation, thereby increasing their visibility and confidence in their innovations. (https://solarimpulse.com).

39. If GEF funding is not provided, it is very likely that many clean technology innovations supported at a national level fail to achieve their impact potential. Cross-border linkages, market opportunities, partnerships and investment prospects will be missed for promising cleantech innovations. Possible synergies and learning between countries will be lacking leading to further missed opportunities. Programme efficiencies resulting from the GEF funding for coherence and coordination will be missed resulting in less efficient national child projects and associated reduction in impact. In summary, the barriers for entrepreneurs to expand and commercialise internationally will remain in place which will result in many unrealized opportunities in reducing GHG emissions, in strengthening partnerships with the private sector, in commercialisation of cleantech SMEs and entrepreneurs and ultimately in missed opportunties for green economic growth and jobs.

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

40. GCIP, at the programmatic level, is designed to respond to the increasing global demand for environmental sustainability, climate action, and to unleash the potential of cleantech innovation and entrepreneurship to help transform priority sectors and systems. To address the barriers faced by SMEs in transforming their cleantech innovations into market ready solutions, the programme uses a holistic ecosystem approach which will facilitate the growth of cleantech SMEs, improve coordination of national activities and foster synergies between participating countries. GCIP has a unique approach as it seeks to capacitate the private sector to deliver environmental benefits through transforming early-stage cleantech companies into fast-growing and investment-ready enterprises whilst simultaneously developing the cleantech innovation and entrepreneurship ecosystems in partner countries.

41. This GCIP global child project responds to the call for systematic coordination at the global level, leveraging of opportunities for synergies and improved cost efficiency of allocated resources, all required due to the scaling-up of GCIP. GEF funding will be utilized for the establishment of a global coordination platform and for the development of GCIP tools and methodologies to ensure a systematic approach, programme consistency and coherence, and quality across the participating countries. By establishing an enabling environment it will ensure that the catalytic grant investments from the GEF will leverage more investments from national stakeholders and the private sector, and deliver greater impact at scale. In particular, GCIP will de-risk investments in cleantech SMEs by transforming their early-stage cleantech solutions into viable, scalable and investable enterprises.

42. The GCIP global child project will aggregate and enhance efforts to strengthen and connect the ecosystems of partner countries, and at the same time connect them to a truly global innovation ecosystem. Over the long-term, the project seeks to build robust innovation ecosystems that can identify and systematically support high-impact cleantech technology innovations as well as attract large-scale investments. This mechanism is expected to deliver significant global impact on limiting global temperature rise to well below 2 degrees centigrade as well as generating local environmental benefits. Global coordination, provided by this global child project, will enhance the performance of the individual child country projects as well as reducing duplication of efforts and costs. A significant part of the work of the global child project will be dedicated to supporting countries to implement their child projects through the platform, knowledge products, advocacy, outreach and programme coherence and coordination as well as direct technical support to SMEs, GCIP alumni, mentors, judges, national institutions and governments.

43. In summary, to deliver the overall project impact the GCIP Global child project will:

a. build a global community of ecosystem players and form strategic partnerships with key influencers that can lead and guide policy and business decisions in the cleantech space;

b. enhance access to financing support for early deployment and commercialization of solutions with highly transformational impact potential for the global commons;

c. implement a demand driven global technology accelerator and provide associated mentoring, training and support;

d. increase efficiency, effectiveness and impact through the development of GCIP tools, methodologies and guidelines;

e. promote knowledge exchange and transfer to inform cleantech innovation policy regulations development across various countries;

f. enhance visibility and credibility of identified solutions to the international investor and financing community;

g. enhance coordination and cooperation among GCIP national execution partners for knowledge and experience sharing and facilitate the connectivity of ecosystems and greater scaling-up of innovations across different countries;

h. promote systematic networking among GCIP supported SMEs, mentors and judges at the global level; and

i. increase impact tracking and monitoring of GCIP supported SMEs, ecosystems, national institutions at the global level.

44. The acceleration of fast-growing cleantech innovation SMEs also creates new green jobs, therefore contributing to national and global poverty reduction efforts. It supports the formation of new sectors supporting low-carbon and low-emission economic development and further catalyzes greater private sector cleantech investment.

45. The GCIP global child project has been designed based on achievements to date, key lessons learned from the implementation of the first GCIP projects and on the collective feedback from various stakeholders including national counterparts, partner institutions and SMEs successfully participating in GCIP, as well as strategic partners at global levels. The table below outlines how the project addresses the particular findings and recommendations of the GEF IEO independent thematic evaluation of GCIP and feedback from various GCIP stakeholders.

Table 1: GEF IEO recommendations and how they are addressed by this project

GEF IEO Recommendations and GCIP Feedback	**How the recommendations will be addressed in the global child project**
a) More focus on Investor outreach and connecting with investor networks / Outreach and marketing of the program and showcasing of GCIP supported innovations at global events	Component 1 will specifically address this by organizing investor connect platforms and events as well as connecting GCIP alumni directly with potential investors, financiers and networks. Further, each child project is expected to have activities dedicated at implementing investor outreach and marketing strategies at local scale and connect to global platforms. Component 3 includes global communications, advocacy and outreach activities which will also market the program and advocate innovators at regional and global events.

b) Improved cross-country coordination and system to ensure coherence and quality	Component 3 will include GCIP programmatic coherence and coordination activities in order to provide support to national child project executing entities (NPEEs), share guidelines and internal standards as well as promote interaction between NPEEs.
c) Quality of Support	Component 1 will develop and provide a GCIP Accelerator Guidebook which will equip Child Projects with a standard GCIP approach and methodology to promote cleantech innovation and entrepreneurship in the countries. The guidebook will also include practical tools and guidelines for operations and management of the accelerator. Specific effort will be focused on ensuring that the training and mentorship support provided under the Cleantech Accelerator will be adapted to the local context of the applicant countries.
d) Advanced business-support for SMEs post GCIP acceleration needed	Component 1 will include advanced/post-acceleration support. The work will provide a standard approach for advanced investment and commercialization support to GCIP alumni. This will include further mentoring for advanced business growth support, match-making services with interested corporations, investors, governments, and also offering opportunities for start-ups to be showcased at high-level international events.
e) An increased focus on policy strengthening and regulatory frameworks to foster cleantech innovation is needed	Under Component 2, the global child project will assist child projects in strengthening the policy framework through sharing best practices, policy dialogue and cross-country learning of success stories from different countries and contexts.
f) Global peer networking among entrepreneurs	Component 1 of this project will create and maintain a global community of GCIP stakeholders which will allow cross-border connectivity among GCIP partner countries, facilitate peer to peer networking among entrepreneurs as well as investor matching, sharing of best practices between countries, identifying suitable in-country partners and promoting export opportunities.
g) Knowledge exchange between national executing agencies and government counterparts	Component 2 includes a focus on knowledge management and exchange and is designed to maximize the impact of GCIP by identifying synergies between national ecosystems and ensuring that the successes and achievements of GCIP are captured in knowledge products. Networking will be facilitated between national executing entities and government counterparts. Component 3 focuses on knowledge products for the national executing entities such as standards and methodologies.
h) Improved monitoring and evaluation of impact	Component 3 has a specific activity dedicated to impact tracking, which will develop a common methodology for measuring outcomes and impacts to allow for extrapolation and comparison. Each child project will use the same methodology and feed their results into the global figures.

i) Widening the reach of GCIP	Global accelerators will be organized under Component 1 of this global child project and will build on the selection of high impact technology innovation with market potential beyond domestic markets. This will ensure that cleantech innovations with potential global impact receive the specific mentoring and business support for entering global markets.

46. In line with the three pillars of the global framework, the global child project is structured into three components, as shown in the centre of the Theory of Change in Figure 1(in purple), namely:

? Transforming early-stage cleantech innovations into commercial enterprises;

? Cleantech innovation and entrepreneurship ecosystems strengthening and connectivity; and

? Strategic programme coordination and programmatic coherence.

47. The Theory of Change (ToC) for the global child project shows its path from challenges to impact; how the the global child project will deliver accelerated uptake and investment in cleantech innovations so that innovative SME-driven cleantech products and services are available to international actors that meaningfully contribute to climate change mitigation, green growth and job creation.

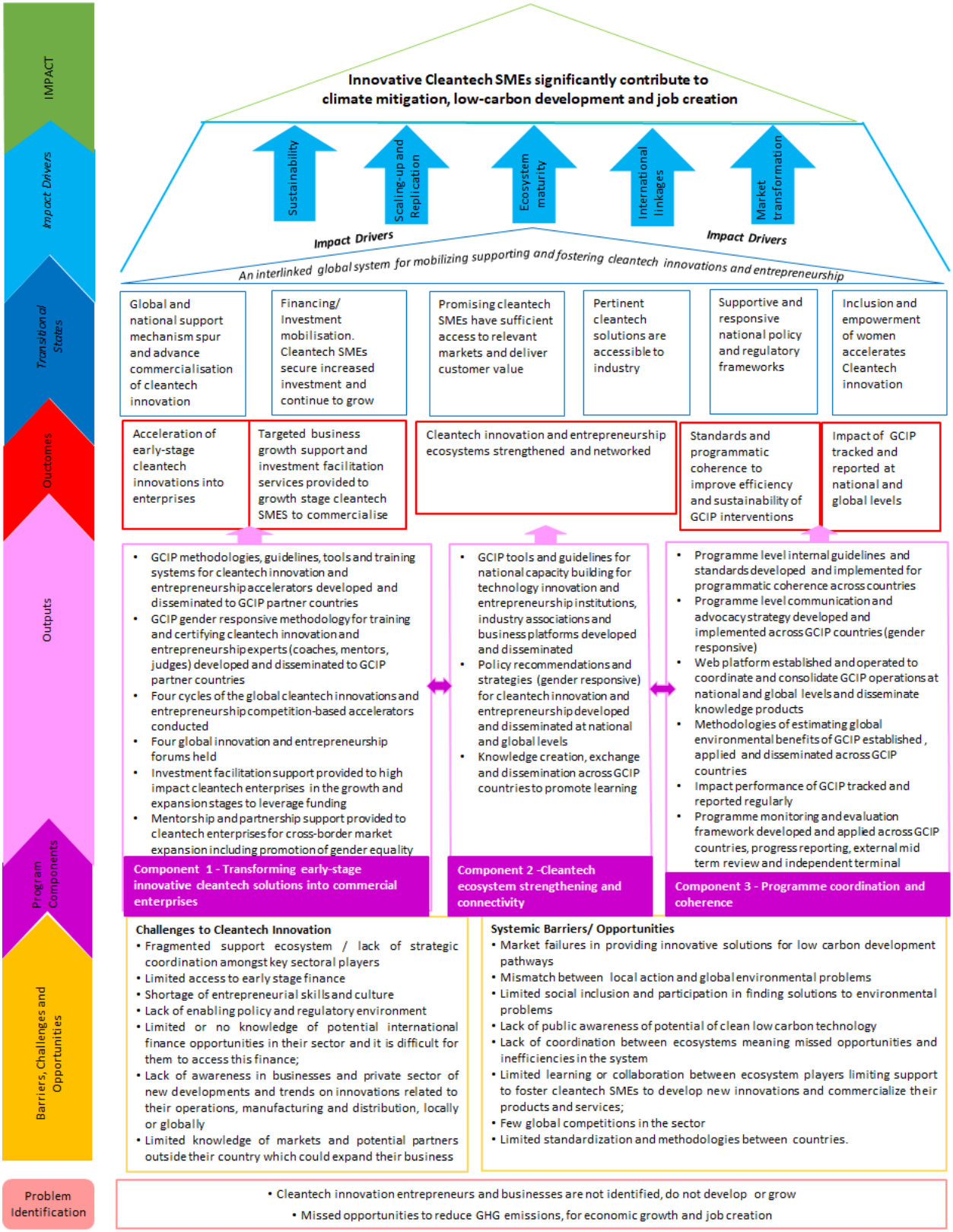

IMPACT
Impact Drivers
Transitional States
Outcomes
Outputs
Program Components
Barriers, Challenges and Opportunities
Problem Identification
Innovative Cleantech SMEs significantly contribute to climate mitigation, low-carbon development and job creation
Sustainability
Scaling-up and Replication
Ecosystem maturity
International linkages
Market transformation
Impact Drivers
Impact Drivers
An interlinked global system for mobilizing supporting and fostering cleantech innovations and entrepreneurship
Global and national support mechanism spur and advance commercialisation of cleantech innovation
Financing/ Investment mobilisation. Cleantech SMEs secure increased investment and continue to grow
Promising cleantech SMEs have sufficient access to relevant markets and deliver customer value
Pertinent cleantech solutions are accessible to industry
Supportive and responsive national policy and regulatory frameworks
Inclusion and empowerment of women accelerates Cleantech innovation
Acceleration of early-stage cleantech innovations into enterprises
Targeted business growth support and investment facilitation services provided to growth stage cleantech SMES to commercialise
Cleantech innovation and entrepreneurship ecosystems strengthened and networked
Standards and programmatic coherence to improve efficiency and sustainability of GCIP interventions
Impact of GCIP tracked and reported at national and global levels
GCIP methodologies, guidelines, tools and training systems for cleantech innovation and entrepreneurship accelerators developed and disseminated to GCIP partner countries
GCIP gender responsive methodology for training and certifying cleantech innovation and entrepreneurship experts (coaches, mentors, judges) developed and disseminated to GCIP partner countries
Four cycles of the global cleantech innovations and entrepreneurship competition-based accelerators conducted
Four global innovation and entrepreneurship forums held
Investment facilitation support provided to high impact cleantech enterprises in the growth and expansion stages to leverage funding
Mentorship and partnership support provided to cleantech enterprises for cross-border market expansion including promotion of gender equality
GCIP tools and guidelines for national capacity building for technology innovation and entrepreneurship institutions, industry associations and business platforms developed and disseminated
Policy recommendations and strategies (gender responsive) for cleantech innovation and entrepreneurship developed and disseminated at national and global levels
Knowledge creation, exchange and dissemination across GCIP countries to promote learning
Programme level internal guidelines and standards developed and implemented for programmatic coherence across countries
Programme level communication and advocacy strategy developed and implemented across GCIP countries (gender responsive)
Web platform established and operated to coordinate and consolidate GCIP operations at national and global levels and disseminate knowledge products
Methodologies of estimating global environmental benefits of GCIP established, applied and disseminated across GCIP countries
Impact performance of GCIP tracked and reported regularly
Programme monitoring and evaluation framework developed and applied across GCIP countries, progress reporting, external mid term review and independent terminal
Component 1 - Transforming early-stage innovative cleantech solutions into commercial enterprises
Component 2 -Cleantech ecosystem strengthening and connectivity
Component 3 - Programme coordination and coherence
Challenges to Cleantech Innovation
• Fragmented support ecosystem / lack of strategic coordination amongst key sectoral players
• Limited access to early stage finance
• Shortage of entrepreneurial skills and culture
• Lack of enabling policy and regulatory environment
• Limited or no knowledge of potential international finance opportunities in their sector and it is difficult for them to access this finance;
• Lack of awareness in businesses and private sector of new developments and trends on innovations related to their operations, manufacturing and distribution, locally or globally
• Limited knowledge of markets and potential partners outside their country which could expand their business
Systemic Barriers/ Opportunities
• Market failures in providing innovative solutions for low carbon development pathways
• Mismatch between local action and global environmental problems
• Limited social inclusion and participation in finding solutions to environmental problems
• Lack of public awareness of potential of clean low carbon technology
• Lack of coordination between ecosystems meaning missed opportunities and inefficiencies in the system
• Limited learning or collaboration between ecosystem players limiting support to foster cleantech SMEs to develop new innovations and commercialize their products and services;
• Few global competitions in the sector
• Limited standardization and methodologies between countries.
• Cleantech innovation entrepreneurs and businesses are not identified, do not develop or grow
• Missed opportunities to reduce GHG emissions, for economic growth and job creation

Figure 1 ? Theory of Change for GCIP Global Child Project

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

48. Component 1 will enhance the capacity and competitiveness of cleantech SMEs, entrepreneurs, innovators and SMEs[19] to leverage market opportunities embedded in climate change mitigation. SMEs need different forms of support and financial assistance as they develop along the ?start-up to scale-up journey? of a cleantech enterprise. Figure 2 below shows the differing demand for funds and technical support by cleantech business, depending on their stage of growth as well as the associated technical assistance required.

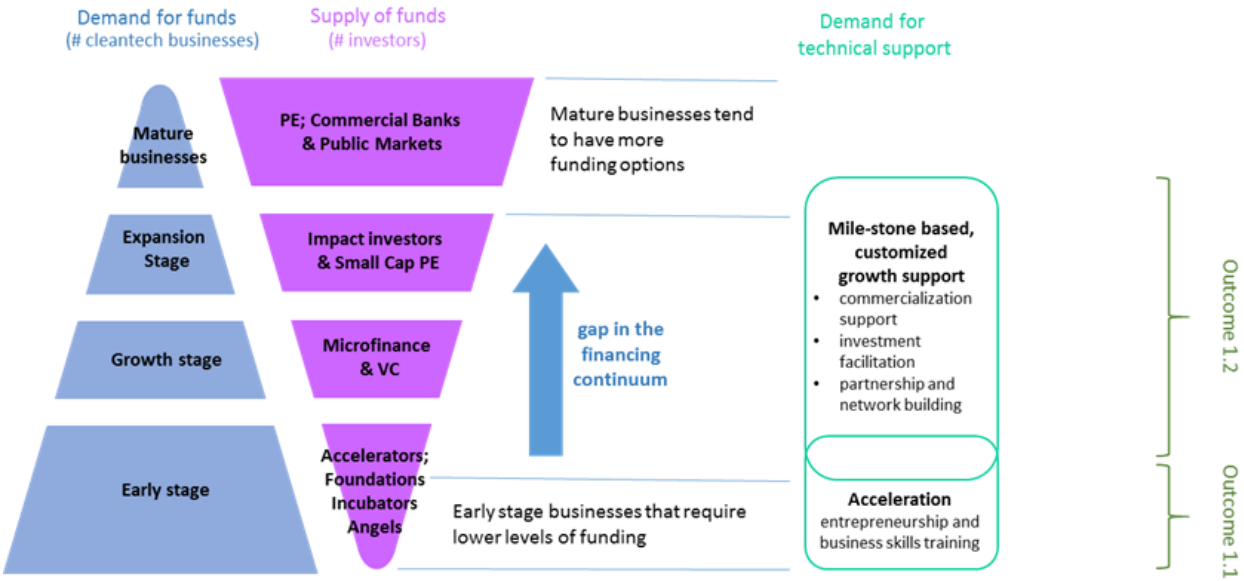


Figure 2: Demand for funds and technical support per enterprise development stage

49. Outcome 1.1 will focus on very early-stage innovative cleantech solutions and provide tools for, and acceleration support, related to entrepreneurship and business skills training (early stage SMEs). Outcome 1.2 provides targeted technical assistance and investment facilitation to the SMEs that were accelerated and have traction and sales evidence, but which still need specialized enterprise growth support. Criteria for whether an enterprise is eligible for support under the two outcomes will be developed under 1.1.1 at the beginning of the project.

Outcome 1.1 : Acceleration of early-stage cleantech innovations into enterprises

50. SMEs with early-stage cleantech innovations with high impact potential will be supported in transforming to become growth-stage enterprises through competition-based cleantech innovation and entrepreneurship accelerators. This component will provide the backbone for establishing national and global accelerators and advanced accelerators. Outcome 1.1 will be executed by NGIN.

Output 1.1.1 GCIP methodologies, guidelines, tools and training systems for cleantech innovation and entrepreneurship accelerators developed, applied and disseminated to GCIP partner countries

51. In line with the different stages of growth outlined above, support from GCIP falls into three categories on this continuum, depending on the country context: i) acceleration; ii) advanced acceleration; and iii) post-acceleration support. A brief overview of the three types of GCIP support is given Annex O.

52. The key challenge within the context of GCIP is to ensure that there are multiple points of intervention and appropriate tools and support available to fit all participating entrepreneurs across all ten countries. The greatest potential for GCIP overall lies in the provision of in-depth acceleration interventions for a broad range of participating SMEs with customization to fit the unique needs of a specific country, region or sector. Importantly, mechanisms must exist to identify teams with the greatest potential and provide tailored acceleration when they reach specific milestones.

53. Detailed eligibility criteria/milestones are defined for the three windows of support under GCIP to achieve the highest impact potential of GCIP interventions along the ?start-up to scale-up? journey of a cleantech enterprise. These include proof of concept, level of technology readiness (TRL), business and market readiness levels (BRL/MRL), market potential, proof of evidence of growth before, during and after participation in the GCIP accelerator, further growth potential, environmental and social impact potential[20][20], and effectiveness of environmental and social mitigation measures, among others. The criteria include appropriate definitions of SMEs. For each window of support, the criteria define the scope and required impact of the GCIP support and is in line with the needs and priorities of GEF-7 climate change focal area and the SDGs.

54. The type of intervention to achieve the highest impact potential should be tailored to the specific needs of each country according to the local conditions, strength of national innovation ecosystem and precise scope of each accelerator cycle. Therefore the first step in developing national accelerator programmes is to assess the current situation. GCIP tools developed are to be used by national PEEs to assess the strengths and weaknesses in the national innovation and entrepreneurship ecosystem, in particular of the potential accelerator applicants and participants (SMEs), of potential mentors, trainers and judges, of accelerator alumni and an assessment of the progress and key acceleration events for current GCIP cohorts and alumni. This is not intended to be an in-depth review of the whole ecosystem (which is included in the frameworks under Output 2.1.1) but a focused look at the areas where support is needed to identify the specific type of interventions that target these gaps/weaknesses, which in turn informs the design of the first year?s accelerators (and advanced accelerators). These assessment tools are documented within the guidelines for use national PEEs to conduct global and national accelerators (see below). The aim of this support is to enable the national accelerators meet the key targets for applicants, technology categories, mentors etc. Support is provided to national PEEs, on request[21][21], in years 1 & 2 on conducting the analysis and on the implementation of specific interventions to target the weaknesses within the i) potential accelerator participants (SMEs) and ii) potential mentors, trainers and judges. These include guidance on outreach strategies and communication, support for connecting to global GCIP alumni and mentor communities, support in building a national GCIP community and network, and guidance on addressing key gaps in the community and national innovation landscape.

55. A GCIP approach and methodology for designing and conducting acceleration, advanced acceleration and post-acceleration support will be developed in the first few months of the project, to ensure its use in the first cycle of GCIP accelerators. The two GCIP Guidebooks developed (GCIP Accelerator Guidebook, including pre-accelerator support, GCIP Advanced Accelerator and Post-Accelerator Guidebook) are comprehensive documents that articulate the GCIP approach and methodology for promoting early-stage cleantech innovation and entrepreneurship in developing countries. The guidebooks include practical tools and guidelines for operation and management of the accelerator and guidelines for attracting sponsorship. It also includes a schedule, eligibility requirements, selection, and identification criteria for the participants, competition rules, how to use the web-based tools , training curricula and material and handbooks for applicants, mentors, Entrepreneurs In Residences (EIRs) and judges. The guidebooks will be kept on a dedicated area of the GCIP website.

56. The GCIP Guidebooks are disseminated to each national child project for review and adaptation to the context of the respective national cleantech ecosystem, including market conditions, policy environment, development priorities, technology priorities, local examples etc[22][22]. Support is

provided to national PEEs, on request, to produce their localized guidebook and supporting training material, based on identified gaps and priorities.

57. The selection criteria for inclusion in the accelerators, once it meets the eligibility milestone criteria above, includes as a minimum: sector eligibility (GEF 7 CCM 4 priorities plus sustainable cities and food systems)[23][23], business growth potential (market size/scalability) and environmental impact potential (minimum threshold for GHG emission mitigation). Innovations that contribute to a circular economy are also be given priority. The level of innovation sought by the competition is specified during the development of the criteria.

58. The GCIP Accelerator (and advanced accelerator) Guidebooks developed include the training systems for cleantech innovation and entrepreneurship. This includes the methodologies, curriculum, content and training material for training innovators and entrepreneurs for each accelerator track (accelerator, advanced accelerator). Details of the modules and worksheets for the Accelerator are included in Annex O.

59. To accompany the training modules, guidelines are developed and disseminated to national trainers and experts (train-the-trainer guidance) on advanced acceleration, post-acceleration support and priority technology/industry sectors. When requested by the national PEE, the global curriculum and training content will be customized for national needs and priorities in 2021 and 2022. A GCIP system for analyzing the consistency and effectiveness of the global and national training activities will be developed.

60. Additional training support developed for advanced acceleration, post-acceleration and for priority technology and industry sectors is available. This virtual training support includes training modules (3-4 virtual training modules of 1-2 hours each) on advanced acceleration topics such as corporate partnerships, government relationships etc, and training modules (3-4 virtual training modules of 1-2 hours each) focused on alumni (post ?acceleration support) including international market entry, exits and acquisitions etc. In addition training modules (3-4 virtual training modules of 1-2 hours each) on priority areas for specific challenges or industry sectors are developed (eg. mobility, clean air, etc). Additional best practices on advanced acceleration, venture incubation and specific technology/industry sectors are circulated to all the national PEEs from leading international incubators, technology parks and venture investors (through membership of the Network for Global Innovation - see 1.2.2).

61. The national GCIP Accelerator guidebooks are used as an operations and management plan to conduct the annual Accelerator in the respective countries. Lessons learned and best practices from GCIP child countries are reflected, fed back and incorporated into and updated Guidebook as appropriate. A mechanism for feedback from the users of the tools (guidebook) is established on the website.

Output 1.1.2 GCIP methodology (gender responsive) for training and certifying cleantech innovation and entrepreneurship experts (trainers, mentors and judges) developed and disseminated to GCIP partners countries

62. Developing a pool of cleantech innovation and entrepreneurship experts to act as mentors, trainers, EIRs and judges[24][24] is critical to the effectiveness of accelerators in providing the right support to the participating teams. This is because the delivery of the accelerator curriculum and the connections facilitated with the right actors will depend on the capacity and networking of these experts. A pool of experts with the knowledge and connections to support cleantech innovations towards commercialization is also crucial to effective cleantech ecosystems. The community of experts trained/certified by GCIP are expected to positively influence the cleantech innovation initiatives at national and global levels, and will contribute to the strengthening of the cleantech innovation and entrepreneurship ecosystem in general. This contributes towards the sustainability of the GCIP and is part of the exit strategy.

63. In order to ensure coherence of approach and of quality among mentors, trainers and judges, a GCIP cleantech innovation and entrepreneurship expert training system will be developed for national trainers, mentors and judges. The training system includes the GCIP methodology, the training steps, methods of delivery and assessment appropriate to each type of national (and international) expert (trainers, mentors and judges). This includes specific support to foster the increased participation of GCIP alumni as experts. For each group of experts, methodologies and training material including a curriculum and content will be developed plus certification and exam requirements and designs set out which recognize and are adapted to all the GCIP partner countries. The experience from GCIP under GEF 5& 6 will be used to develop the material comparing lessons learned and what worked in the different GCIP countries. The methodology for training, training material and certifying will be kept on a dedicated area of the GCIP website.

64. Similar to the GCIP Accelerator Guidebook, the training system is disseminated to each GCIP partner country for review and adaptation to their national contexts, ensuring that the training

materials accurately reflect market, business, policy and investment climates. Support is provided to the national PEEs in training the national cleantech experts focussed on the first cycle of the accelerator with some follow-up support in the second year: training curriculum and material will be developed and delivered to the whole group of national PEEs to support them in the delivery of the GCIP training and support methodologies. Additional support is provided to the national PEEs, on request, on the production of localised guidebooks and training materials (excluding translation) and on integrating the GCIP certification with national needs, partner requirements and any existing certification processes.

65. A mechanism to enable an efficient feedback loop from certified GCIP experts to ensure continued enhancement of the training and certification activities will be developed. This will capture recommendations from experts gathered from on-line submissions, virtual 1:1 sessions and groups.

Output 1.1.3a Four cycles of the global cleantech innovation and entrepreneurship competition-based accelerator which mainstream gender and youth

66. Four cycles of a Global competition-based accelerators with multiple tracks (competition and challenge-based tracks) are conducted based on the guidebooks developed (see above section). A specific guidebook for the global accelerator will be developed, adapted from the generic GCIP guidebooks. This includes the methodology and guidelines for the global competition-based accelerators including:

- ? the development of categories, criteria, awards categories,
- ? global outreach and promotion guidelines
- ? sourcing global mentors and judges
- ? applicant review and selection
- ? global cohort training and support (virtual through online webinars / group mentoring sessions)
- ? judging of global cohort by GCIP category and industry challenge
- ? selection and promotion of GCIP global winners; and
- ? post accelerator support guidelines for all global participants.

67. The Global Accelerator supports innovations that have high scale-up and replication potential. In year one the focus is on more developed teams from each of the ten GCIP countries (including GCIP Global Category Winners/Finalists) and from year 2 the focus will expand to include

early-stage entrepreneurs from any country, with the provision that they have a focus on technologies for developing or emerging economy countries and have a partner in that country. An initial review of global innovation competitions/accelerators/challenges has been carried out to scope the global level innovation landscape. This research shows that the GCIP offer is different from other accelerators and incubators currently in operation. However further mapping to be carried out of the current landscape and of the greatest cleantech innovation gaps across industry sectors and countries that could be addressed by the global accelerators. This research will inform the future selection of categories, criteria and awards. Categories for the global accelerator are also determined in consideration of the GEF 7 priorities and those from all developing and emerging countries.

68. In addition, as part of the global accelerator categories, ?Global Sector and Innovation Challenges? are established from Year 2 to facilitate identification and development of demand-driven solutions that can address the most pressing climate change mitigation and sustainability challenges, as defined by key industrial sectors. This approach allows the market to ?pull? innovative solutions to very specific challenges, thereby increasing opportunities for direct market access. Examples of potential challenges could include energy-efficient refrigeration for the food processing sector or new energy storage technologies for the garment manufacturing sector. The main advantage of the challenge approach is that the identified innovations immediately secure clients and investment for their solutions, increasing efficiency and effectiveness in scale-up. To this end, partnerships with entities that can define and invest in the specific challenges are key for a challenge.

69. Key global innovation challenge evangelists, stakeholders and funding sources will be identified and the initial pilot challenges will be developed. The specifics of the challenges are defined in consultation with industry partners with the intention to invest in the identified solutions. Discussions are underway with Mitsubishi Heavy Industries and Kureha Corporation to design the Innovation Challenges to meet their corporate sustainability targets. Following the pilot, supporting collateral to secure funding and support form key stakeholders will be developed for the widespread expansion of the challenges to many countries (eg. 50+). Negotiations will be held with prospective corporate partners prior to review and due diligence by UNIDO. This component is especially instrumental in engaging private sector partners into GCIP, and facilitating interaction among innovators, private sector investment, and the market. GCIP has already used this approach in Pakistan where GCIP collaborated with industry on an innovation challenge to identify market ready solutions for the steel industry and manufacturing sectors. The guidelines for the innovation challenges (industry-led focused challenges) are included in the Guidebook developed.

70. Partners identified and secured are to assist in the execution of the global accelerator, including mentors and judges. The global child project identifies, trains and certifies a pool of international mentors, trainers and judges who are used in the global accelerators as well as in national child projects, where additional support is requested. The mentors and trainers are drawn from industry,

universities, and professional institutions, including business leaders. The panel of judges will have adequate expertise and knowledge in the potential technologies being assessed as well as independence and neutrality to the teams that are being evaluated. It is envisaged that 30 global expets are trained in three remote training sessions.

71. Four (annual) GCIP global multi-track competition-based/challenge accelerators will be conducted. The calls for applications will be designed and announced, and global outreach and promotion will publicise each GCIP accelerator. Alumni companies from all GCIP countries (including those supported under GEF 5 & 6) are welcome to participate in the global accelerators. The global project executing entity (global PEE) for the component coordinate with national PEEs in in-country promotion activities in the GCIP countries to solicit applications to the GCIP global accelerator. To further publicise the global competitions, information is disseminated through UNIDO?s national and regional offices as well as through the networks of NGIN, CTG and PFAN plus networks such as the Resource Efficiency and Cleaner Production Network (RECPnet), Global Network of Sustainable Energy Centres (GNSEC), related incubators and accelerators like Impact Hub so that it reaches out to as many countries and SMEs as possible.

72. It is expected that each global GCIP competition/challenge/accelerator has 100+ applicants with higher numbers of applicants expected in the later competitions (approx. 20 applicants per category in Year 1 up to 30 per category in Year 2). From these applicants, 25-30 semi-finalists are selected to receive support through the accelerator programme; 5-10 finalists will then be selected to receive further support as part of the accelerator programme and from these finalists, 3-5 winners and runners-up will be selected to participate in the annual GCIP Global Forum (see 1.1.4 below). The numbers of applicants, semi-finalists, finalists, winners and runners-up varies from year to year and category to category, depending on the number of technology categories to be covered, maturity of the organization team and prize categories available.

73. A real added value of the GCIP global programme is the ability to facilitate collaboration among country cohorts. Opportunities for cross-border virtual collaboration between GCIP finalists and entire cohorts are identified from the national accelerators and the global accelerator and collaboration facilitated. This facilitates learning and business opportunities across alumni. This is done through the creation of affinity/interest groups to spur integration and collaboration, support for self-directed introductions and the development of self-guided tools and directories to enable participating entrepreneurs to final potential collaborators with the GCIP community. Support for additional opportunities for GCIP participants to build cross-border virtual connections with partners in additional countries is also available through membership of the Network for Global Innovation.

Output 1.1.3b Support to national PEEs on running national accelerators

74. A general timeline will be developed to ensure that the cycles across the global accelerator and each GCIP country is aligned and can all feed into global level activities (online webinars, participation at the global forum, etc.).

75. A number of countries will need customized assistance in developing their pool of potential applications prior to the launch of the accelerator. This pre-accelerator support results in the development of an effective pipeline of suitable accelerator applicants and assists those entrepreneurs that would normally be too early for the accelerator and so would not meet the accelerator criteria. Support increases the ability to cover key innovation gaps, industry needs and support the transfer of university research. The target is for 20-25+ entrepreneurs per year to progress from the pre-accelerator to the accelerator (assuming 40-50% of each cohort intake and depending on country size). Support is provided to national PEEs, when requested, to assist in the delivery of in-country/virtual pre-accelerators. This is a 10-day pre-accelerator programme (7 days virtual/3 days in-person[25][25]) held each year 6-8 weeks prior to the accelerator deadline. Practical guidance to national PEEs on support for very early stage cleantech entrepreneurs is included.

76. Support is provided to all national PEEs in establishing and conducting the country accelerators by providing intensive assistance in the first cycle of the accelerator. This is followed by phasing out of support in the second cycle, when requested, with a view to fully capacitated national institutions by the third cycle/accelerator. The support includes the development and execution of a common annual webinar training series for all national accelerator participants in the 10 country accelerators. The global training webinars are also used as a platform for cross-border interaction between GCIP cohorts, an immediate response to key questions and a mechanism to continuously solicit feedback and comments from participants.

77. Additional support is needs based so will differ between countries but includes help in facilitated initial national academies and the development of participating national teams. This includes a 4-day national academy per country with associated training of national staff, mentors and trainers[26][26]. Support is given on the development and delivery of the national academies and training, observation and assessment of national trainers and mentors carried out. For new GCIP countries support is focused on assisting national trainers and national PEEs, and for established GCIP countries the focus would be on support, observation and assessment of trainers and mentors.

78. In addition country specific virtual training and support for alumni innovators and entrepreneurs, based on stage of maturity and size of the alumni community, is available for countries on request. Training content will leverage global best practices but focus on the specific needs and interests of the national alumni community. Each training is 1-hour long and key parameters are tracked (such as attendance, attentiveness, questions). To increase and continue engagement from alumni, alumni training modules and/or ?office hours? with global EIRs (entrepreneurs-in-residence) are customized.

79. Additional support is available to the national PEEs for additional training of national trainers, mentors and judges specifically to address identified gaps and needs within the national accelerator and broader ecosystem. This is delivered as in-country workshops or on-line training depending on the request from the national PEE. This is an important aspect of a sustainability strategy post GEF support.

80. A ?help-line? set up for queries from all national PEEs and cleantech experts responds to urgent queries on accelerator operations and troubleshooting. This provides capacity for urgent questions on an as-needed basis through a combination of online tools (wiki, forums etc.) and easy escalation to a live call or chat with a global PEE team member experienced with GCIP accelerator operations and methodologies. A knowledge base (FAQ) based on the key questions and answers will be developed.

Output 1.1.4 Four global innovation and entrepreneurship forums to showcase GCIP enterprises and link to investors organized

81. An annual GCIP Forum is designed and organized to showcase GCIP enterprises and to link them to investment opportunities. It is an integral part of ecosystem connectivity. The GCIP Forum brings selected finalists of the global and national accelerators together for recognition and awards, and for opportunities to be connected with potential partners, customers, technology scouts and investors from around the world. This provides GCIP alumni enterprises with exposure to the global community, and the opportunity to forge new partnerships for co-innovations and joint ventures. The GCIP Forum is further a culmination of innovation showcasing, investment matching, and networking among national GCIP counterpart institutions, and will continue to be an important annual milestone for networking, advocacy, and knowledge exchange among cleantech innovation ecosystem players. The Global forum is held as a dedicated virtual event or a side event at an existing industry forum such as the UNFCCC COP, UN Climate Summit, Vienna Energy Forum and cleantech forums organized by

partners such as Cleantech Group, Cleantech Scandinavia etc. The format of GCIP Global Forums will carefully considers opportunities to maximize attendance from all GCIP countries and the impact of the COVID pandemic(s). The tasks anticipated to conduct the four GCIP global forum are included in Annex P.

82. Guidance is available to national PEEs, on request, on GCIP national forums and integration with the annual global forum, including themes and private sector participation. This includes guidance on the successful execution of the National GCIP forum.

A summary of all the activities under Outcome 1.1, and the responsibilities for delivery, is included in Annex P.

Outcome 1.2 : Targeted business growth support and investment facilitation services provided to growth-stage cleantech SMEs to commercialize

83. Upon completing the GCIP accelerator, supported SMEs are expected to continue growing their business and move into the traction, growth and expansion stages. However, they will continue to face very weak and generally hostile innovation and entrepreneurship ecosystems where there is limited or no access to systematic support services. Experience from GCIP to date showed that after successful completion of the GCIP Accelerator, SMEs required further targeted and specialized support in areas that include intellectual property (IP), enterprise development, access to appropriate finance to sufficiently mature and penetrate the market.

84. Therefore a select number of cleantech enterprises who have successfully completed the GCIP Accelerator (GCIP alumni) and have shown significant traction will receive targeted and specialized advanced commercialization support and investment facilitation services (see figure 2 above). Extensive consultation is envisaged to take place as part of the selection process. Support is not be limited to winners of the Accelerator, but is also provided to all GCIP alumni which meet the selection criteria/benchmarks (developed in 1.1.1).

85. The support required towards full commercialization can be categorized into four related, but not necessarily linear dimensions: business and management readiness, investment readiness, market readiness, and technology (product) readiness. The support to be provided is underpinned by the partnerships with CTG and NGIN which facilitate access to the relevant technical institutes or universities to, say, test a product or to the appropriate advisors who are experts on IP. Advanced and Post-acceleration support is a cost-effective way to directly support and monitor growth of GCIP

alumni enterprises. It has the added advantage of removing the overemphasis on the competition aspect of the Accelerator, and allows all semi-finalists to focus on the added value and benefits of the entire GCIP accelerator process.

Output 1.2.1 Enterprises in the growth and expansion stage mobilize investment after receiving investment facilitation support

86. Mobilising investment for cleantech products and services is a lengthy and iterative process. Therefore, GCIP alumni enterprises with high replication and scaling up potential will benefit from investment facilitation support. At the global child project level, GCIP is partnering with PFAN (REEEP) to provide investment facilitation services to alumni coming from both national and global accelerators. Building on the success of PFAN (REEEP)?s pilot under GCIP under GEF 5 & 6, GCIP alumni will be eligible to apply to PFAN (REEEP) through an open-ended application[27][27]. Alumni who are successful receive support through PFAN (REEEP) to raise finance with local and/or global investors. By working with PFAN (REEEP) , GCIP alumni are supported to scale-up their operations and reduce more GHG emissions. Output 1.2.1 will be executed by PFAN (REEEP). The following activities are envisaged in providing this investment facilitation support:

87. Establishment of GCIP alumni criteria for applying to PFAN (REEEP) . Working with NGIN which is developing criteria and guidebooks under Output 1.1.1, criteria will be developed for potential GCIP alumni and the details of support available finalized. The mode of application for GCIP alumni is through the open-ended application form available on the PFAN (REEEP) website. In the first year of the intervention, post-acceleration support by PFAN (REEEP) is targeting the graduates from previous GCIP accelerator editions.[28][28]

88. Outreach and awareness raising. As GCIP supported companies near the end of their acceleration or advanced acceleration support they are made aware of the post-acceleration support available. This is directly through an information campaign, mail outs or global webinars which set out the services available, the criteria to access the services and how to apply. Gender mainstreaming is ensured by conducting specific outreach to promote GCIP-PFAN (REEEP) services and ensure that calls for proposals are inclusive and encompass women?s organizations and associations and women entrepreneurship programmes. Consideration for a targeted call for proposals for gender dimension will be given, eg. for businesses owned by women entrepreneurs or that predominantly benefit women.

89. GCIP alumni selection. Application to GCIP post-accelerator support is by submission of a proposal that is subjected to a rigorous evaluation of value proposition, market and regulatory analysis, the experience and credibility of management, technical and commercial viability, environmental and socio-economic benefits, as well as maturity of the business. These are set out in the criteria/benchmarks developed above. The main focus is on businesses which require total (initial) capital in the range of USD 1 - 50 million (or any currency equivalent). There is no formal limit, PFAN (REEEP) activities also cover micro-businesses (under USD 1 million) and larger businesses (over USD 50 million). Applications are made on a rolling basis. An evaluation team assesses the applications (by region or theme) and the PFAN (REEEP) Technical Committee makes the final decision based on the recommendation for offering or declining GCIP-PFAN (REEEP) support to the GCIP alumni. SMEs approved by the PFAN (REEEP) Technical Committee are admitted to the PFAN (REEEP) pipeline for assignment of advisors and receipt of support. The Technical Committee consists of UNIDO and REEEP representatives, the PFAN (REEEP) Global Coordinator, and technical experts as needed.

90. Advanced business support. All businesses admitted to the PFAN (REEEP) pipeline are assigned a designated PFAN (REEEP) advisor to provide targeted PFAN (REEEP) services. The PFAN (REEEP) advisors are selected based on the expertise, knowledge and experience in mentoring, business evaluation, cash flow analysis, and financial structuring, as well as geographic proximity, regional and country specific experience, sectoral and technology expertise, and the specific needs of the business (e.g. for specific advice and support in the area of cash flow development etc.), as well as language requirements. At the stage of graduating from the GCIP accelerators, the SMEs are expected to already have gained some business acumen. Therefore, it is presumed that the business development support provided by PFAN (REEEP) advisors will be advancing their knowledge and skills, i.e. it encompasses:

- ? Optimising the business model and the financing structure of the enterprise, advising on milestones to be achieved before meeting with investors;
- ? Supporting the entrepreneur to improve the business plan and financial model, ensuring consistency and reliability with respect to risk analysis, assumptions and financing strategy;
- ? Assisting the entrepreneur in producing high quality financial models, cash flow projections and financial outputs and indicators, which reflect their investment ask;
- ? Providing inputs, guidelines and advice on valuation for equity investment and (interest rate) pricing for debt financing; assessing if the entrepreneur is ready to meet with investors, and if so, research what types of investors would be targeted;
- ? Supporting the entrepreneur in preparing a draft investor presentation, and as applicable, rehearsing to a panel.

? Where considered necessary specific capacity building training for women is delivered.

91. Capacity building/enterprise development workshops are conceived as an important business/project development tool during the post-acceleration journey. Some of these events are organised in close cooperation with selected local partners (government agencies, other programmes active in the cleantech space as well as local and international banks). The workshops are designed based on standard PFAN (REEEP) curriculum for project development and include modules on investment structure, preparation of the business plan and related documents, targeting investment and investors, the investment process, negotiation and documentation and preparation of investment pitches as well as integrating the gender dimension in the business to enhance access to finance and increase new business opportunities.

92. The objective of the workshops is to provide coaching support in a group / peer environment, thereby supplementing and supporting the core PFAN (REEEP) one-to-one coaching activity. The curricula for the workshops are built on tried and tested curricular.

93. Attracting new investors through outreach and awareness raising. The raising of awareness of investors related to GCIP alumni is essential to strengthening and expanding the network of investors, support investment match making and to contribute to sustainability. This activity builds on the activities described in section d) and introduces new investors to the GCIP and PFAN (REEEP) networks and promotes and introduces the GCIP alumni pipeline receiving GCIP PFAN (REEEP) support to potential investors. This activity includes notably, the following activities:

? Producing GCIP-PFAN (REEEP) promotional materials in close coordination with UNIDO and all GCIP PEEs;

? Circulating information on PFAN (REEEP) services and opportunities to investors;

? Organizing and implementing investor events and road shows and 1-1 investor introductions as appropriate in selected cities in cooperation with strategic partners;

? Supporting the regional and global coordinator on preparation and conducting awareness raising activities and events for investors;

? Identifying potential Investment Partners.

? Facilitating a staged process of project review and technical assistance designed to assist project developers access private sector financing by introducing projects to investors;

? Contact brokering and introductions to financing sources;

? Deal facilitation and deal support to smooth investor negotiations and due diligence;

94. Potential investors include development financing institutions (DFIs), philanthropic organizations, family offices, impact investors, corporate social responsibility (CSR) investors, private equity and venture capital funds, as well as strategic and industrial investors and commercial banks and other similar financial institutions.

95. Investment facilitation support to the entrepreneurs, including:

? Ensuring the entrepreneur is ready for investor introduction including the finalisation of necessary documents

? Preparing the entrepreneurs to pitch to investors;

? Facilitating and supporting them with investor introductions;

? Guiding selected projects towards financial closing and identifying potential financial resources for selected projects.

? Deal facilitation and deal support to smooth negotiations and due diligence, negotiating an investment commitment to reach financial closure;

? Advice on structuring the investment transaction and providing inputs, guidance, and advice on valuation for equity investment and interest rate pricing for debt financing;

? Providing entrepreneur with guidance on the next steps to be pursued and met to be successful.

96. Identification and development of project portfolios for wholesale investment through capital markets. This activity contributes to PFAN (REEEP) ?s portfolio securitisation approach. The basic idea is to group a number of SMEs in portfolios to create bundled assets which will generate predictable cash flows over a certain period of time. SMEs are bundled / grouped in a number of ways (by technology, by geography, by risk, or by a combination of these factors in a matrix approach ? probably the most likely) and it is usual to create a number of different asset classes with different risk profiles, ratings and return levels within a single instrument. Investors can then choose what level of risk they are prepared to accept and which return they expect.

97. Development and promotion of local ecosystems for the provision of financing and financing services (through the support and training of local service providers). Training workshops will be conducted for local financial experts, including brief presentations on PFAN (REEEP) , its project development journey and coaching process. Selected experts are trained and may become future PFAN (REEEP) advisors, and are provided with project sourcing and investment facilitation skills and tools. The goal of this activity is also to facilitate cross-fertilization between GCIP and PFAN (REEEP) , in that current PFAN (REEEP) advisors support the training of experts (trainers, judges, and mentors) selected by GCIP on the one hand, and GCIP-selected experts might be later on invited to join PFAN (REEEP) as new advisors on the other hand.

98. Knowledge management, market intelligence and learning involves gathering and processing of enterprise data with support of a project management tool. In particular, lessons learned, recommendations, success stories, and case studies should be provided.

99. GCIP-PFAN (REEEP) Network development. This activity involves the operation, maintenance and expansion of the GCIP-PFAN (REEEP) networks, notably by identifying, cultivating, cooperating and managing the relationships with Network Partners in the targeted countries.

100. Beyond PFAN (REEEP) , GCIP will also explore targeted investment/financing vehicles at global levels, and select and connect GCIP alumni as appropriate. Cleantech Group will also reviews accelerator finalists for eligibility in Cleantech Group events, select SMEs are featured in Cleantech Group startup showcase, or invited to speak at Cleantech Interactive and Cleantech Forum events. UNIDO also targets partnerships with impact investors such as the Global Innovation Fund[29][29] and other global cleantech innovation funds that are operational or are being designed.

101. For those not selected for support, GCIP alumni are guided to training offered in the market by PFAN (REEEP) Partners and/or on-line to assist them in approaching financiers and leveraging finance. Specific or sector advice is provided by mentors.

Output 1.2.2 Mentorship and partnership support provided to cleantech enterprises for cross-border market expansion, including promotion of gender equality and the empowerment of women

102. Many GCIP supported cleantech innovations have potential for replication in other developing countries. Based on requests received from GCIP alumni enterprises, the global child

project facilitates the assignment of international mentors in the target country of expansion to facilitate building of connections and networks for expansion into a new market. The service is offered through this global child project, with support from national child projects in identifying a suitable mentor with the appropriate expertise. As a cross cutting output, which requires coordination between the global executing entities, alumni and cross border networks, UNIDO will execute this output as part of its coordination function in the programme.

103. Each child project automatically receives membership of the Network for Global Innovation for the duration of the project. This provides the NPEE and GCIP participants with access to international best practices on advanced acceleration, venture incubation and specific technology/industry sectors from leading international incubators, technology parks and venture investors and provide opportunities for GCIP participants to build cross-border virtual connections with partners in additional countries.

104. In addition, enterprises are given curated peer networking opportunities with other GCIP enterprises, as well as cleantech enterprises within UNIDO?s partner network. GCIP enterprises can make requests for the peer-networking through their national child project PEE which forwards the request on to the global child project. Through peer networking, the enterprises explore opportunities for technology collaboration, product co-development and joint venture for market expansion in a business-to-business to context.

105. Matchmaking services for GCIP alumni enterprises are provided with interested corporations, investors, governments on an ad-hoc basis as opportunities arise. Partnerships with corporations are to be formed to connect GCIP alumni with other cleantech companies with the aim to create joint venture and co-innovation opportunities across borders, to facilitate market expansion and product co-development. With a global mandate the global child project (through NGIN, CTG, PFAN (REEEP) and UNIDO) is in a very good position to facilitate this. 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. This pilot is expanded under this project.

106. To further improve opportunities for investors and partnerships for GCIP, GCIP?s presence at key global investor/partner networking events including PFAN (REEEP) investment forums, UNFCCC meetings, GEF meetings is coordinated and facilitated. Furthermore, opportunities to showcase cleantech innovations and solutions at these high-level national and international events, such as the UN Climate Summit, UNFCCC Conference of Parties, Vienna Energy Forum, etc., are provided to GCIP alumni (in addition to the GCIP Forum). Such high-profile events are instrumental

for GCIP alumni companies to build their global presence and extend their partnerships and networks. As mentioned above, GCIP finalist companies from the accelerator programme in Component 1 are reviewed by NGIN and CTG and where they believe there may be interested partners (in addition to investors) in their networks the selected companies will be featured in the NGIN and CTG database and programming. In select cases, this results for example in participation in the Cleantech Group global events / SME showcases such as the Cleantech Forum and Cleantech Interactive. To maximize the visibility of GCIP as a programme, and to increase the visibility and credibility of GCIP alumni, partnerships will be established and leveraged on a continuous basis. This allows GCIP to be fully connected to other technology innovation related initiatives, and to contribute to the wider discourse on how cleantech innovation ecosystems can best be leveraged to offer transformative environmental solutions in the market.

A summary of all the activities under Outcome 1.2, and the responsibilities for delivery, is included in Annex P.

Component 2: Cleantech innovation and entrepreneurship ecosystems strengthening and connectivity

Outcome 2.1: Cleantech innovation and entrepreneurship ecosystems strengthened and networked

107. This component is key to the overall GCIP programme with cross-cutting activities designed to maximize the impact of GCIP by strengthening national cleantech ecosystems of GCIP partner countries, identifying synergies across national ecosystems, and connecting ecosystems for knowledge exchange and partnership building. This component is executed by CTG.

Output 2.1.1 GCIP tools and guidelines for national capacity building for technology innovation and entrepreneurship institutions, industry associations and business platforms developed and disseminated

108. Guidelines and tools for strengthening national cleantech ecosystems will be developed and disseminated to the national PEEs. This includes recommendations for enhancing capacity of national institutions to support cleantech innovation and entrepreneurship, and a set of tools such as a framework for cleantech ecosystem mapping and analysis (a cleantech innovation and entrepreneurship ecosystem (CIEE) assessment framework), strategies for facilitating meaningful interaction and collaboration among ecosystem players, and training and awareness raising material.

109. A global cleantech innovation capacity building framework will be developed as a tool to analyse the strengths and weaknesses of a country?s cleantech innovation ecosystem. This is based on

primary and secondary research and build on work already carried out by UNIDO in South Africa and includes mechanisms to incorporate the work of other assessments. For example, in many cases a country might already have an assessment of the general entrepreneurship ecosystem or of support for cleantech but there is nothing that covers all aspects of cleantech innovation and entrepreneurship together. The tool will be easy to use and provided with guidelines. One global framework and capacity building framework workshop will be delivered in the first year and reviewed and updated in Year 3.

110. Once finalized the capacity building framework will be disseminated (directly and via the GCIP Website) to national child projects for their use. This is instrumental in identifying the capacity building needs and optimal set of interventions for each country. The aim is to ensure that national ecosystem players are supported to understand and contribute in their roles as part of the ecosystem, and that they have the capacity to continue promoting national cleantech innovations and enterprises towards commercialization beyond GCIP. Where requested by the national PEE, the global child project also provides support to national child projects on the assessment?s application and use. In assessing the ecosystem a kick-off workshop with national stakeholders is held to support mapping the existing ecosystems.

111. Further recommendations and framework modalities for fostering cleantech innovation and leveraging cleantech innovation for economic growth at national and global levels will be developed and disseminated to the national PEEs. Frameworks include strategies for cleantech innovation ecosystem strengthening through:

? A global framework for stakeholder engagement is a comprehensive framework with modules for engaging key stakeholder categories (enterprise, policy, capital, research). Work commences with a kick-off stakeholder engagement workshop to identify stakeholder groups and with a focus on identifying resources, engaging key personnel and enhancing advantages. Strategies for facilitating meaningful interaction and collaboration among ecosystem players and associated training materials (e.g. framework modalities for engaging with private sector partners) are developed. The work also includes the results of the benchmarking (see component 2.1.2 & 2.1.3) with relevant findings and applications to stakeholder groups identified. A follow-up workshop for discussion on the implementation of the framework is also be held.

? A global cleantech innovation cluster development framework will be developed with the critical steps and components outlined, KPIs/targets set and methods for analysing local capabilities and value-addition will be identified. Existing and potential clusters are identified. Accompanying the framework a workshop on cleantech innovation clusters is delivered including training on best practices for cleantech innovation cluster development and steps to transitioning regional advantages to national benefits.

? Complementary policy frameworks to be delivered through the activities are outlined in component 2.1.2.

112. Each framework outlined is to be developed through both secondary and primary research, with primary research consisting of questionnaires for global and national participants and interviews with global leaders in cleantech innovation and cleantech innovation policy. Framework delivery is accompanied by workshops for engagement with global participants and national PEEs.

113. The global child project will also develop generic training and awareness raising material which can then be adapted for use at the country level for national institutions, industry associations and business platforms on how to support cleantech innovations. Since the status and knowledge of ecosystem players in each country varies enormously, the training material is not be prescriptive but provides the framework on which the country child project can develop its own training and awareness raising programmes. A training workshop on how to use the frameworks for implementation will be held for global and national stakeholders which ties together the drivers, stakeholders, capacity building and policy.

114. Support to national PEEs on ecosystem building includes the following, depending on the country?s specific requirements and requests:

? Capacity analysis ? mapping of the existing national ecosystem and identifying gaps between the global framework and national needs/capacity by carrying out a capacity building kick-off workshop setting goals, prioritizing market areas, data/interviews and alignment with priorities.

? A national cleantech Stakeholder Engagement framework based on success factors identified in research and tailored to local conditions and identifying key stakeholders in entrepreneurship, enterprise, capital, policy and research. Interviews and data analysis carried out and accompanied by a National cleantech Stakeholder Engagement Workshop and a follow-up workshop for training up to 15 national facilitators (>35% women) on implementing stakeholder engagement strategies at the national level and across stakeholder groups.

? National cleantech innovation cluster[30][30] (key regions and cities) execution framework including: primary and secondary research, evaluating cleantech innovation clusters in comparable countries; interviews with in-country innovators and experts; and qualitative analysis of innovation resources and potential for 'traded' value; alignment

with local strengths; and a national cleantech Innovations Cluster workshop training up to 15 national facilitators (>35% women). Key output will be a national cleantech innovation cluster execution framework document.

115. Support to national PEEs on global engagement includes the following, where requested from the national PEE:

- ? A national ecosystem global Engagement Strategy Framework for the country including a comprehensive gap analysis based on information gathered during stakeholder and policy evaluations and a global engagement strategy workshop with in-country stakeholders to determine strategy on engaging international bodies and multilateral organizations for growth.

- ? A global synergies strategy framework document will be developed to support GCIP countries in creating formal cooperation models to engage outside partners to increase traded value of innovation and create more access to resources for GCIP country innovators. This includes a gap analysis, resource needs identification and suggested cleantech innovation programmes, innovation clusters and associations globally with which the country could engage. An associated workshop is also held.

- ? National alignment with global ecosystem assessment reviewing attractiveness of ecosystem and including a global alignment workshop.

- ? A global long-term corporate engagement strategy including modular strategies with repeatable mechanisms for long-term autonomy of the national teams and creating a roadmap for engaging and attracting private companies to GCIP country.

116. Best practices and success factors uncovered during the national-level training and implementation is recorded and included in the second iteration (in year 3 of the global-level frameworks) for streamlined information flow and iteration of global strategies according to programme evidence.

117. The frameworks and workshops are to be delivered in year 1. An optional 2nd-level ?health check? is available for participating national PEEs to re-engage for increased support later in the programme. The 2nd level services on offer for the national PEEs include:

- ? National Cleantech Innovation Health Check Workshop: Hold workshop with national stakeholders who participated in the first level of national programmes to understand results since implementation.

? Updated National Cleantech Capacity Building framework: Identify gaps in the previous programme and its implementation, compare to developments in similar countries elsewhere in the GCIP programme and in the global ecosystem; and based on new findings from the workshop and subsequent research, create new framework for changes to strategy.

118. In the final year a global evaluation will be carried out to evaluate the attractiveness of GCIP countries? cleantech ecosystems to outsiders and to evaluate the improvements in ecosystems and companies in target countries. This includes establishing an understanding of where the programme has helped innovators and stakeholders in the GCIP countries to achieve ambitions and where more work should be done. A comprehensive profile of each GCIP country's cleantech innovation ecosystem and of the programme nexus as a whole will be created to select corporates for long-term partnerships. A formal global corporate call to partnership proposal will be created tailored to the ten countries. A final programme review report will be developed to summarize learning on the ecosystem strengthening and will provide suggestions for future work.

Output 2.1.2 Policy recommendations and strategies (gender responsive) for cleantech innovation and entrepreneurship developed and disseminated at national and global levels

119. Policy remains a key influencer of cleantech market and investment behaviour. The GCIP global child project will develop, document and disseminate policy best practices, roadmaps and recommendations for cleantech promotion to all GCIP countries. It involves surveying and documenting success stories on how policy and regulatory measures are used to stimulate and sustain cleantech innovations and support their commercialization. Policy frameworks (including translatable policy recommendations and strategies) are built from research and analysis into policy frameworks that have facilitated success globally, including primary research and interviews with policymakers in countries with comparable conditions to those in the GCIP national participant countries.

120. At the project start, benchmarking of GCIP countries versus global best practices and norms will be carried out. GCIP questionnaires will be developed and distributed to innovators during the application process of the Component 1 accelerators. Standards for evaluation and benchmarking and comparable countries identified. The output is a cleantech innovation policy strategy framework baseline which includes climate transition model outputs and a high-level overview of GCIP countries' status with regard to climate readiness transitioning, using publicly-available data and rendered through climate modeling software; and an overview of emissions, solutions, indicators as well as policies and commitments to identify starting point policies.

121. Building on the baseline a global cleantech innovation policy strategy will be developed in year 1 along with a global cleantech innovation policy framework workshop focusing on training on global trends and key enabling policies plus a high level comparison with GCIP country policies. The policy frameworks are finalized based on learnings, suggestions and feedback from the national PEEs and partner networks on policy changes and influences on the ability of innovators to grow. In Year 3 this strategy will be reviewed and a cleantech innovation policy strategy gap analysis developed accompanied with a cleantech innovation policy strategy gap analysis workshop.

122. Support is also be provided to national PEEs in contextualizing and adapting policy tools to national contexts to strengthen their national policy frameworks. A national cleantech innovation policy localization framework document will be developed for each country along with a workshop on policy localization. The work looks to build off the global policy exercises to create baseline assumptions at the national level and highlights opportunities for improvement, supported by examples from case studies and observed best practices. A framework for translating the global findings into best practices for national actions will be developed, along with KPIs being suggested for any additional details. Any policies that are inhibiting innovation are also be identified.

123. Further specific support is available to the national PEEs, on request. This includes assisting in producing national policy recommendations and tools:

- a national cleantech innovation policy framework baseline based on success cases in comparable countries found during research and tailored to local conditions; this includes a framework as well as a climate transition model and policy analysis. Work includes evaluation of current capacity, prioritising market areas of focus plus primary and secondary research, and interviews with national stakeholders.

- National women and youth empowerment framework includes research into national-level women and youth opportunities in the cleantech sectors.

- delivery of a national framework for long-term cleantech innovation policy, and workshop, that facilitates further development of the country's innovators and innovation clusters. Includes gap analysis, identifying areas if missed opportunities due to policy gaps and a suggested roadmap provided, based on observations gained during the GCIP programme.

124. Policy best practices are also be captured in the GCIP Innovation Index reports (as outlined in section 2.1.3 below), and national-level progress and lessons learned on policy issues will be recorded and reported on at the global level in the annual advisory board updates and will be made available on the GCIP website. Mechanisms for information sharing between the national PEEs will be

established on the GCIP website in order to record and report real-time measures being implemented during the course of the GCIP programme.

125. Where requested by national PEEs, support is provided to develop templates for gender baseline studies and gender and youth mainstreaming strategies and action plans. The template will provide a framework for the country child projects to develop their own studies, strategies and action plans. Primary and secondary research in Year 1 will be carried out into best practices and success factors for gender and youth mainstreaming. Based on this and previous experience they will also include a number of examples and suggestions for targeted interventions that promote gender equality and to enhance participation of women and youth in the cleantech sector which the child projects can select and adapt for the national circumstances.

126. Policy frameworks and workshops are expected to be delivered in year 1, in tandem with the development of the innovation ecosystem strategies (in 2.1.1). An optional 2nd-level ?health check? will be available for participating national PEEs to re-engage for increased support later in the programme. The 2nd level services on offer for the national PEEs are linked to those in output 2.1.1 and include:

127. National Cleantech Innovation Policy Health Check: Policy-related topics are covered in the health check kick-off workshop (see 2.1.1), additional research will be conducted to understand each country's progress on policy measures and standing vs similar countries; and based on new findings in the kick-off workshop and subsequent research, create new framework for improved policy-making.

Output 2.1.3 Knowledge creation, exchange and dissemination across GCIP countries to promote learning

128. Emergence of a cleantech sector requires convergence of technical knowledge, understanding of policy, market and financial environments, as well as business savvy and entrepreneurial skills. As it is an emerging sector, knowledge and capacities of individuals or single institutions are often not sufficient to translate into market success. Therefore knowledge creation, exchange and dissemination are especially important in strengthening the cleantech ecosystems of developing countries.

129. The global child project serves as a coordination platform (via the website especially) to create, capture and disseminate the knowledge created from all GCIP activities. At child project level,

knowledge is captured through products such as policy briefs, reviews, impact reports, brochures, webinars, and other types of promotional materials for effective communication tailored for each segment of the ecosystem, and to influence thinking and decision making processes around cleantech at national and global levels. In addition, this allows the GCIP global child project to play a key role in connecting innovation ecosystems of different developing and emerging countries to the global innovation ecosystem, and to facilitate and contribute to community of practice in this space. In particular, when requested by the national PEE, a global investment outlook briefing for GCIP country innovators will be delivered to the country including insights on global trends relevant to the national priority sectors programme (>= 30% women innovators included in briefing).

130. The global child project identifies synergies between national innovation ecosystems and facilitate collaboration, exchange and learning among the countries. Networking among national ecosystems of GCIP partner countries allows national ecosystems to become part of a larger global innovation ecosystem. Another key output is the establishment of a global alumni network linking both national and global alumni. This will be established on the website and curated by the global child project. Linked to both networks above, a Community of Practice in cleantech innovation is facilitated for the national ecosystem

131. The wealth of information and insights collected through GCIP activities will be translated into knowledge products that reflect the technology and investment trends, and inform and influence the international discourse on policy and investment decisions for cleantech innovation. One such product is the GCIP Innovation Index (GCIP II), which will be published twice during the duration of the GCIP programme to share knowledge on the innovation ecosystems in GCIP countries. Innovation indices are tailored to the GCIP programme, taking into account only trends that are priority to the GCIP programme and its affiliated member countries. Each Child project are tasked with collecting data and developing indicators for the index in each country as GCIP Country Profiles. The global child project is responsible for collecting, synthesizing of all the indicators and developing the index, the publication and dissemination of the report globally. The report becomes a policy tool for GCIP partner country governments and provides value addition as well as helping to contribute to creating an enabling environment for cleantech innovation.

132. One market trends analysis will be developed (in year 2), to be disseminated through the GCIP online portal. Updates and evaluation on policy and capacity progress across the GCIP programme will be provided to the advisory board annually. An Experts Group Meeting will be organised to provide guidance to the board for the second half of the GCIP programme responding to the policy and capacity results from Years 1 and 2.

A summary of all the activities under Outcome 2, and the responsibilities for delivery, is included in Annex P.

Component 3: Programme coordination and coherence ? Strategic guidance for efficiency and effectiveness in achieving impact among GCIP countries

133. This component is a core value addition of the global programme; through its facilitation of enhanced coherence and coordination. The activities ensure that the successes and achievements of GCIP are captured and communicated globally so that GCIP is leading and contributing to the global cleantech ecosystem. Coherence and standards in the execution of GCIP country child projects will be developed which, along with networking, and benefits GCIP national executing entities. The activities within this component are necessarily interlinked.

Outcome 3.1: Standards and programmatic coherence to improve efficiency and sustainability of GCIP interventions

Output 3.1.1 Programme level internal guidelines and standards developed and implemented for programmatic coherence across countries

134. In order to maintain coherence and standards of GCIP execution across multiple countries, GCIP internal guidelines will be developed under this global child project and disseminated as a tool for national child projects. The internal guidelines include, inter alia:

- ? Introduction to the GCIP programme
- ? Organisational roles in the global programme
- ? Global Advisory Board and Project Steering Committees
- ? Communication channels with the global PEEs
- ? Support available from the global child project
- ? Using the GCIP web platform (see 3.1.3)
- ? Gender sensitization and mainstreaming in GCIP
- ? Environmental and social management
- ? Risk management
- ? Data protection
- ? Stakeholder engagement

? Impact monitoring (see 3.2)

? M&E and reporting requirements

? Branding and marketing of GCIP

? FAQs

135. Collective (International) training for national PEEs is an important channel for programmatic coherence across partner countries, and therefore in addition to on-line on-going support, national PEEs will be brought together at least once a year to discuss the GCIP guidelines, approach and methodologies, and share experiences and insights. The initial global workshop will train and advise the national PEEs on all the elements in the guidelines and includes a gender sensitization workshop session. Support is provided in contextualizing the guidelines at national levels (in consideration of policy framework, market conditions, business environment, language etc).

136. In addition, GCIP sustainability and exit strategies for the global and national accelerators, and ecosystems more generally, will be developed in the first year of implementation for review and adaptation by each GCIP partner country by the beginning of year 2. Developed in consultation with all global PEES it takes the form of guidelines on how to prepare a strategy with clear steps (assessment of situation, roles required, selection of organisations/funders, capacity requirements, stakeholder consultation etc) plus checklists to complete. A GCIP global model will be developed which outlines the implementation arrangements, activities and funding mechanisms for the GCIP global project beyond GEF funding. This also includes significant input from Component 1 and discussions with potential partners for the acceleration and post-acceleration support. Levels of collaboration and needs required by the national projects in the future are to be discussed. Many of the national projects with smaller budgets aim to complete the GEF funded activities in less than five years whereas the global child project is five years long so it has the opportunity to support the transference of the national projects to new funders and to learn from them. Discussions will start early with potential funders so that there is a seamless transition.

Output 3.1.2 Programme level, communication and advocacy strategy developed and implemented across GCIP countries (gender responsive)

137. Past experience has shown that exchange of learnings and experiences among GCIP national project execution units (or national project executing entities NPEEs) are key, especially in conducting the annual national accelerators, supporting SMEs at various stages of development with diverse range of technologies, and strengthening national cleantech ecosystem. Therefore this is formalized as part of this GCIP global child project. A GCIP knowledge management, communication and advocacy strategy will be developed outlining the mechanisms to be used and for whom. This is

executed by the global child project and disseminated to the country projects. The communication and advocacy efforts have three aims:

- ? Promoting visibility of GCIP as a programme and communication of impacts achieved at national and global levels;
- ? Increasing awareness of the catalytic role of clean technologies as a business model in addressing climate change and environmental issues and their profitability;
- ? Showcasing cleantech innovations from GCIP alumni enterprises and enhancing their visibility and credibility.

138. Guidelines for a national level knowledge management, communication and advocacy strategy will be developed for dissemination, review and adaptation by each national PEE.

139. The GCIP web platform (see 3.1.3) is the main instrument for internal communication and external messaging. Programme management and operation related knowledge created and accumulated at national levels is collected and disseminated systematically among GCIP partner countries. To this end, each national PEE coordinates closely with the global PEE for Component 3.

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

141. As part of the advocacy strategy a global advisory board will be established (see Section 6) and GCIP will be represented at key global events including UNFCCC meetings, GEF meetings, etc. Prior to the specific meeting discussions between national PEEs, the global PEEs and UNIDO will take place to ensure that GCIP is represented by the most appropriate GCIP advocate. Through UNIDO, GCIP is acutely aware of and closely engaged in the discussions and policy dialogues at the international level in informing and shaping the discourse surrounding national priorities for innovation of climate and clean technologies, and will continue to provide thought leadership and guidance to GCIP child countries to ensure that their national priorities are achieved in tandem with the international recommendations and best practices. Through the GCIP Global Child Project, design and implementation of GCIP at national levels will be further refined in light of the international discussions led by governments, and the experiences and expertise accumulated at national levels in GCIP partner countries will be valuable knowledge that can facilitate evidence-based discussion on cleantech innovation at the international level.

Output 3.1.3 Web platform established and operated to coordinate and consolidate GCIP operations at national and global levels and disseminate knowledge products

142. The GCIP web platform is key to the coordination, coherence and consolidation of the GCIP framework. The GCIP web platform will be developed within this project as a tool for four key functions:

a. An internal management and operations tool for use by global and national PEEs. Each of the country projects will have dedicated space. There will be an internal news page and an internal discussion area for questions and answers to be shared between NPEEs and where questions can be put to the global child project. For example if one national child project is looking for specific expertise that they can?t find within their own country they can request this through the website. Similarly where an enterprise is looking to expand into another GCIP country market the website will provide the linkages.The guidelines and tools developed will be disseminated through the web platform. Policy best practice, roadmaps and recommendations will be shared here. There will also be a section dedicated to impact monitoring where data for each supported enterprise, country and global data recorded and M&E recorded here. The Community of Practice in cleantech innovation will be hosted here.

b. A tool for execution of annual accelerators at national and global levels, 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.). The site will be designed so that it can be adapted and used by each child project for their own accelerator without any cross-over with other country or global accelerator. The site is owned by UNIDO since it will contain sensitive information from the applicants.

c. For maintenance of a GCIP community at national and global levels. All GCIP alumni enterprises, as well as certified GCIP mentors and trainers will be invited to join the online community as a networking tool. Profiles and impact potential of each GCIP supported cleantech solution will be showcased through the web platform. Therefore it serves as a gateway for potential investors and customers to collect information on GCIP alumni enterprises.

d. A knowledge depository for the general public. The first functions of the website will be limited access whereas this web area makes available all knowledge and communication products developed at national and global levels for public consumption and demonstrates the impact of GCIP.

143. Training will be delivered to each national PEE on how to use, adapt and maintain the website. The development of the core website will be sub-contracted out to a web specialist in the first months of the project. The site is actively managed by the Component 3 global PEE to ensure that it is always up to date and that the discussion and networking is monitored and curated.

A summary of all the activities under Outcome 3.1, and the responsibilities for delivery, is included in Annex P.

Outcome 3.2: Impact of GCIP tracked and reported at national and global levels

Output 3.2.1 Methodologies of estimating impact, including global environmental benefits of GCIP (GHG emissions), established, applied and disseminated across GCIP countries

144. GCIP methodologies for calculating, projecting, validating, verifying and gathering information on social and environmental impacts will be established and disseminated and applied by national child projects. By standardizing the methodologies across all GCIP partner countries uniformity and accuracy of the calculations can be assured. This also ensures that GCIP?s impact is clearly understood and can be used for programme and management decision making. Methodologies will be developed for the key impacts: global environmental benefits, job creation and investment leveraged.

145. By definition GCIP encourages open innovation, therefore estimating a priori the emission reduction potential of innovations supported through the GCIP has proven to be difficult since the types and categories of innovative cleantech solutions that will be supported can only be determined during the selection of semifinalists as part of the annual accelerators. A standard GCIP methodology for the calculation of global environmental benefits (GEB), primarily the GHG reduction potential of innovations, will be refined in order to track the expected environmental impact of the GCIP innovations and enterprises. It will be regularly assessed and updated.

146. Preliminary background work has begun for a standard GCIP methodology. The standard GCIP Methodology will build on existing tools rather than starting from scratch. A review of current methodologies for estimating GHG emission avoidance from products and services has been carried out with the aim of identifying methodologies GCIP can build upon. Until recently most methodologies for measuring GHG emissions mitigation related to company-based, location-based or

project-based emissions rather than to the avoided emissions resulting from a new product or service, which could have significant potential to contribute to reduce greenhouse gas (GHG) emissions in society.

147. There are a few examples of approaches to estimating the GHG impacts of a product. These include: Mission Innovation?s (MI) Framework for Assessing Avoided Emissions[31][31] which aims to address some of these challenges to be able to classify and rank companies/solutions through their supply of low carbon products and services; and WWF?s Climate Solver Tool[32][32] which is an online platform which estimates the avoided GHG emissions and energy use from an innovative product. These two are the closest tools applicable for potential GCIP innovations. They include the following steps and assumptions: definition of system boundary and timeframe, identification of any rebound effects, estimates of unit efficiency/improvement and emission factors, estimate of unit baseline emissions, stage of development/deployment and certainty of data, estimate of market size and attribution.

148. Based on this, the standard GCIP methodology for calculating GHG reduction potential aims to build on MI and WWF tools, and learns from PFAN (REEEP) , which is also developing a methodology. As stated above initial work has started and a first version is expected within three months of project start. The methodology includes:

- ? Software tool with the calculation steps and showing the type of information that needs to be provided
- ? Manual describing what needs to be done to complete the GHG estimation, including worked examples of using the tool for several categories of products
- ? Short training module (ca. 2 hours) to teach supported enterprises how to use the tool at the start of the mentoring program of GCIP
- ? More extensive training (including teaching material and example worksheets) to enable national PEEs to support enterprises in using the tool.
- ? The methodologies for estimating the other impact categories ? job creation and investment leveraged - will also use the GHG methodology in so much that it includes estimates on market size, attribution and stage of development.

149. Associated tools on using the methodologies will be developed which includes incentive mechanisms for data collection from alumni enterprises. This includes a short list of possible incentive mechanisms from which the national PEEs can select options if they consider it necessary for their enterprise cohorts.

150. Each national PEE will receive training via global webinars on the use of the methodology from the global child project and subsequently they in turn train all semi-finalists across the programme (as part of the Accelerators) to provide GEB estimations of their innovations, using the training module developed. This further allows the programme to show impact on a global level. National PEEs can also request further support to assist training national enterprises in using the GCIP impact methodologies (on-line or in-person).

151. .Applicants to the global accelerator will calculate their own predicted GHG emission reductions for their application submission. Successful entrepreneurs and SMEs supported by the Global Accelerator will then be trained and supported in how to use the methodology by the Component 3 global PEE. They will then update their predictions using the standardised GCIP methodology and use it for actual emission reductions as the entreprise grows.

Output 3.2.2 Impact performance of GCIP tracked and reported regularly

152. Dedicated resources are assigned to track and monitor the business growth, social and environmental impact of the GCIP alumni enterprises. As a minimum, tracking includes global environmental benefits (primarily GHG emission mitigation), job creation and investment leveraged. Data is sex-disaggregated where appropriate.

153. The global child project will establish an online system for tracking at an enterprise level, national level and at the global level. The online system allows for coordination of efforts and consolidates the impact of GCIP as a global initiative. Each national PEE, and the global PEEs, will follow the methodologies outlined in 3.2.1 and facilitate the submission of impact data from each of their GCIP enterprises. Each PEE has a role in the verification of the data and this global child project will also carry out some verification and validation to ensure that all data submitted is robust and that the methodology is being applied in a consistent manner across the GCIP programme.

154. The data will be used to produce a Global Impact Report and create content for promotion and advocacy purposes (news articles, social media posts, brochure and leaflets, videos etc.) that are tailored to diverse types of audiences (investors, national government agencies, donors, students). The

data collected will also be analysed and published as a knowledge product to inform the larger international discourse on cleantech innovation and its impact. This benefits the GCIP alumni enterprises by providing increased credibility and visibility.

Output 3.2.3 Programme monitoring and evaluation framework developed and applied across GCIP countries

155. Programme monitoring and evaluation (M&E) will be conducted in accordance with established UNIDO and GEF procedures. This is in addition to the impact methodologies and tracking detailed above (which focuses on the impact and outcomes of the programme at national and global levels, and feeds into the overall results framework). The overall objective of the monitoring and evaluation process is to ensure successful and quality implementation of each project and the overall programme by:

- ? tracking and reviewing project activities execution and actual accomplishments;
- ? providing visibility into progress as the project proceeds so that the implementation team can take early corrective action if performance deviates significantly from original plans; and
- ? adjusting and updating project strategy and implementation plan to reflect possible changes on the ground, results achieved and corrective actions taken.

156. A detailed GCIP monitoring and evaluation framework (results framework/logframe) will be prepared within this project with SMART indicators and adapted for each national child project, which provide performance and impact indicators for project implementation along with their corresponding means of verification. Operational guidelines will be developed alongside the framework to ensure all child projects use the framework the same. These will form the basis on which the projects? M&E Plans are built. The first draft of the results framework for the global child project is included as Annex A. This will be expanded, reviewed and revised at the beginning of the project so that in addition to the individual Global child project results framework there is also a GCIP programme-wide results M&E framework which covers all possible outputs, outcomes and impacts from the whole global framework. The Results Framework will be shared with all country child projects for them to adapt to their specific outputs, outcomes and impact. The GCIP website will have a dedicated section for M&E for each country to update and where the global child project consolidates all data.

157. The M&E procedures consists of project inception, progress reporting, and a project final report. A detailed monitoring plan for tracking and reporting on project time-bound milestones and accomplishments will be prepared at the beginning of the project. This is carried out by the Component 3 global PEE. The M&E plan is periodically reviewed and updated. (See section 9 on coordination for further details and dedicated budget). The evaluation/implementation team reports and verifies the actual progress against the approved work plan.

A summary of all the activities under Outcome 3.2, and the responsibilities for delivery, is included in Annex P.

4) alignment with GEF focal area and/or impact program strategies;

158. GCIP generally, and this global child project specifically, are fully aligned with the objectives of GEF-7 Climate Change Focal Area Strategy CCM 1-4, ?Promoting innovation and technology transfer for sustainable energy breakthrough?. This project seeks to foster private sector engagement in accelerating the uptake and investments in innovative cleantech solutions at scale. The project prioritizes cleantech innovations in the domains that are fully aligned with GEF 7 priorities i.e. electric drive technologies and electric mobility, accelerating energy efficiency, decentralized renewable energy power with energy storage, and cleantech innovations related sustainable cities and sustainable food systems. In particular, the project supports global cleantech innovation and entrepreneurship by providing catalytic support to early-stage cleantech innovation SMEs so that they commercialize and scale-up their operations thereby delivering climate and sustainable energy solutions that reduce GHG emissions.

159. Therefore, GCIP is a transversal intervention that supports all priorities of GEF 7?s Climate change focal area. The project provides much needed and best available catalytic technical assistance to cleantech SMEs so that they commercialize and scale-up globally and in the process create new industries and green jobs. In line with GEF strategy on private sector engagement, the global child project capitalizes on the growing interest by international private actors in the sustainability agenda and creates the conditions for SME driven creation and transformation of cleantech markets. This ultimately harnesses the ingenuity and creativity of SMEs and ?crowds-in? private sector investments to deliver environmental benefits beyond business as usual. On behalf of the GCIP framework, the global child project promotes synergies with other GEF Programmes to leverage more impacts. In particular, it looks to establish operational, investment and/or knowledge management links with other GEF flagship initiatives such as the prospective Africa Minigrids Programme, Sustainable Cities IP, GreenChem and FOLUR. Furthermore the global child project will also

exchange knowledge and lessons on opportunities for technology and business model innovations across these programmes.

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

160. This project aims to go beyond the current baseline. As discused in section 1a) the baseline includes SMEs with breakthrough cleantech innovations in developing markets having a very low success rate due to lack of key skills and capacities to transform their innovations into viable, scalable and fast growing enterprises. Furthermore, the innovation and entreprenuership ecosystems in these countries can be hostile and initiatives to support these SMEs remain disjointed and uncoordinated. This project has been designed to learn from GCIP supported under GEF 5 & 6, to create more opportunities for greater impact through programme coordination and coherence and in providing greater commercialisation support and investment facilitation services to expand opportunities for international market expansion. This project is designed to provide catalytic and effective interventions that galvanise private sector interest and investments in the cleantech innovation and entrepreneurship space and also strengthen national cleantech innovation and entreprenuership ecosystems and connect them at a global level. These interventions, create a critical mass of interest in the cleantech sector, drive the transformation cleantech markets and result in more cleantech SMEs contributing to climate change mitigation and low-emission development.

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

? establish methodologies, guidelines, tools and training systems for accelerator, advanced acceleration and post-accelerator support and for mentors, judges, trainers to be trained and certified in each country. This will ensure that countries will continue to run the accelerators long after the GEF project has ended, which is not currently the case with all GCIP countries.

? provide post acceleration support and investment facilitation services so that cleantech innovators from this and previous GCIP will be able to commercialise their innovation and mobilise funding for scaling-up.

? support the design and establishment of early-stage financing mechanisms to ensure that GCIP alumni from this project and previous GCIP will be able to access funding to grow and expand their businesses.

? increase focus on developing policy and regulations on cleantech innovations at national levels and document and disseminate policy best practices across countries to promote peer-to-peer learning and exchange.

? organise global events around the global competition based accelerator such as dialogues, investors networks to promote networking and learning across countries by policy makers, co-

innovation and joint ventures among innovators ,and meeting high-impact investment opportunities by impact investors, funds and other financiers.

? promote coordination, communication and impact tracking across the programme.

? promote knowledge gathering, exchange and dissemination to systematically entrench behaviour change and hence transformational change in how cleantech innovators are supported.

? By connecting the ecosystems through the global child project, the project creates bigger market opportunities for cleantech innovators to expand their businesses and hence increase their success rates and reduction of more GHG emissions.

162. One of the many incremental services that the global child project provides is access to global investors. As an estimate, evidence from GCIP under GEF 5& 6 shows that some GCIP alumni were able to mobilise global funding and expand their operations. From Turkey, Episome Biotech (2017 semi-finalist) raised ?1.7million in investment through 3 rounds from Diffusion Capital Partners based in The Netherlands; Seyisco raised USD 100,000 and B-Preg and Solter Vision also raised foreign capital. Actual figures are not yet available as to the level of increased GHG emission reductions achieved as a result of the international funding but the global funding allowed B-Preg (bio-composite parcel shelves) to expand internationally and they now estimate annual emission reductions of 4180 tCO2e/year and growing. Similarly Solter Vision (remote PV plant analysis) now estimates annual emission reductions of 15,300 tCO2/yr and Seyisco (efficient pot hole filling) already estimates 826k tCO2e per year saved. Episome (biotech) has the potential to reduce GHG emissions by 40 million tonnes/year once expanded globally. Therefore, SMEs with innovative cleantech solution can rapidly expand their businesses by accessing international financing opportunities and simultaneously rapidly expand global environmental benefits.

163. The differential is further enhanced through the inclusion of more opportunities for networking and investments, support to expand cleantech business in other countries, development of policies and regulation to support cleantech innovators, and building and strengthening ecosystem. For example:

? The project ensures that GCIP Alumni from the national child projects can truly mature and be able to harness global market opportunities brought about by dedicated support and ecosystems connectivity provided by this project.

? GCIP alumni have higher chances of commercializing their innovations and of getting connected to investors and the private sector through the global innovations challenges, international mentoring for global expansions and linkages to other sources of financing that include impact investors and crowdfunding platforms.

? Enhanced communication, advocacy and outreach about the GCIP galvanises partners and players to value the brand of GCIP and promote it further.

? Enhanced knowledge generation and management from the global GCIP project ensures that the rich knowledge generated across GCIP countries is effectively managed and disseminated thereby increasing the leverage of GCIP in influencing decision making processes across the cleantech innovation and entrepreneurship ecosystems

? Coherence and standards in the GCIP project brings about consistency and trust in the GCIP brand and ensures that high quality SMEs are supported to the highest level thereby increasing their chances of scaling up their innovations.

164. Since these interventions ensure sustainability of the project, they result in more GHG emission reductions beyond the baseline. Without GEF funds there will be lost opportunities to nurture entrepreneurs to scale, to further reduce emissions and to strengthen private sector partnerships. With approximately 100 new cleantech enterprises supported and each saving between 1,800 and 3,600 tCO2e by 2030, the cost effectiveness of the GEF funds is between 4.96 USD/tCO2e and 9.9 USD/tCO2e.

Co-financing

165. The total co-financing to the project is equivalent to US$18,675 million and is required to fully meet the project objectives. Co-financing is contributed by project partners,The Network for Global Innovation (NGIN), PFAN (REEEP) and the Cleantech Group (CTG) in addition to UNIDO, the implementing agency. Co-financing will contribute to additional investment mobilised for GCIP alumni (of approximately USD 12 million) in addition to enhanced networking opportunities and access to international best practices and cross-border connectivity and collaboration. In-kind co-finance will further support the development of GCIP methodologies, comprehensive frameworks, tools and systems with professional services. Finally co-finance will contribute to external evaluation of the project at mid-term and at the end of the project. These contributions are all in addition to finance, services, opportunities and evaluation available in the baseline scenario.

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

166. GCIP supports the introduction and scale-up of cleantech innovations in the market thereby promoting a low-carbon culture that results in multiple environmental benefits including, primarily, GHG emission reductions. The environmental benefits achieved through the implementation of this project will be measured and quantified on the basis of the cleantech solutions marketed and

their uptake through their lifetime. Therefore, the innovative cleantech solutions that will be developed and commercialized by GCIP will achieve environmental benefits beyond the project life and scope. The GCIP approach encourages open innovation i.e. accelerates innovative cleantech solutions developed by innovators and entrepreneurs in the context of the local needs, opportunities and market conditions they operate in. Therefore, estimating the emission reduction potential of innovative solutions to be supported through the GCIP has proven to be difficult since the types and categories of solutions will be determined during the selection of semi-finalists as part of the annual global accelerators.

167. The project activities that will directly support the achievement of GHG emissions reductions are as follows:

a) The development of GCIP methodologies, guidelines, tools and training systems and their application across the 10 countries;

b) identifying and supporting 100 cleantech SMEs toward commercialisation and investment facilitation through 4 cycles of the global accelerator;

c) linking ecosystems across countries, which will ensure that GCIP alumni can leverage market opportunities for their innovation in new countries thus increasing the global environmental benefits (GEBs);

d) providing follow-up support to GCIP alumni, ensuring that more are able to commercialise and, hence, develop more products and services that reduce carbon emissions;

e) increasing investor outreach, which will make sure that GCIP alumni are able to secure investments to commercialise and transition into large-scale deployment; and

f) coordinating the activities of country level projects, ensuring that synergies are identified and adequately leveraged to create a groundswell of support and investments into GCIP activities and alumni.

These activities, seen together, will create the catalytic effect for GCIP alumni and help them to commercialise and transform into global companies and hence consolidate and rapidly expand GHG emission reduction from GCIP.

168. For purposes of estimating the GHG emission reduction potential at this stage, an evidence based methodology was developed and applied. This builds on evidence from GHG emission reductions already achieved by several companies supported from past GCIP projects, that are already in the market and have scaled up their innovative cleantech solutions. As described in component 3 of this child project, a standard GCIP methodology for calculating, tracking and monitoring environmental impact will be refined and regularly assessed and updated (Activity 3.1.1). This methodology will be applied to the other 10 country child projects under GEF program 10408. To

estimate GHG emissions mitigated under this child project, a target-based approach for avoided GHG emissions is employed.

i. Background on GCIP?s target for avoided GHG emission for GCIP Program 10408

169. In order to ensure that GCIP supports innovative cleantech solutions with high impact potential, and delivery of GEBs at the programme level, a target approach is applied. To achieve cost effectiveness of GEF funding for GEBs, a value of 5 to 10USD/tCO2e avoided is targeted (corresponding to an overall cost per tonne at programme level of USD38-76/tCO2e[33][33]). This means, with GEF funding of almost USD 18 million, GCIP aims to deliver between 1.8 million and 3.6 million tonnes CO2e by 2030. As 10 countries will be a part of the overall GCIP programme, almost 1000 semi-finalists are expected to be supported through the accelerators in all countries across the programme, Therefore the target for the minimum projected potential of avoided GHG emissions per enterprise would be between 1,800 to 3,600 tCO2e by 2030[34][34].

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

? Firstly, a survey carried out by UNIDO of 14 of its GCIP alumni showed that these companies had already generated 600,000 tCO2e savings by 2017 and projected to generate over 4.8 million tonnes of GHG emission savings by 2020 (or 340,000 tCO2e/year per company).

? Secondly the IEO Evaluation report of eight GCIP projects included a sample of alumni in its annex with projected avoided emissions between zero (either it had not been estimated yet or the cleantech was not related to CCM) and 5 million tCO2e per year. Therefore an average figure per enterprise does not make sense. A median figure would be 88 tCO2 per year, but this is only based on those reported, which make up a small proportion (#60 of 900) of the total alumni. If only those with an estimated reduction are counted (#34) then the median figure increases to 12,200 tCO2/year

? Thirdly a number of alumni were selected as part of Mission Innovation?s 100 innovative clean energy solutions in 2019. For example, Atomberg Technologies (https://atomberg.com/), which manufactures an energy efficient fan, is estimated to avoid 5 million tCO2e/year by 2030 using the MI Framework for Assessing Avoided Emissions (https://www.misolutionframework.net/). BEAD, an energy management AI optimization solution, is estimated to avoid 319 million tCO2e/year by 2030. These two companies were both included in the 60 alumni above but Atomberg had not provided an estimate (so was assumed zero) and BEAD?s estimate was 5 million tCO2e/year.

171. It is still too early to calculate the delivered unit abatement cost of GCIP to date as the GHG reductions of all alumni are not known and not enough time has passed. However the design of GCIP included for unit abatement costs (for GEF funding) of between 0.68 USD/tonne CO2e in Turkey to 29.77 USD/tonne CO2e in Armenia. Just with the enterprises mentioned above, the targets were exceeded in those countries. The proposed benchmarks are within the same range so realistic and conservative.

172. Given that a key focus of GCIP is to identify and support cleantech innovations with high impact potential, this benchmark will guide the global accelerators to take into account the GEB potential as a key criterion in accepting applications into the accelerator. The provided range of 5 to 10 USD/tCO2e in reduction potential, will allow the child projects to support a mix of technologies with different CO2 emission reduction potentials as long as this minimum average across the programme is achieved. This will allow innovations into the accelerators with lower CO2 reduction potential and could have extremely high replication potential, but which explore new market applications, as well as innovations creating multiple benefits (including social indicators such as job creation, innovations contributing to gender and youth dimensions).

173. In addition, indirect GEBs facilitated through the cleantech ecosystem strengthening at global levels are also expected. Broader adoption of GCIP impact can take place through several processes including sustaining, mainstreaming, replication, scaling-up and market change.[35][35] 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.

This target-based approach for the estimation of GHG emission reductions will be applied across all child projects under the GCIP Program 10408.

ii. Estimation of Global Environmental Benefits of project 10461

174. A ten year horizon has been selected to calculate the emission reductions from this global child project. The calculation takes account of emissions from the global accelerator where 100 companies will be supported through this project i.e. acceleration and then investment facilitation services.

Global accelerator and investment facilitation support

175. Assuming 100 new[36][36] semi-finalists/finalists in the global competitions and challenges and using the targets set out above of a minimum projected potential of avoided GHG emissions per enterprise would be between 1,800 to 3,600 tCO2e by 2030, then the avoided GHG emissions from the global competition and challenges would be between 180,000 and 360,000 tCO2e of direct emissions savings. Using the factor of 5 for indirect emissions the estimate would be between 900,000 and 1,800,000 tCO2e of indirect emissions savings.

176. It should be noted that there is no double counting in GHG emission reduction between project 10461 and other child projects under program 10408. The GHG emission reductions under project 10461 only refer to the benefits that a cleantech SME gets from expanding their business beyond their country of origin.

177. By way of example, if a cleantech SME participates in one of the country accelerators and then participates in the global accelerator under project 10461, the GHG emission reductions will be estimated as follows:

- GHG emission reduction related to the scaling up of the cleantech innovation within the country will be attributed to the accelerator of the country child project

- GHG emission reductions related to the expansion and scaling up of the cleantech innovation to other countries and markets will be attributed to project 10461.

178. In addition to the substantial CO2 emissions mitigation and based on examples cleantech SMEs supported from past GCIP projects, it is expected that other environmental co-benefits will result from this project. In the same way that this project will increase the GHG emission reductions from GCIP alumni, other environmental co-benefits will also increase as well as those attributable to the Global accelerator. These are likely to include reduction in waste in the environment, reduction in air pollutants (eg. NOx, SOx, PM and CO), improved water quality and reductions in material use. These environmental co-benefits will be calculated, tracked and monitored under component 3.1.1 of this project.

7) innovativeness, sustainability and potential for scaling up

Innovation

179. GCIP is a lean, effective and results-oriented solution towards catalysing cleantech innovation and entrepreneurship in frontier markets where the cleantech innovation ecosystems are weak. The global child project underpins the global programme and its innovation. GCIP?s innovative design is premised on having a dual pronged approach that on one hand creates a critical mass of early-stage cleantech innovation SMEs that will transform into market ready enterprises and on the other hand strengthens national cleantech innovation ecosystems and linking them at global level to create market opportunities for the SMEs to truly grow their businesses beyond their national boundaries. GCIP supports entrepreneurs across the whole innovation value chain to develop demand-driven and investment-ready climate solutions that can become global enterprises. In comparison with other incubators or accelerator programmes, GCIP not only supports cleantech SMEs, but also strengthens cleantech innovation and entrepreneurial ecosystems by building capacity in national institutions, developing policy roadmaps and creating strong linkages between the most relevant ecosystem players and by raising awareness among them. In particular the global child project facilitates GCIP?s innovation by connecting innovation ecosystems across the countries so as to create market opportunities for GCIP SMEs, promote the sharing of experiences and policy best practices to promote learning. This connectivity, and the related opportunities it provides, is not being enabled by anyone else. Beyond this, the project provides support to cleantech innovation SMEs from anywhere in the world, providing help through the development process of their concepts to ensure that they are sustainable and will have a real impact on the market. This truly global support, provided through accelerators, is uncommon and in particular the link into global markets and from other developing counties into GCIP countries is innovative. GCIP support also goes beyond the accelerator including additional advanced post-accelerator support, which is an innovative concept based on the stated needs of alumni.

Sustainability

180. The project is predicated on creating a critical mass of cleantech innovations that commercialize thereby establishing cleantech markets that are linked across GCIP countries. It promotes the active engagement of the private sector in the cleantech innovation and entrepreneurship space thereby ensuring that there is a strong and systematic link between the GCIP alumni enterprises (solution providers), investors, policy makers, and the market.

181. Key to the sustainability of the global GCIP child project is the development of long-term partnerships with the private sector to secure funding as part of the exit strategy for global GCIP. A further model for global GCIP will be developed (under Output 3.1.1) which will include, inter alia,

funding mechanisms (likely to be based on a sponsorship and fees model), on-going activities (incl. global competitions, knowledge creation and coherence) and institutional arrangements. Guidelines for finding sponsorship is also included in the Accelerator guidebooks developed under Output 1.1.1. The sustainability and exit strategy will be developed in year 1 and 2 as well as initial discussions with potential funders. Discussions will also take place with the national PEEs on future collaboration and future needs. The funding will be finalized in year 4 along with a clear hand-over and exit strategy for Year 5 with potential future implementing partner/s will be the global PEEs.

182. The sustainability of GCIP is reinforced by the following:

- Through investment facilitation, GCIP SMEs are be able to mobilize funding and investments from angels, impact investors and other sources of finance so bringing their businesses into full sustainability;

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

- Strengthening innovation and entrepreneurship ecosystems at national levels galvanizes various ecosystem players to pool resources, know-how and investments towards supporting the acceleration and commercialization cleantech innovations. Once ecosystem players start appreciating, the benefits of supporting cleantech innovations, they will continue do so in the long-term;

- By linking cleantech innovation ecosystems across countries, GCIP creates a business motive for cleantech SMEs, policy makers, and industry associations to work across countries. This is sustained through these stakeholders investing their own resources in these activities beyond the life of the programme;

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

- The management of knowledge generated from GCIP in terms of fact sheets, guidebooks, tools and reports on accelerating cleantech innovation. This ensures that stakeholders, countries and the private sector will have on-going access to these tools and apply them to sustain the GCIP approach;

? Supporting the maintenance of standards in terms of GCIP processes and practices so as to ensure adherence to the highest quality of norms. Such norms ensure that the GCIP develops as a recognized brand and hence ensure long-term sustainability.

183. At a national level, as shown in South Africa post GCIP, there is interest from both public and private sector to jointly run cleantech accelerators. This approach will be promoted across all GCIP countries. Based on these experiences a global strategy will be designed under the global child project and then be adapted to the national child projects. Sustainability and exit strategies will be developed at the global level in year 2 of implementation (under Output 3.1.1) which will then be reviewed and adapted for the global child project (and for each GCIP partner country) by the beginning of year 3. . The strategy is likely to include interventions such as:

? identify and work with institutions that will retain the knowledge and skills developed under the project;

? pursue country ownership through engagement of relevant public and private sector actors;

? identify public and private sector funding;

? build local capacities (trainers, mentors, judges) to sustain the ongoing organization of the accelerator;

? ensure access to training materials and infrastructure to manage applications (whether local, international, or centrally-shared);

? provide clarity about the point at which exit will take place, based on targets and outcomes; and

? engage in a handover process and transition where GCIP support is phased out.

184. These measures collectively create a basis for sustainability and exit strategy in GCIP by galvanizing partnerships and resources to expand and sustain the programme approach in the long-term. In this project, this issue will be aggressively promoted so that GCIP becomes sustainable.

Scaling up

185. Replication and scaling up is systematically included in the project design. GCIP activities and accelerators are operated in partnership with public and private entities. Partnership with private entities ensures that the private sector will mobilise their resources and network to scale-up the

activities of GCIP. In particular, partnerships will be established with the private sector in establishing challenge focused accelerators where successful innovations will be immediately linked to private sector for incubation, investments and scaling up. GCIP acts as an international hub of innovation and connects other ecosystems players such as incubators, networks of investors, policy makers, business/industrial associations and regulators. Through this, GCIP will be able to influence cleantech innovation and entrepreneurship at country level and hence expand and scale-up the influence of GCIP.

186. At global level, the project will establish partnership with corporations, industry associations with a view to leverage networks, resources and support to scale-up the programme. In particular, GCIP will establish partnerships with global platforms like Mission Innovation and Clean Energy Ministerial with a view to link innovations from GCIP countries to the global level, but also to establish programmatic collaboration that supports the scaling-up of GCIP and increase the number of SMEs supported, investments and linkages with global corporations. In parallel, opportunities to scale-up across sectors will be assessed by reviewing any upscaling synergies between GCIP and other programmes, such as Global GreenChem (GEF ID 10353).

187. The project provides targeted support to GCIP alumni that have potential for global expansion to expand and scale up into new markets, thereby rapidly scaling up the innovations into various markets. Furthermore, the project supports linking and connecting of ecosystems in different countries to promote exchange of experiences and know-how. In fact, ecosystems connectivity helps in connecting cleantech innovators with partners and investors from different countries thereby creating opportunities for scaling their innovations. By supporting outreach, communication and advocacy activities, this project increases the visibility of GCIP and confidence around it. This in turn attracts more partners to GCIP like investors, private sector and foundations who will be agents to support the scaling up of GCIP. At the global level, the knowledge products and tools are made available for participating and interested countries and stakeholders.

188. GCIP also brings global visibility to GCIP alumni SMEs. Such visibility at the global level is key in creating awareness about GCIP and opens up investment and partnership opportunities at global levels that lead to the scaling up of innovations and their businesses in global markets.

189. In conjunction with these efforts, the project actively seeks to attract other countries to join the GCIP community by encouraging them to develop child projects under the GCIP (programme 10408) if possible or else to become closely affiliated to the programme even if developed as stand-alone GEF cleantech innovation and entrepreneurship projects.

[1] Where changes related to the addition of ?GCIP? and to be more gender responsive, these have not been broken down in this table.

[2] https://www.ipcc.ch/sr15/chapter/spm/

[3] GCIP defines cleantech innovations as a broad range of solutions (technologies, processes, services, business models, and their combinations) that improve operational performance, productivity, or efficiency while reducing costs, inputs, energy consumption, waste, or environmental pollution. Cleantech lead to an increase in positive impact or a decrease in negative impact on climate change mitigation and adaptation, transition to a low-emission economy, sustainable energy systems, and other dimensions of environmental sustainability. Climate technology, clean energy technology, agtech etc. are subsets of cleantech. There is no pre-defined type of innovation and innovations can be either high-tech or low-tech.

[4] https://unfccc.int/sites/default/files/resource/docs/2017/cop23/eng/11a01.pdf

[5] limited knowledge of the cleantech sector among investors in emerging/developing markets leads to a vastly reduced appetite for risk. GCIP has a proven ability in providing effective training and therefore would be able to educate new and existing investors in each market to enable them to make more informed decisions based on best practices from around the world and the latest market data.

[6] http://www.infodev.org/innovations-scaling-green-sectors

[7] Annual Impact Investor Survey, 2019, Global Impact Investment Network (GIIN)

[8] Sizing the Impact Investment Market, GIIN, 2019

[9] www.pfan.net

[10] https://www.thegef.org/news/gefs-response-covid-19

[11]unfccc.int/ttclear/misc_/StaticFiles/gnwoerk_static/incubators_index/ee343309e8854ab783e0dcae3ec2cfa6/c172d2f388234bdbbe3dd9ae60e4d7e9.pdf, July 2018

[12] Climate Technology Incubators and Accelerators: United Nations Framework Convention on Climate Change Technology Executive Committee, Green Climate Fund, Climate Technology Centre and Network. July 2018

[13] http://unfccc.int/ttclear/events/2018_event2

[14] This was implemented as part of the Greening the COP 17 project - https://www.thegef.org/project/greening-cop17-durban

[15] More information on GCIP is available on - https://www.unido.org/our-focus/safeguarding-environment/clean-energy-access-productive-use/climate-policies-and-networks/global-cleantech-innovation-programme

[16] More information available on : https://www.unido.org/sites/default/files/files/2017-12/GCIP-Brochure.pdf

[17] https://www.unido.org/sites/default/files/files/2017-12/GCIP-Brochure.pdf.

[18] Smart Grids Innovation Challenge ; Off-Grid Access to Electricity Innovation Challenge ; Carbon Capture Innovation Challenge ; Sustainable Biofuels Innovation Challenge ?; Converting Sunlight Innovation Challenge ?; Clean Energy Materials Innovation Challenge ?; Affordable Heating and Cooling of Buildings Innovation Challenge ?; Renewable and Clean Hydrogen Innovation Challenge.

[19] All to be termed as SMEs.

[20] Environmental and social impacts could be both positive and negative and both will need to be assessed

[21] Where support is provided ?on request? it is the national project executing entities who will request the support services and they will be paid for by national funds. The related outputs will feature in the national projects? frameworks and not in the global child project framework in Annex A.

[22] Cleantech technologies can include low-tech and lower-tech approaches to energy, resource efficiency and waste management.

[23] Applications will be invited for cleantech innovations that are in line with GEF 7 priorities that include electric drive technologies and electric mobility, accelerating energy efficiency, decentralized renewable energy power with energy storage, and cleantech innovations related to sustainable cities and sustainable food systems.

[24] Mentors are advisors assigned to the participating teams of the Accelerator to provide guidance as required on a rolling basis for the duration of the accelerator cycle. Trainers are experts delivering parts of the accelerator curriculum as per their expertise, to the cohort of participating teams. EIRS are experts in residence who mentor in-house during advanced acceleration. Judges are specialists in the fields of technology, business, investment, sustainability etc. invited to participate in the selection panel of the accelerator as required. No monetary remuneration is offered for mentors and judges, other than travel cost support as required. Trainers (national and international) may be contracted or recruited to deliver the accelerator curriculum.

[25] The in-person programme is subject to prevailing Covid-19 risks and will become virtual as required.

[26] This is intended to be in ?person but will be subject to Covid-19 risks at that time and as necessary will become virtual.

[27]PFAN (REEEP) issued a pilot call for applications specific to GCIP alumni enterprises. This pilot initiative was used to assess the appetite of investors to invest in new technology innovations and early stage businesses. One of the GCIP alumni that participated in this pilot initiative, Atomberg technologies, recently raised 10 million US$ -

[28] Covering 9 GCIP countries: Morocco, Turkey, South Africa, Armenia, Pakistan, India, Malaysia, Thailand, Ukraine.

[29] https://globalinnovation.fund/)

[30] Cluster refers to the grouping of solutions by sector, by technology type, by geographical region or by industrial parks. The type of cluster referred to here is technology and sector but at a national level it could have different groupings.

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

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

[33] Including all the predicted co-finance.

[34] Note the calculation uses rounded numbers. For the whole programme, GEF funding of USD 18 m and an avoided target of 5-10 USD/tCO2e = 18,000,000/5 = 3.6 million tCO2e by 2030. Assuming 1000 semi-finalists then per enterprise = 3,600,000/1000 = 3,600 tCO2e by 2030. The actual cost effectiveness of each child project will vary depending on the actual number of enterprises supported and the GEF funds committed.

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

[36] New in this context means that they are not GCIP alumni from a national GCIP programme.

1b. Project Map and Coordinates

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

The global child project has its central operations located at the Vienna International Centre, Vienna, Austria (48? 12' 36.1188" N and 16? 21' 48.4164" E.) but coordinates the 10 countries shown in Annex E.

1c. Child Project?

If this is a child project under a program, describe how the components contribute to the overall program impact.

190. The global child project has been specifically designed to support and integrate the Global Framework and the national child projects through its core activities building synergies, knowledge management and coherence and in supporting GCIP alumni from the whole programme. The Global Child Project?s aim is to scale-up and enhance the outputs and outcomes from the national child projects through increased engagement. The project will enhance and contextualize the support that will be provided to SME applicants so that they get training and mentorship that is relevant to their countries and circumstances. This project will focus on knowledge management and development of tools that will ensure that counterparts of the GCIP are able to own the programmes and have the knowledge to run the programmes on their own. Moreover, knowledge management will also focus on assessing the impact of the programme and generating knowledge to influence the discussions on policy and regulations to promote climate and clean energy technology innovation and entrepreneurship. The project will focus on outreach to investors by developing models of partnerships with the private sector at a global level. In sum, this project is designed to make GCIP a truly globally coordinated programme and harness synergies from connecting ecosystems across different GCIP countries.

191. Support to and engagement with the national child projects and how it contributes to the overall GCIP framework is shown Annex R.

2. Stakeholders

Please provide the Stakeholder Engagement Plan or equivalent assessment.

192. UNIDO will be responsible for stakeholder engagement. In the project preparation UNIDO has reached out to consult with government agencies, multilateral organizations, development agencies, academia, private sector, financial institutions including impact investors, and civil society organizations, primarily through calls and emails to understand their concerns, their objectives for the project and to get feedback on the planned project. Indigenous people will not be impacted nor specifically involved in this project, however, innovative solutions from such communities or those that benefit these communities will be supported. Stakeholders identified who will be involved in the global child project are shown in the table below and with how they will be engaged in the project.

193. The main tool for dissemination will be the project website. In addition dissemination and engagement will be through emails, on-the-job interaction, presentations, training material, workshops, webinars, project reports, e-newsletters, briefings, press releases, social media, face-to-face meetings and phone calls. Further information is provided in Section 8: Knowledge management and in the attached Stakeholder Engagement Plan (Annex J).

194. Further stakeholder engagement is detailed in Section 4: Private Sector Engagement. Resource requirements for stakeholder consultation are integrated into the overall project costs since stakeholder consultation forms a key part in the whole project delivery.

In addition, provide a summary on how stakeholders will be consulted in project execution, the means and timing of engagement, how information will be disseminated, and an explanation of any resource requirements throughout the project/program cycle to ensure proper and meaningful stakeholder engagement.

Table 3:Key to level of involvement with stakeholders

Stakeholder/Stakeholder group	Role and consultation	Type of engagement*	Timing
UNIDO	Lead implementing agency.		
Network for Global Innovation (NGIN)	NGIN will a global PEE (Outcome 1.1) as a technology and knowledge partner in developing and implementing the methodologies and guidelines for running the global and national acceleration programme, providing support to the national PEEs. NGIN will be involved in project management and will report to the Global Advisory Board.	Collaborate as Executing Entity	Continuous
Cleantech Group (CTG)	CTG will be a global PEE (Outcome 2) responsible for capacity building for national ecosystems and ecosystem connectivity. They will be a knowledge partner in developing the cleantech innovation index (GCII).	Collaborate as Executing Entity	continuous
Private Financing Advisory Network (PFAN)/REEEP	PFAN (REEP) will be a global PEE (Outcome 1.2) supporting successful innovators in scaling up their ventures by providing business coaching to GCIP alumni and helping them to link to investors until they reach financial closure.	Collaborate as Executing Entity	continuous
National child project NPEEs	National PEEs will be the main counterparts at the GCIP country level. They will also provide the coordination between national ecosystem stakeholders and beneficiaries and the global PEEs	Collaborate	continuous

GCIP country Governments/ Government Agencies including: Cambodia -, Ministry of Economy and Finance Indonesia - Ministry of Research and Technology and Higher Education (RISTEKDIKTI) Kazakhstan ?The Ministry of Ecology, Geology and Natural Resources of the Republic of Kazakhstan Moldova - Ministry of Energy and Infrastructure Morocco ? Secretariat of State Responsible for Sustainable Development ? Ministry of Energy, Mines and Sustainable Development Nigeria ?Federal Ministry of Science and Technology (FMST), Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) South Africa - Ministries of Science and Innovation, Trade, Industry and Competition Turkey ?Ministry of Science, Industry and Technology Ukraine ? Ministry of Ecology and Natural Resources, Ministry of Economy Uruguay - Ministry of Industry, Energy and Mining (MIEM), Small Business Development, Environmental Affairs	GCIP country government agencies are key stakeholders for the whole GCIP programme in their key role suppoting the innovation ecosystem. As such they will be beneficiaries of capacity building, institutional strengthening and policy development. In addition they will be key informants consulted as part of the benchmarking research and audience for the GCIP knowledge products.	Consult, empower and inform	continuous

Global GCIP trainers, mentors and judges	NGIN and other PEEs will source experts through their networks from industry, finance or academia. They will be trained as trainers, mentors and judges and intricately involved in the delivery of the support to the entrepreneurs	Inform, empower and collaborate	Year 1 plus updates
GCIP Global Entrepreneurs/SMEs	As one of the key beneficiary groups of GCIP there will constant consultation with entrepreneurs. In first assessing the baseline for benchmarks existing entrepreneurs will be consulted. Those successful applicants will receive training, mentorship, partnership building and investment facilitation. They will be invited to investor events and will be able to show case on the GCIP website.	Inform, consult, involve and empower	From Year 1

Green Climate Fund	GCIP will collaborate with various innovation initiatives being developed by GCF, in particular the Climate Innovation Facility which is under development*. Areas of potential collaboration include connecting to regional level platforms, linking GCIP alumni to the various actors on policy and knowledge management on climate technology innovation, in particular: Explore options to connect national and regional cleantech platforms for the identification of cleantech enterprises to be supported by accelerators/incubators, including the possibility of potential co-funding climate innovation initiatives Systematically support GEF-GCIP supported enterprises (alumni) as a pipeline portfolio for the CIF Link policy/regulatory work conducted in GEF-GCIP countries to CIF Establish a consultative platform/dialogue on methodological issues related to ex-ante estimation/calculation of global environmental benefits of cleantech solutions and cleantech enterprises (such as GHG emission reduction or impact on climate adaptation impact) Facilitate knowledge exchange and management on lessons learned and best practices in incubation/acceleration of cleantech businesses in low/middle income countries * including the support for incubators and accelerators	Consult, Involve and Collaborate	From Year 2/3
Climate KIC	Will be a technology and knowledge partner in running the acceleration programme and will be a partner in connecting innovation ecosystems across GCIP countries	Collaborate	From year 1

Cleantech Scandinavia	Potential to be a technology and knowledge partner in running the acceleration programme and will be a partner in connecting innovation ecosystems across GCIP countries and also linkages with Scandinavian ecosystems.	Collaborate	From year 1
Solar Impulse Foundation	UNIDO already has an MOU with Solar Impulse and will work with the foundation in this project to facilitate labelling of GCIP alumni products	Collaborate	From year 1
Climate Technology Centre and Network (CTCN)	Will be consulted with to ensure that the technology solutions, capacity building and advice on policy, legal and regulatory frameworks are specifically tailored to the needs of individual countries and synergies and complementarities are identified	Consult	Year 1
Global Innovation Fund	Invests in social innovations that aim to improve the lives and opportunities of millions of people in the developing world. Potential partner for investment for high impact innovations	Consult and involve	From Year 1
Korean Financing Technology Corporation (KOTEC)	Will extend their GCIP pilot to be partners to connect with GCIP alumni with the aim to create joint venture and co-innovation opportunities across borders, to facilitate market expansion and product co-development.	Involve and collaborate	Year 1 onwards
Academia -universities and institutions of higher learning ? appropriate organisations will identified through CTG, NGIN and PFAN?s networks	Will be the main source of early-stage innovations that will apply to GCIP for acceleration support and they will also be a source for mentors, trainers and judges. In addition institutions will be consulted as part of the global benchmarking research relating to capacity building, policy and engagement and will be recipients of GCIP knowledge products such as market trends analysis and the GCIP innovation index reports.	Inform, involve, collaborate and consult	Continuous

Industry and business associations incl: World Water Counci; World Wind Energy Association; World Green Building Council; International Council on Cleantech Transportation (ICCT); Business for Social Responsibility (BSR); World Business Council for Sustainable Development (WBCSD)	Will be partners to provide incubation support to GCIP SMEs, provide access to networks, investments and incubation support. They will also provide trainers, mentors and judges to the accelerators	Inform/Collaborate	Continuous
Networks of angel, venture and impact investors (through PFAN, CTG and NGIN)	Will be engaged to link with GCIP supported SMEs so that they can access investments and grow their businesses. Invited to investor connect events and Global Forum and to PFAN events. They will also be recipients of training on investment and gender lens investment principles. In addition they will be consulted on research relating to capacity building, policy and engagement and will be target audience for GCIP knowledge products.	Inform, involve and Empower	continuous
Corporations incl: Mitsubishi Heavy Industries; Panasonic; Kureha Corporation (Japan)	Will partner with GCIP accelerators to provide know-how, investments and market access and a source of challenge ideas. In addition corporations will provide GCIP alumni opportunities for joint venture and co-innovation across borders, to facilitate market expansion and product co-development. Consult with and provide information for global benchmark research (Capacity building framework, innovation policy framework, stakeholder engagement framework) and recipients of market trends analysis and GCII	collaborate Consult and Inform	Continuous Year 1 and Year 3
Alliance for Rural Electrification (ARE)	Potential to partner with ARE to develop partnerships for GCIP innovators and for outreach	Collaborate	From year 1

Mission Innovation (MI)	With multiple innovation challenges covering the entire spectrum of RD&D, from early-stage research needs assessments to technology demonstration projects, GCIP will aim to link with the global research community, industry and investors for collaboration with GCIP innovators. The challenges are in: Smart Grids; Off-Grid Access to Electricity; Sustainable Biofuels; Converting Sunlight; Clean Energy Materials; Affordable heating and cooling for buildings; Renewable and clean hydrogen	Collaborate and inform	From year 1
The Mini-Grids Partnership	Potential to link with the partnership and its members as for outreach and also as potential partners for GCIP innovators in the mini-grid space.	Collaborate and inform	From year 1
World Electric Vehicle Association (WEVA)	WEVA promotes research, development and deployment of electric drive vehicles and includes three regional organizations - the Electric Drive Transportation Association (EDTA), the European Association for Electromobility (AVERE) and the Electric Vehicle Association of Asia Pacific (EVAAP). Potential to partner to develop partnerships for GCIP innovators and for outreach	Collaborate and inform	From year 1
Energy Efficiency Global Alliance (EEGA)	Potential to partner in outreach, advocacy, participate in the EE global forum and to find partners for GCIP alumni. The EEGA coordinates the efforts of global EE companies, officials, and initiatives to increase recognition of efficiency?s critical role as a climate solution and facilitate its rapid deployment.	Collaborate and inform	From year 1
ICLEI	Potential to partner with local governments committed to sustainable cities in relation to GCIP alumni solutions and in outreach and advocacy.	Collaborate and inform	From year 1
Gender focal points, gender experts and associations that promote GEEW (incl UN Women)	GCIP will collaborate with these experts in developing gender-responsive methodologies, guidelines and policy tools to promote GEEW	Consult, Involve and Collaborate	From year 1

Levels of Involvement	Engagement Goals
Inform	Provide information to assist stakeholders
Consult	Obtain feedback from stakeholders
Involve	Work directly with stakeholders through process and ensure their needs are understood and considered
Collaborate	Partner with the stakeholder including the development of alternatives, making decisions and the identification of preferred solutions
Empower	Place final decision-making in the hands of the stakeholder / capacity building

Select what role civil society will play in the project:

Consulted only;

Member of Advisory Body; Contractor; Yes

Co-financier; No

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

Executor or co-executor; No

Other (Please explain)

3. Gender Equality and Women's Empowerment

Provide the gender analysis or equivalent socio-economic assesment.

195. Gender equality is a fundamental human right. While the world has achieved progress towards gender equality and women?s empowerment, women continue to suffer discrimination and violence in every part 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. 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 on Gender Equality and the Empowerment of Women (2019). UNIDO has also developed an operational energy-gender guide to support gender mainstreaming within its sustainable energy initiatives.

196. Gender equality enhances economic growth, reduces household poverty and enhances human development whilst women entrepreneurship can directly contribute to women?s economic empowerment. It is often seen as crucial for increasing the quality of life of women in the developing world, a way of triggering changes of the status-quo of women and re-addressing the balance of power within the family . Engaging a nation?s entire population to support growth is an important development strategy for a country and the benefits of supporting women in the economy (and in entrepreneurship) has particular appeal in countries where women?s inclusion in the economy is unequal. Enhancing the role of women as drivers of poverty reduction, promoting women investors and entrepreneurs, and recognizing the link between gender equality and safeguarding the environment all promote inclusive and sustainable industrialization, and directly contribute to SDG 9 on industry, innovation and infrastructure, and to SDG 5 on gender equality.

197. The dialogue on gender and cleantech is shifting from women being identified as part of the vulnerable groups, to also becoming key agents of change as consumers, entrepreneurs, distributors and decision makers across the value chain. Women and their organization have the potential to play a critical role in contributing to the SDGs. A large number of women are engaged in small and medium sized enterprises, with a woman?s ownership representing 30-70% of all SMEs in emerging markets (IFC and McKinsey, 2011), nevertheless the enterprises undertaken by women tend to be concentrated in a relatively narrow range of activities. They are often very energy intensive, rely on biomass fuels and have disproportionately low rates of return compared to the activities undertaken by men. Nonetheless, networks of women entrepreneurs could be leveraged to promote new and clean technologies and could provide a springboard off which to sell new energy services and cleantech products.

198. The Global Cleantech Innovation Programme (GCIP) overall, and this Global Coordination Child project, have been identified as a project with ?significant gender mainstreaming? impact according to the Gender Marker used in categorizing UNIDO projects. It is expected to significantly contribute to gender equality and/or women?s empowerment. These projects possess multiple entry-points for gender mainstreaming activities and/or affirmative action, but do not explicitly state gender equality and/ or women?s empowerment as a principal objective. Rather, gender equality and/or women?s empowerment is a secondary objective and the project has corresponding outputs and indicators that measure how gender equality will be advanced.

199. Work on gender will be governed by the UNIDO Policy on Gender Equality and the Empowerment of Women (2019) and the UNIDO Strategy for Gender Equality and the Empowerment of Women, 2020-2023 as well as the GEF gender policy.

200. A guiding principle of the project is to ensure that both women and men equally lead, participate in and benefit from the project (UNIDO Gender Policy 2019). Particularly in the

competitions and accelerator as well as the post-accelerator support gender-responsive activities are important to ensure 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. in all stages of project implementation. Previous GCIP projects have already shown higher levels of women?s participation than other accelerator and incubator programmes with 25% of the 1200 alumni supported to date being women led enterprises (see next section). This project hopes to continue this trend and even to increase this proportion; with a target of at least 35% of beneficiaries being women.

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

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

? Consider tailor-made interventions to encourage women?s participation and apply gender lens investing principles.

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

? Collection of sex-disaggregated data.

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

202. A Gender Analysis has been carried out and an action plan developed (Annex K) which has influenced the project design. In the project design UNIDO has ensured that the relevant gender dimensions are considered, and the project log-frame developed reflects key gender dimensions of the respective outputs, activities, indicators and targets. A review of previous GCIP projects and an analysis of the project has identified how the project can improve gender equality and proposes gender specific targets to be monitored and evaluated throughout the project implementation period. This will be reviewed early in the project and where necessary the review will allow for adjustments of the gender related targets, will capture the gender dimension in the first year of the project and define the ways in which the project can achieve, or improve on, its gender-specific targets.

203. A summary of some suggested approaches to gender mainstreaming is shown in the table below: A full list and further details are provided in the gender analysis and action plan (Annex K). Some key assumptions around the level of participation of women and the breakdown apllicable to different target groups, mentors, judges, applicants and winners will be validated in the inception phase of the project.

Stage/Activity	Gender equality measure
Global co-ordination	Gender sensitization workshops for all stakeholders involved in GCIP Development of a gender training package (material for capacity building on gender awareness) which will be included as one of the internal guidelines and standards developed. This can be adapted by national PEEs for country level training and by the global PEEs for outputs under Outcomes 1 and 2. GCIP Gender Focal point
Recruitment of GCIP consultants/ experts	Completion of the ?I know gender? UN course Consultants to provide evidence on how gender equality is addressed in the material they develop
Development of GCIP methodologies, guidelines and training material	Guidebooks (guidelines and methodologies) developed will highlight the need to make special effort to encourage women to apply to the accelerators, including with targeted outreach and gender specific communications material (eg. videos, success stories) and explicitly stating that GCIP encourages applications from women Include ideas for options for gender focused support Training materials for entrepreneurs/SMEs will include capacity building on gender awareness Gender equality will be addressed in the curricula and content of all training material developed for trainers, mentors and judges as well as in the training delivered to national PEEs. As such specific material for capacity building on gender awareness will be developed as part of the material/tool-kits and a clear code of conduct for mentors and trainers will be developed. Templates prepared for assessing or reporting on entrepreneurs/SMEs will include gender specific recommendations and observations and templates for TORs for the project experts will include gender aware language and suggestions.
Application stage for Accelerator	Applying a gender lens to application stage Collection of gender disaggregated data through application forms: Number of women-led enterprises, % of women in the applying team; Targeted outreach: The main target groups would be both men and women engineers and business persons, but importantly also ways in which to bring the two groups together. From the second year of implementation, the project will consider organizing events specifically targeted at connecting women technicians/engineers with business women; Setting a target on the % of women-led enterprise applications (at least 35% for global accelerator) -this percentage to be validated in the inception phase of the project
Selection of both men and women semi-finalists, and mentors and judges	Stringent selection criteria will be defined that provide equal opportunities for both women and men. The objective would also be to involve women in the mentoring process so that more role models could be created, thus mitigating the impact of this inequality in the future.

Special Awards	Special consideration will be given to the creation of a gender related prize; either a prize for the women?s entrepreneur of the year or a special award for the team with the product/service with the most potential positive impact on gender equality, which would be part of the global cleantech competitions involving all Cleantech countries concerned. A similar prize was awarded in a number of the ongoing GCIP project cycles and has led to increase in the number of women-led innovators applying to the GCIP. In countries like South Africa, Pakistan and Morocco where such a prize was included the number of women-led applications increased to between 25% and 40%. In sum, the project design will acknowledge the differences between women and men considering distribution of economic activities and social roles in the cleantech innovation space, in line with GEF 7 Programming Strategy.
Provision of support to entrepreneurs in accelerator, advanced accelerator and post-acceleration	Where considered necessary support for GCIP entrepreneurs will target areas that women entrepreneurs have seen as barriers to ensure inclusion. For example it may be necessary to offer segregated financial training to encourage women to attend and so increase the uptake and learning.
Global forums	Women participants will be encouraged to attend through focused outreach and ensuring that topics of interest to women entrepreneurs are included Participant data disaggregated
Investment facilitation	Investment facilitated under GCIP will have gender lens investing principles applied to all investment decisions. To support this GCIP investing guidelines will be developed which will incorporate gender lens investing principles. Specific training material for investors will be developed on investment with a gender lens.
Capacity building	Material for dissemination to all countries will include capacity building on gender equality and the engagement strategies and frameworks developed will include a focus on engaging with women.
Policy support	Gender and youth empowerment framework developed for dissemination and adaptation in each GCIP country

Table 3: Gender mainstreaming

Supporting youth cleantech entrepreneurs

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

205. Youths are more likely to be interested in mission/impact driven business models, as opposed to profit driven business models. This means the goals of GCIP are more attractive to youths that seek to establish businesses that offer environmental solutions. Therefore interest from youths to participate in GCIP is higher. For example in Pakistan the average age of GCIP innovators was between 25 and 35 years and in South Africa 33% of the GCIP semi-finalists over five years have been younger than 35 years old. It is important to engage youths in the cleantech sector, as youths experience environmental problems differently due to behavioural and lifestyle differences compared to other generations. Many cleantech solutions are developed based on personal experiences, and therefore fully engaging the youth will be important in addressing environmental challenges comprehensively. To promote application from early stage R&D cleantech solutions, GCIP has focused on engaging universities and students. This has the added benefit that youths are naturally the target group of GCIP communications and advocacy efforts. GCIP is also indirectly impacting the entrepreneurial culture of partner countries, through its communications efforts. The main message is that solutions to environmental and social challenges can be profitable business models. Also, in promotion efforts for the GCIP supported SMEs, many youth entrepreneurs are showcased, and the public is exposed to success stories of young entrepreneurs. Seeing peers as entrepreneurs may indirectly influence other youths to also consider entrepreneurship as an option. A women and youth empowerment framework will be developed which will be disseminated to the GCIP countries for adaptation and implementation.

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;

Improving women's participation and decision making Yes

Generating socio-economic benefits or services or women

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

Yes

4. Private sector engagement

Elaborate on private sector engagement in the project, if any

206. Private sector engagement is key to the success of this global child project as well as the overall GCIP programme. The private sector is the main target group for the project. A strategy for private sector engagement will be developed as part of this project under 1.2.1. This project includes the following areas of private sector interaction; all of which are integral to the GCIP approach to identifying and supporting cleantech innovation see Appendix R for further specific examples):

207. Direct interaction and support for SMEs and entrepreneurs with climate and clean energy technology and business model innovations. Innovative technology SMEs are agents of change and by supporting them to strengthen their businesses and commercialize results in market transformation. In this project, direct support will be provided to SMEs identified in global accelerators as well as post-accelerator advanced support being provided to selected SMEs identified under the national accelerator programmes. Support will be provided to, inter alia, help companies commercialize, to establish and connect to overseas markets and to find investment and partners. Investment facilitation support will be provided by linking GCIP alumni enterprises with potential investors and by ?de-risking? them for financial institutions.

208. Engagement with international industry associations to leverage their knowhow, capital, connections and interest in cleantech innovations. GCIP will also engage captains of industry as mentors, trainers and judges in the acceleration processes.

209. The effort to mobilise private investments (debt/equity) from international impact investors, such as venture capital funds and angel investors, for the GCIP alumni, will be closely linked to PFAN (REEEP) (Private Financing Advisory Network www.pfan.net)operations. PFAN (REEEP) is the global PEE for Outcome 1.2 and will encourage GCIP enterprises into its pipeline to receive support to reach financial closure. Over the past GCIP cycles, PFAN has helped 10 GCIP alumni companies to mobilize a total of USD 17.2 million. Under this project a strategic partnership will be established with PFAN. Under this partnership, GCIP alumni companies will be referred to the PFAN for support. PFAN (REEEP) will assess the GCIP alumni companies against its pipeline entry criteria and provide support to those enterprises that meet the requisite minimum requirements. Based on previous experience a number of GCIP alumni companies should get into the PFAN pipeline to access and secure finance.

210. Access to a wide network of private sector organisations including investors, associations, corporations and incubators will be facilitated for the GCIP alumni through the direct engagement of NGIN, PFAN (REEEP) and CTG as global PEEs for Outcome 1.1, Outcome 1.2 and Outcome 2 respectively.

211. Partnerships with large corporations with a proven commitment to identify and invest in specific clean technology innovations. GCIP will develop targeted cleantech accelerators in partnerships with global/local corporations to find demand driven solutions with direct market access,

as successfully demonstrated in Morocco. The scope of the particular challenges will be discussed with the specific corporations.

212. Partnerships with corporations will also be formed to connect GCIP alumni with other cleantech companies with the aim to create joint venture and co-innovation opportunities across borders, to facilitate market expansion and product co-development. With a global mandate the global child project is in a very good position to facilitate this. 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. This pilot will be expanded under this project.

213. Connections will be formed with public and private cleantech incubators and innovation hubs in specific international markets that are of importance to GCIP alumni.

214. GCIP will bring international financiers together with the SME innovators and will engage with financiers to transform investment decisions to consider socio/economic benefits in addition to profit. Financing institutions, venture capitalists and angel investors will be key target groups for the communications and outreach activities of GCIP at global and regional levels. GCIP aims to bring together a robust network of national and international investors to raise awareness and sensitize various stakeholders on the opportunities and risks associated with cleantech products and market trends. The global child project will focus on international investors, including venture funds, angel networks and strategic investors. This will result in greater appetite for investment in cleantech SMEs and so crowd in private sector investments. Investor Connect events will be organized for GCIP alumni with targeted impact investment funds and venture capital funds and targeted investment / financing vehicles will be connected with selected GCIP alumni.

5. Risks to Achieving Project Objectives

Elaborate on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, the proposed measures that address these risks at the time of project implementation.(table format acceptable):

Table 4: Risk Mitigation Measures

Risk	Level of Risk	Mitigation Actions

Risk	Level of Risk	Mitigation Actions
Institutional risk Lack of capable and relevant institutional partners for project execution and sustainability	Low	Since the introduction of the GCIP in 2011 the programme has been operated without dedicated funding and resources for global coordination activities and knowledge management. Recognizing the value of these efforts and the need to build on the experience, the proposed global child project is designed in part as a mitigation measure against the institutional risk to ensure that the Global programme can continue be operated in a systematic and continuous manner. To ensure vertical and horizontal integration, UNIDO has built a strong network of partners at international and regional levels that can be leveraged for project and post-project implementation and execution. Three global PEEs (NGIN, CTG & PFAN) have been selected based on their experience and expertise and their ability to be a funding partner post-GEF with the future model likely to be a combination of a sponsorship and fees model. An organizational assessment through a commercial RFP evaluation was conducted during PPG phase to evaluate potential execution risks for each global PEE. The results showed the risk assessment to be ?low? in all areas since robust commercial procurement process has been followed.
Operational risk On-going global restrictions due to global shock (eg. covid-19)	Medium	The intention is that the Global forums and some of the training occurs face to face. However if this is not possible due to travel and/or group meeting restrictions then the events will be organized on-line with the aim of providing an experience as close as possible to the physical events with side events and one to one meetings also possible.
Sustainability risk Lack of ownership to run activities and inability to source funding to continue the programme's activities in the medium/long term	Low	Sustainability is mainstreamed through the global project with exit strategies developed early on which will identify the management and financing of the global coherence, management and coordination roles as well as the global competition. Three global PEEs (NGIN, CTG & PFAN) have been selected based on their experience and expertise and their ability to be a funding partner post-GEF with the future model likely to be a combination of a sponsorship and fees model.

Risk	Level of Risk	Mitigation Actions
Political risk Lack of political support to mainstream innovative clean technologies	Medium	Currently, cleantech innovation and entrepreneurship are high priority areas in international climate action dialogue and governmental agendas. To keep the momentum and the political support, advocacy and awareness raising activities will be an integral part of the global project. Innovations with a high potential of generating global environmental benefits will be promoted and mainstreamend as solutions to the international development agenda. The Global Advisory Board will ensure strategic direction and guidance.
Financing risk Default in mobilizing co-financing from key partners	Low	Co-financing commitments have been obtained from PFAN, CTG and NGIN and a proper follow up will be made with the co-financing partners to ensure timely availability of co-financing. During project implementation, the co-finance received (cash or in-kind) will be closely monitored and documented.
Financing risk Incentive and financial support system are insufficient Financing available reduces due to global recession	Medium	Financing institutions, venture capitalists and angel investors will be a key target group for forming strategic partnerships and outreach activities of GCIP at global and regional levels. Investment facilitation support will be provided by linking high-impact GCIP enterprises with potential investors and by ?derisking? them for financial institutions. GCIP is highly recognized by investors and through programmatic coherence seeks to build confidence in national and international investors to invest in GCIP cleantech innovations. PFAN will establish windows for GCIP alumni and the GCIP acceleration and post acceleration support will assist alumni to successfully gain support and investment facilitation with PFAN. In addition, strategic partnerships with recognized and respected public and private institutions will be strengthened to increase the visibility and confidence in the GCIP methodology, thereby increasing the confidence in GCIP enterprises and the understanding of market opportunities and barriers in the cleantech space. Cleantech is expected to continue to grow as markets and ivnestors look to focus on environmental and sustainable funding opportunities.
Market risk Lack of interest from entrepreneurs and potential SMEs	Low	There is robust demand from GCIP alumni for further post-accelerator support including enhancing linkages with investors and the private sector and international partnering and expansion. Coherent communications campaigns and outreach activities on global and national levels will provide evidence of the benefits of GCIP as well as advertising the competitions as widely as possible. UNIDO and NGIN will leverage on their own networks as well as strategic alliances and their respective networks and partners to advertise the global GCIP accelerators in global, regional and national fora ensuring the coverage is as wide as possible. Experience from the first GCIP projects shows there is a healthy appetite for GCIP support.

Risk	Level of Risk	Mitigation Actions
Market risk Failure of businesses	Medium	Using the GCIP methodology will provide innovators and entrepreneurs with the skills required to develop and commercialize their innovations. The Accelerator provides intensive training, mentoring as well as technology and business model validation to ensure adequate understanding of customer segment and the market to increase commercial success rates. High-impact innovations are selected, validated and provided with advanced business growth support to access funding as well as grow organisational capacity for scaling-up.
Market risk. Lack of interest of industries for shifting to clean technologies	Medium	Global stakeholder consultation has taken place to assess commitment and prioritization in cleantech innovation programme resulting in confirmed interest in mainstreaming green techologies as important contributions for low carbon development pathway. As part of the global competitions, challenges will be developed working alongside inustrial partners so that competitions respond to actual industrial needs thus providing adequate innovative clean technology solutions to an existing environmental problem and potential industrial production constraint. This approach seeks to create a win-win situation for the innovators and the industries as they will be able to identify a solution without extensive resource allocation for R&D and the innovators will be able to validate their technology and find customers. This will include innovative business modeling for delivery of clean technology solutions to industry partners such as appropriate ESCO models, etc.
Gender Risk	Low	To ensure gender inclusiveness of all programme activities, UNIDO methodology for gender assessment and gender responsive communication showing the benefits of gender equality for both women and men, and ensure stakeholder involvement at all levels will be promoted throughout the programme at the global level, incorporating local aspects of cultural and gender sensitivity. To mainstream women entrepreneurship, adequate and gender responsive communication strategy as well as further sensitization workshop will be employed. A full gender analysis has been carried out and its recommendations have been incorporated into the project design.

Risk	Level of Risk	Mitigation Actions
Environmental and Social Risks	Medium	Overall the environment and social risk is considered to be medium (category B). However it is recognized that some potential clean technologies may have significant environmental risks such as the use of blockchain, which could have major GHG emissions associated with it unless powered entirely by renewable energy (cooling), which is difficult to ensure. Similarly technologies related to storage, in particular, can have harmful environmental impacts if not mitigated or managed effectively. Clear environmental safeguarding measures are proposed that include any cleantech innovation applying for support will need to meet strict E&S criteria and be subject to stringent screening by an expert to ensure that any related impacts are mitigated appropriately and if this is not possible the technology will not be supported. There are also possible negative social impacts relating to the technologies supported such as poor labour, health and safety conditions in the SME?s operations or related to their contractors. There is also a real risk that there is low women and youth participation in all project activities. Social safeguarding will address this through the former being included in the E&S criteria and stringent screening and the latter will be mitigated with gender and youth mainstreaming actions. See also the ESMP in Annex L.
Climate change risks	Low	The extent to which climate change affects the outputs and outcomes of the project will depend on the cleantech innovations supported as part of the project. Possible impacts of climate change could relate to cleantech innovation dependent on biomass or water supplies whose raw material is affected. There are also climate change impacts that could affect any SME such as through logistic disturbances, disruptions to production, effects to working conditions or to the market, increased utility prices and costs for insurance, finance or imports. To safeguard against climate change risks the screening of technologies for selection for global GCIP support will include an assessment of the climate risks, over the next 30 years, and where a risk is identified it will be necessary for the SME/entrepreneur to propose suitable adaptation or management measures. Climate risk will be included in the E&S criteria. GIZ?s Climate Expert Tool[1] could be used as one tool available to entrepreneurs. Once selected the alignment of proposed technologies will continue to be reviewed against local climate risks, as part of the support provided within the accelerator. Further details of climate change risks and safeguarding is provided in the ESMP.

Table 5: COVID-19/similar crises risk analysis

Risk	Risk level	Reduction measure

Technical expertise is not readily available due to the pandemic	Low	The technical expertise identified for the global Child project is spread internationally and therefore the experts are used to working remotely. However site visits and meetings are also necessary. The project will look to identify alternate technical expertise in case it is required. Planning should 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/ implementation	Medium	The project must be ready to strengthen the capacity of the stakeholders for remote work and online interactions by securing access to commercially available conferencing systems. This will contribute to government and project staff safety and decrease the need for travel thus further decreasing potential carbon footprints. The nature of a global accelerator is that it is conducted remotely. However some of the training is designed to be face-to face. If this is not possible then events will be organized on-line with the aim of providing an experience as close as possible to the physical events with the ability o ?meet? one to one.
Beneficiaries?? (national governments, industrial associations, entrepreneurs) focus changes due to crises	Medium	Cleantech is likely to be more of a priority due to the pandemic, however because the results are not immediate further advocacy may be needed to ensure continued commitment and buy-in from all stakeholders.
Some project supporters, co-financiers or beneficiaries may not be able to continue with project execution/implementation.	Low	The project will have to monitor closely the situation of these counterparts in order to find alternate supporters or co-financiers, or to readjust the list of beneficiaries.
Increases in lead time and price increases for procurement of goods/services	Medium	The project team will have to work harder in finding alternate providers and making sure that competitive pricing is obtained.

Table 7: COVID-19 opportunity analysis

Opportunity	Opportunity level	Opportunity optimization measure

New business opportunities created in response to COVID-19 related restrictions and measures	High	Response to COVID-19 restrictions, such as remote working arrangements and no-contact business modalities will require solutions that can be turned into new business models. These opportunities will be analyzed at a global level and shared with the GCIP entrepreneurs as part of the market intelligence information. Examples of former GCIP alumni responding to new business opportunities by providing innovative solutions during the pandemic are summarized here: https://www.unido.org/stories/cleantech-innovators-take-covid-19
New business opportunities to build back better for business continuity and economic recovery post-COVID-19	High	By design, the GCIP projects engage the private sector (especially and SMEs) to promote energy efficiency and renewable energy technologies, business models with resilience to climate change, and circular business practices. New business opportunities and policies and regulations will be added to the Accelerator curriculum so that the entrepreneurs are fully informed of the market and policy environment trends.

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

6. Institutional Arrangement and Coordination

Describe the institutional arrangement for project implementation. Elaborate on the planned coordination with other relevant GEF-financed projects and other initiatives.

Project Implementation

215. As the lead GEF Implementing Agency for GCIP, UNIDO holds the ultimate responsibility for the implementation of the programme, the delivery of the planned outputs and the achievement of the expected outcomes. In particular, UNIDO will be responsible formonitoring of the programme, supervising the global coordination efforts and reporting on the programme performance to the GEF. The implementation and execution arrangements can be found in the table below.

	Pillar 1	Pillar 2	Pillar 3
Implementation	UNIDO Department of Energy (Office of the Director)	UNIDO Department of Energy (Office of the Director)	UNIDO Department of Energy (Office of the Director)
Execution	NGIN,PFAN (REEEP), UNIDO CTI Division	CTG	UNIDO CTI Division
Component	Component 1: 1.1 NGIN 1.2.1 PFAN (REEEP) 1.2.2 UNIDO CTI Division	Component 2: 2.1.1, 2.1.2 and 2.1.3	Component 3: 3.1.1, 3.1.2, 3.1.3, 3.2.1, 3.2.2, 3.2.3

Table 6: Implementation and execution arrangement

216. The implementation function of the global child project lies within UNIDO?s Department of Energy - the Office of the Director.

Project Execution

Global Child Project Executing Entities (global PEEs)

217. In line with the GEF policy on separation of implementation and execution functions for GEF funded projects, UNIDO has identified and selected global PEEs for Component 1 and 2 of the project, through an open competitive process according to UNIDO procurement rules and regulations. There will be a contractual agreement between UNIDO and each of the global PEEs detailing the expected outputs and deliverables including conditions of payment amongst other conditions.

218. For execution of Component 1, the Network for Global Innovation (NGIN) and the Renewable Energy and Energy Efficiency Partnership (REEEP), on behalf of the Private Financing Advisory Network (PFAN) have been selected. For Component 2, the Cleantech Group (CTG) has been selected as the executing entity.

219. The Private Financing Advisory Network (PFAN), hosted jointly by UNIDO and the Renewable Energy and Energy Efficiency Partnership (REEEP) is a global network of climate and clean energy financing experts that offer business coaching and investment facilitation to entrepreneurs developing climate projects in emerging markets. PFAN is not a legal entity and conducts its business via subcontract through UNIDO and REEEP. In this instance REEEP will be the subcontractor. The experts in

the PFAN network offer personalized one-on-one coaching and targeted introductions to investors, providing a fast track to commercial investment

220. NGIN and PFAN (REEEP) will be responsible for the execution of Component 1 project activities, in addition to managing the delivery of project outputs (funded by the GEF project financing and respective co-financing) whilst CTG will have the same responsibilities for Component 2 of the global child project. Terms of Reference (ToR) for the global PEEs are included in Annex M.

221. UNIDO will implement the global project as a whole, and execute Components 1.2.2 and 3 of the project. Specifically, the implementation will be handled through the Office of the Director of the Department of Energy, and the execution will be handled within the Climate Technologies and Innovation division (CTI). Pillar 3 of GCIP at the programmatic level focuses on ensuring coherence and synergies across child projects, which will be achieved through operationalization of Component 3 (and Component 1.2.2) of this global child project. By executing Components 1.2.2 and 3 of the global child project UNIDO ensures coherence and cooperation across all child projects and thus the success of the GCIP as a programme.

222. Execution of Components 1.2.2 & 3 will be through the Global Programme Coordination Team (GPCT), which will be located in the Climate Technologies and Innovation Division, with designated personnel contracted by UNIDO and who will have clear responsibilities with regard to the execution of the Global Child Project that are separate from any implementation function of UNIDO. The GPCT will ideally comprise of a Project Manager, GCIP Coordinator, Knowledge Management and Communication Expert and an Administration Assistant. The Terms of References (ToRs) for these personnel are included in Annex M.

223. The main function of the GPCT will be to maintain the programmatic approach and coherence across the programme, outlined in Component 1.2.2 and 3 of this document. This will include activities such as developing and enforcing standards and approaches that ensure programmatic coherence for the purpose of efficiency and sustainability of GCIP interventions over time, tracking and reporting of GCIP impact at national and global levels, establishment and maintenance of a common web platform to aggregate country data and ensuring consistent dissemination of knowledge centrally etc., facilitating robust communication channels among the national counterparts, global PEEs and national PEEs.

Support from global PEEs to National Child Projects

224. An integral role of the global PEEs in executing the activities of Component 1 and 2 of this project is to facilitate collective interaction, training, knowledge sharing and communication with the national child projects through the national PEEs, as set out in the alternative scenario. This includes the development of tools and guidelines for dissemination to each national child project, training and workshops provided to all national PEEs to strengthen their capacity to adopt and operationalize the tools and guidelines developed, and further support to the national child projects, to enhance the capacity of national PEEs in adopting and adapting the frameworks and tools developed in the global child project, to reflect the national contexts. In addition, national PEEs can select optional supplementary services specific

to their country needs from the global PEEs. Each of these supplementary services are identified during the PPG phase, and included in the project document of each national child project. Based on this pre-determined scope and costs, UNIDO (as the implementing agency of the respective national child project) will contract the global PEE to deliver the services to the national PEE. The terms of reference and schedule of payments are finalized in consultation with the respective national PEE.

The following figure shows the delivery of services from the global PEEs to the national child projects.

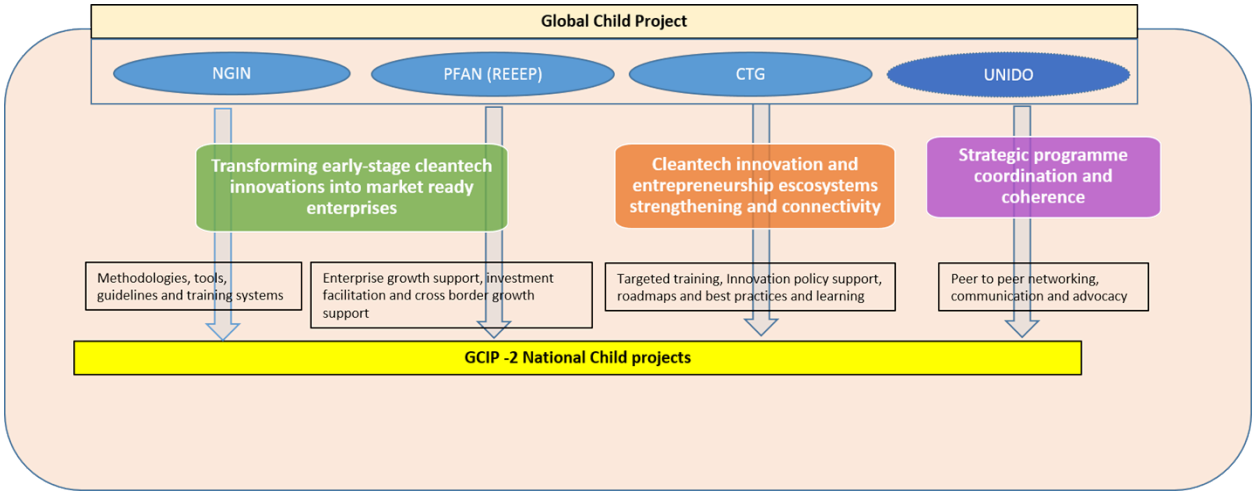


Figure 4: Delivery of Services from the global PEEs to the national child projects

Project Governance

Global Advisory Board

225. A Global Advisory Board will be established to provide strategic inputs to the global project and to the overall global programme. The Global Advisory Board will comprise of the GEF, UNIDO and government representatives from each GCIP partner country. Other key partners and stakeholders active in the cleantech space may be invited to join the Advisory Board. The Advisory Board will provide strategic guidance to the programme, and will be the approval body for items of major impact on the programme. It will meet once a year to monitor progress against the objectives of the overall GCIP at the programmatic level, address potential problems and discuss strategic and policy issues affecting the programme. It will review impact tracking and will be responsible for defining strategy and advocacy messages.

226. UNIDO?s Global Programme Coordination Team (GPCT) forms the secretariat of and reports to the Global Advisory Board on the progress of the global child project and programmatic level issues that may arise during the reporting issues.

227. While each county child project will have its own project steering committee, the Global Advisory Board will also actively discuss emerging issues across child projects and suggest solutions that contribute to the overall objectives of GCIP (see Annex S for the Terms of Reference for the Advisory Board).

The institutional arrangement for the project is shown in the following figure.

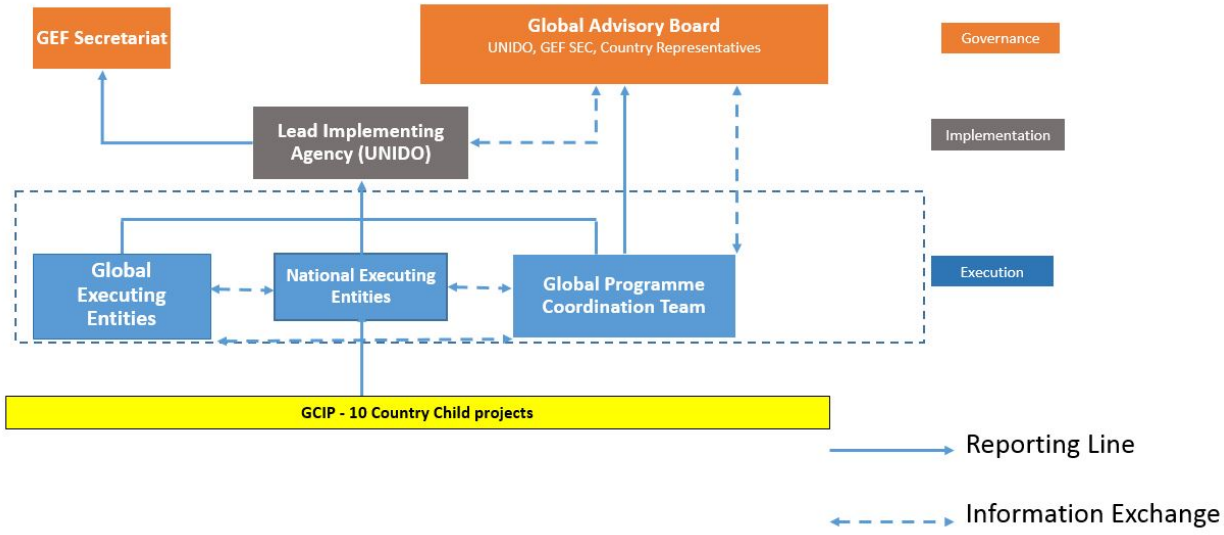


Figure 5: Institutional Arrangements for GCIP

Co-ordination with other initiatives

228. In addition to coordination with the ten GEF-GCIP country child projects based in Cambodia, Indonesia, Kazakhstan, Moldova, Morocco, Nigeria, South Africa, Turkey, Ukraine and Uruguay under the global programme framework (10408), the GCIP child project will also look to co-ordinate with other GEF funded programmes. In particular, it looks to establish operational, investment and/or knowledge management links with other GEF flagship initiatives such as the prospective Africa Minigrids Programme (GEF ID 10413), Greenchem (GEF ID 10353) and FOLUR (GEF ID 10201). Furthermore the global child project will exchange knowledge and lessons on opportunities for technology and business model innovations across these programmes. The following two programs are particularly well aligned with GCIP:

229. The Sustainable Cities Impact Program (GEF ID 10391) supports cities as they pursue sustainable urban planning through spatially integrated solutions in energy, buildings, transport, urban food systems, management of municipal solid waste, and utilization of green space and infrastructure. The Impact Program promotes innovative climate actions across 28 cities in 11 countries. This aligns well with the GCIP approach of ecosystem strengthening through innovation clusters. The programme could provide

learning opportunities for where to focus urban innovation and may present challenges and new markets for GCIP innovations and enterprises.

230. A new GEF Global E-Mobility Program (GEF ID 10114) launched at the COP25 climate summit will help 17 developing countries deploy electric vehicles at scale, in support of improved air quality and reduced fossil fuel dependency. The programme will help governments establish supportive policies to enable technology transfer, private sector engagement, and access to commercial finance for the introduction of fleets of electric buses, two-wheelers, three-wheelers, trucks, light duty vehicles, and private vehicles. This work will be closely tied to the GEF Sustainable Cities Impact Program. The GCIP global child project will drive collaboration and coordination since innovative e-mobility solutions will be a focus of GCIP and could again provide innovative solutions to support these new value chains.

231. In addition to GEF initiatives, close cooperation and coordination with the Climate Technology Centre and Network (CTCN) will be sought. CTCN is the operational arm of the UNFCCC Technology Mechanism co-hosted by UNIDO. CTCN aims to promote the accelerated transfer of environmentally sound technologies for low carbon and climate resilient development at the request of developing countries This is fully in line with and complementary to the GCIP objectives, and GCIP will also maintain an open channel with the CTCN through the GCIP Global Child Project to ensure that the technology solutions, capacity building and advice on policy, legal and regulatory frameworks are specifically tailored to the needs of individual countries.

232. The GCIP child project will also co-ordinate with other global initiatives such as the Green Climate Fund, Climate KIC, the Solar Impulse Foundation and the Global Innovation Fund. The proposed form of engagement and collaboration is outlined in Section 2 on stakeholder engagement.

7. Consistency with National Priorities

Describe the consistency of the project with national strategies and plans or reports and assesments under relevant conventions from below:

NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc.

233. The GCIP Global Child Project is a global project enhancing and supporting national child GCIP projects, under the GCIP global programme, as well as holding global accelerator and innovation challenges. As such the project is consistent with the international climate change and sustainable development strategies and agenda and, in its support for the child projects, will also be fully in line with associated National strategies, plans and assessments.

234. Technological innovation is a critical accelerator and enhancer of the efforts to implement national climate actions and achieve the above-mentioned global objectives. The Paris Agreement explicitly refers to innovation in its Article 10, paragraph 5. In the 2030 Agenda for Sustainable Development, technological innovation is referred to in connection with various sustainable development goals, particularly goals 7 (affordable clean energy), 8 (decent work and economic growth), 9 (industry, innovation and infrastructure) and 17 (partnerships for the goals). Acknowledging the key role technological innovation can play in combating climate change, the UNFCCC Technology Executive Committee (TEC) conducted a study on the role of technology innovation for the Paris Agreement . In this TEC report, the ten key messages are:

? Technological innovation is central to climate action - Tech innovation plays a key role in supporting countries to implement their NDCs and mid-century strategies

? Acceleration of climate technology innovation needed - Climate techs are being deployed on unprecedented levels, but innovation needs to be scaled up and sped up to meet Paris Agreement objectives

? Countries have unique innovation needs - Every country is different. This makes it difficult to identify quick fixes for enhancing innovation efforts

? Effective innovation is based on actors, institutions and networks - Successful innovation interventions depend on a sound national system of innovation

? The right ?push? is important - Efforts to enhance RD&D are crucial. The national government can play a key role in stimulating private sector participation in these activities

? Demand ?pull? is equally important - The national government can play a role in incentivizing widespread deployment of climate technology innovations

? Innovation is more than technology - Innovation in financing, business models and policy mechanisms is key for leveraging the full potential of climate technologies

? Innovation benefits from involvement of many stakeholders - To have impact, technological innovation should be inclusive

? International collaboration is efficient - Enhancing collaborative efforts can play an important role in facilitating large-scale deployment of low-emission and climate-resilient technologies

? UNFCCC bodies: building coherence and synergies - The wealth of technological and financial knowledge that the UNFCCC bodies hold creates huge potential for collaboration that can affect transformational climate action.

235. In addition, understanding climate technology needs is the starting point for effective action on climate change. To understand these needs, and to determine a country?s climate and clean technology priorities, the UNFCCC technology needs assessments (TNAs) will be consulted to ensure that GCIP supported technology innovations are fully in line with the relevant national sustainable development priorities. In recent years, many countries have also identified climate technology innovation needs in their nationally determined contributions (NDCs), which will further inform the GCIP?s interventions in the GCIP partner countries.

8. Knowledge Management

Elaborate the "Knowledge Management Approach" for the project, including a budget, key deliverables and a timeline, and explain how it will contribute to the project's overall impact.

236. Knowledge management is one of the key objectives of GCIP. Knowledge management is included within all three components of the project and seeks to create, generate, capture and disseminate knowledge generated by the GCIP at national and global levels in a symbiotic and mutually reinforcing manner. Without dedicated knowledge management it is not possible for the project to achieve its overall impact. Knowledge management will ensure that the ecosystems within each child country are strengthened and connected and will assist the entrepreneurs to reach their potential thereby contributing to promoting coordination, ecosystems connectivity and accelerating the uptake of, and investment in, innovative cleantech solutions. A knowledge management, communications and advocacy strategy will be developed at the beginning of the project which will outline the mechanisms to be used and for whom. Knowledge management products will be designed to be targeted at different stakeholders as shown in the table below. The knowledge management approach includes the following

237. In terms of dissemination of knowledge products, GCIP will apply different modalities depending on the target audience. To reach out to innovators, GCIP will enhance its presence on social media platforms. So far GCIP has been present on twitter under the handle - @GCIPsmes at global level and country specific accounts like @GcipMaroc ? which is the handle for Morocco. Information related to calls for innovations, news and opportunities for support will be disseminated through various social media platforms such as Twitter, Facebook, WhatsApp, Instagram and LinkedIn. Reports, tools and indices will be disseminated through print and circulated at high level events including COP etc. These reports will be posted on the web platform and news items widely disseminated through social media.238. All knowledge management activities (such as brochures, case studies, frameworks and featured articles) will be gender mainstreamed. This includes integration of gender dimensions into publications, for instance presenting sex-disaggreagted data, gender-energy nexus theory, gender sensitive language in publications, photos showing both women and men, and avoid presenting stereotypes, as well as assuring that women, men and the youth have access to and benefit from the knowledge created.
The budget for knowledge management is incorporated int the general budget (Annex F) as it is integral to the project. A timeline for delivery is shown in the workplan in Annex H.

Knowledge products / management approach	Targeted stakeholders	Timeline (Year and months)
Under the global child project, a web platform will be established and will have various functionalities that are central to knowledge management efforts in GCIP. To begin with the web platform will be used to manage the accelerator processes in all GCIP countries. It will also act as a repository of the reports, updates on the works on policy and regulatory innovations in each of the GCIP countries. All methodologies, tools and guidebooks will be available through the web platform. In addition, it will act as a platform for a Community of Practice in cleantech innovation in various countries and across countries. The web platform will also act as a mechanism to foster knowledge exchange between participating entrepreneurs, alumni and mentors, both within each GCIP country and between across all 10 GCIP countries. Discussion forums, live chat sessions, webinars and live broadcasts will enable both specific questions to be answered and broader thematic feedback to be collated. The resulting information will be used to measure community engagement and enhance ongoing training and support. Furthermore, the platform will be used for showcasing GCIP assisted companies by creating sub- webpages to profile their innovation, business, team and key needs (e.g. investment, connections, partners etc.).	National PEEs Mentors, judges, trainers GCIP alumni Community of Practice Investors Finance community Government Public SMEs and entrepreneurs	Website development: Y1 M1-6 Website operation: Continuous
Market analysis, comprised of high-level observations in the global cleantech market (fundraising events, significant mergers & acquisitions, technological breakthroughs). Serves as a complement to the detailed analyses delivered in the year 1 and 3 workshops, as well as the cleantech index. To be delivered to GCIP stakeholders through the GCIP online portal.	National PEEs Mentors, judges, trainers GCIP alumni Community of Practice Investors Finance community Government SMEs and entrepreneurs	Y2

Frameworks, workshops, and workshop materials on capacity building, stakeholder engagement, cluster development and innovation policy, developed through secondary and primary research processes, delivered through workshops with stakeholders. At the global level, this content will address the GCIP programme's trajectory benchmarked against global trends.	Investors Corporations Universities Government SMEs and entrepreneurs	Y1 and Y3
Frameworks, workshops, and workshop materials on capacity building, stakeholder engagement, cluster development, gender and youth mainstreaming and innovation policy, developed through secondary and primary research process, delivered through workshops with stakeholders. At the national level, there will be customization to national strengths and key industries. At the national level, the projects will culminate in long-term policy and corporate engagement recommendations, tailored to the in-country stakeholders that Cleantech Group works with during the project process	National PEEs Governments Finance community	Y1 and Y3
The Cleantech Innovation index will be developed as a regular publication of the GCIP programme to share knowledge on the innovation ecosystems in GCIP countries. Each Child project will be tasked with collecting data and developing indicators for the index in each country. Data should also be collected at the global and national level during the application phase for the accelerators in Component 1. Innovation indices will be tailored to the GCIP programme, covering only trends that are priorities to the GCIP programme and its affiliated member companies, and addressing opportunities for the specific GCIP countries, using benchmarks generated during the preparation for the initial global workshops in years 1 and 3. The global child project will be responsible for collecting, synthesis of all the indicators and developing the index, the publication and dissemination of the report.	Investors Finance community Governments SMEs and entrepreneurs	Y1 and Y3

As part of knowledge management, enhanced GCIP impact tracking will be implemented. To this end, indicators and methodology of assessing impact of GCIP will be developed. Once developed and validated, these tools will be applied to all child projects for consistent and regular tracking of the impact of GCIP. Participating SMEs, national entities and policy makers, will be able to benchmark the current and projected impact against other SMEs and projects, both within each GCIP country programme and between countries. The global child project will then extract knowledge from these reports and develop knowledge tools that include stories, brochures, thematic reports for widespread dissemination to policy makers, innovators, investors etc. Feature articles will also be generated that will be included in other report, magazines that are widely read in GCIP countries and by GCIP partners at country level and globally.	Investors Finance community SMEs and entrepreneurs Governments Public	Development of methodologies: Y1, M1-6 Use of impact tracking: Annual Reports, stories, articles: Throughout project
The global child project will develop GCIP guidebooks and methodologies that will be adapted and applied in other child projects and for wider dissemination and replication. Standards will be developed and used across the GCIP countries to ensure the quality of the programme. These guidebooks and standards will strengthen knowledge management across the programme.	National PEEs Mentors, judges and trainers Alumni	Y1
Training materials will be developed to ensure that participating entrepreneurs, alumni, mentors and judges meet prescribed global and national standards. Importantly, the results from all training will be captured, including i) details of national localization and adaption; and ii) examples of how the training has been successfully applied by the participating entrepreneurs (lessons learnt). This community-derived knowledge will also be used to improve and enhance the training materials on an ongoing basis.	National PEEs Mentors, judges and trainers Alumni	Y1

9. Monitoring and Evaluation

Describe the budgeted M and E plan

239. Project monitoring and evaluation (M&E) will be conducted in accordance with established UNIDO and GEF procedures. This is over and above the impact tracking detailed in Component 3.2 (which will focus on the impact and outcomes of the project and will feed into the overall results framework). The overall objective of the monitoring and evaluation process is to ensure successful and quality implementation of the project by:

? tracking and reviewing project activities execution and actual accomplishments;

? providing visibility into progress as the project proceeds so that the implementation team can take early corrective action if performance deviates significantly from original plans; and
? adjusting and updating project strategy and implementation plan to reflect possible changes on the ground, results achieved and corrective actions taken.

240. A detailed Project Result Framework (LogFrame) is included in Annex A provides performance and impact indicators for project implementation along with their corresponding means of verification. These will form the basis on which the project's M&E Plan will be built. The evaluation/implementation team reports and verifies the actual progress against the approved work plan approved.

241. The M&E procedures will consist of project inception, progress reporting, and a project final report. A detailed monitoring plan for tracking and reporting on project time-bound milestones and accomplishments will be prepared by UNIDO in collaboration with the global PEEs and project partners at the beginning of project implementation and then periodically updated.

242. All monitoring and evaluation tools and documents, such as the monitoring plan, progress reports, final evaluation report, and thematic evaluations (e.g. training needs assessment), will include gender dimensions, and report with respect to an established baseline for gender related targets.

243. The UNIDO project manager will be responsible for tracking overall project milestones and progress towards the attainment of the set project outputs and will be also responsible for reporting to the GEF.

244. An external mid-term review will be conducted during the third year of implementation and an independent terminal evaluation conducted by independent experts will be carried out by the project, and also at the programmatic level under this global child project. The terminal evaluation of the GCIP at the programmatic level will be managed by the UNIDO ODG/EVA in compliance with all GEF requirements. Terminal evaluation reports will be sent to the GEF Evaluation Office at the latest 6 months after the completion of the evaluation.

245. Monitoring and evaluation (M&E) is also covered under Activity 3.2.2.

246. Overall, US$ 75,000 from the GEF which includes US$ 40,000 that has been reserved for the terminal independent evaluation and with co-financing equivalent to US$ 125,000 have been foreseen for the M&E activities. The terminal evaluation will be conducted 6 months prior to the completion of the project.

247. In addition, part of the UNIDO?s contribution to project implementation will be used by the UNIDO project manager for monitoring of the project implementation.

M&E Activity Categories	Feeds Into	Time Frame	GEF Budget (USD)	UNIDO co-financing (USD)	In-kind co-financing* (USD)	Responsible Parties

Periodic progress reports and monitoring of project impact indicators (as per Log-Frame)	Annual progress report	12 monthly	20,000	10,000	35,000	GPCT and global PEES submit inputs for consolidation and approval by UNIDO PM
Mid-term review	External mid-term review	At 2.5 years	15,000	20,000	15,000	UNIDO PM
Independent terminal evaluation	Independent Terminal Evaluation conducted by UNIDO ODG/EVA	Project completion (at least three months prior to the end of the project and no later than six months after project completion)	40,000	30,000	15,000	Independent evaluator for submission to UNIDO PM
		Total	75,000	60,000	65,000	

*In-kind co-financing will come from the PEEs reporting and providing information as well as the time contributed by GCIP stakeholders (including entrepreneurss, mentors, judges and government) in reporting and responding to review/evaluation questions.

10. Benefits

Describe the socioeconomic benefits to be delivered by the project at the national and local levels, as appropriate. How do these benefits translate in supporting the achievement of global environment benefits (GEF Trust Fund) or adaptation benefits (LDCF/SCCF)?

248. The project will act as a catalyst for SME development and clean technology investment globally. The creation of dedicated national platforms for promoting clean technology innovation in SMEs will result in an enhancement of human capital with the acceleration and scale-up of fast-growing cleantech innovation SMEs creating new green jobs and contributing to national and global poverty alleviation efforts. It supports the formation of new sectors supporting low-carbon and low-emission economic development and further catalyzes greater private sector cleantech investment.

249. Local development and production of these new technologies will very likely result in lower costs benefiting both the technology developer and end-user and with local development there will be

accelerated local and national economic development. Finally, the increased use of clean technology innovations supported by the project will result in significant GHG emission reductions.

250. The project will forge linkages between clean technology innovators and the international private sector that can invest in the subsequent commercialization of the technologies. It will also provide SMEs with attractive incentives to invest in innovation in clean technology in a relatively risk-free environment that will benefit all economies. At the same time, the growing number of participants encourages cross-country networking and creates opportunities for cooperation to further enrich the innovation ecosystem in participating countries.

11. Environmental and Social Safeguard (ESS) Risks

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

Overall Project/Program Risk Classification*

PIF	CEO Endorsement/Approval	MTR	TE
	Medium/Moderate		

Measures to address identified risks and impacts

Elaborate on the types and risk classifications/ratings of any identified environmental and social risks and impacts (considering the GEF ESS Minimum Standards) and any measures undertaken as well as planned management measures to address these risks during implementation.

The project has been categorized as **Category B as per the UNIDO ESSPP** and based on an analysis of the environmental and social risks of the project; i.e. there are few likely adverse impacts, which will be site-specific, and few if any will be irreversible. In most cases impacts can be readily avoided or

mitigated with appropriate mitigation measures or incorporating internationally recognized design criteria and standards. See Annex L

Supporting Documents

Upload available ESS supporting documents.

Title	Module	Submitted

ANNEX A: PROJECT RESULTS FRAMEWORK (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

See Annex A separately

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

	Comments	UNIDO Responses
	Germany	
	Germany welcomes this innovative proposal that aims to foster clean tech start-ups and SMEs through capacity building, access to finance, policy and regulatory strengthening and learning and exchange, building on the lessons learnt from a previous project. The proposal is aligned with the relevant GEF focal strategy and comprehensive. Germany requests that the following requirements are taken into account during the design of the final project proposal:	
1	Germany asks to review the risks section of the document as to identify environmental risks for relevant strategies and develop associated mitigation measures. The proposal currently considers environmental risks to be low without providing detail. How ever, some (e.g. blockchain) have concerning carbon footprints, unless they are powered exclusively by renewable energies, which is rarely the case. Industrial processes related to battery-based technologies can have harmful environmental impacts if these are not mitigated through environmental regulation and risk mitigation measures, which are often not effectively enforced.	Across all 11 projects, the environmental risk section was reviewed and revised based on the comments, and the environmental risks of some technologies were acknowledged and mitigation measures proposed. More specifically, the project now includes environmental experts amongst the mentors, judges and trainers that will support the SMEs. This will ensure that all possible environmental risks for all innovations are systematically identified and mitigated. The technology selection criteria for applications submitted to GCIP will be devised to include assessment of mitigation measures for possible negative environmental and social impacts. Where required, specialized expertise will be sourced to help the entrepreneurs to minimise the negative impacts and in the event that mitigation measures are not sufficiently addressed, then that technology will not be supported by GCIP.

2	In this context, Germany also suggests to review the technologies alignment with local climate risks, when deployed. The GIZ ?Climate Expert? tool could provide a relevant frame to do so in a local context.	The impact of technologies will be assessed against local climate risks in the target markets, as part of the support provided within the GCIP Accelerator. Minimizing any negative environmental and social impacts will be accounted for in the technology selection criteria for applications submitted to GCIP. Adaptation strategies will also be prepared if necessary. UNIDO reviewed the Climate Expert Tool in details and found it to be quite relevant. UNIDO will systematically recommend Climate Expert tool as one tools available to entrepreneurs and GCIP mentors, judges and trainers across the 10 countries.
3	Germany suggests further broadening the scope to support low -tech and lower-tech approaches to energy, resource efficiency or waste management that do not exclusively rely on strong IT skills. It might not be the local SMEs? lack of access to finance and entrepreneurial capacities alone that hinder their development and scaling up.	The scope of technologies to be supported is not prescriptive as long as it is cleantech and in line with GEF 7 CCM focal area programming directions https://www.thegef.org/council-meeting-documents/gef-7-programming-directions (i.e. electric drive technologies and electric mobility, accelerating energy efficiency adoption, decentralized renewable power with energy storage, cleantech innovation, sustainable cities, and food systems, land use and restoration, etc.). As such, low-tech and lower-tech approaches to energy, resource efficiency, waste management etc will not be excluded from the GCIP scope of support. Their uptake will depend on the state of the markets in each of the countries. In the Global project, an appropriate footnote was added to Output 1.1.1. For the 10 Country projects, the technology selection criteria for the national GCIP Accelerators will be adapted at the national level and will take into account the local skills and technology base. The GCIP approach is designed to address other ecosystem weaknesses that may impact SME?s ability to develop and scale-up beyond finance and skills. For example, Component 2 is designed to address some of these weaknesses by building capacity and supporting policy development that will strengthen the local ecosystem.
4	Germany also suggests seeking synergies with KfW?s SME and start up support program for energy-efficient production processes, as well as the GIZ project on the promotion of smallest, small and medium-sized enterprises in Morocco.	All GCIP child projects will actively identify synergies with other programmes or initiatives in respective countries and, as outlined in the stakeholder engagement plans, they will engage and work with others, such as for example KfW and GIZ. The GCIP Morocco child project will seek to maximize synergies and avoid duplications with the KfW?s and GIZ?s projects in the country.

5	Germany further invites consideration of potential additional synergies with research institutes (e.g. by leveraging the partners hip with Climate-KIC); such partnerships might be able to provide some of the IT technology needed or help to bring technologies to maturity and to foster market readiness	UNIDO has been in discussions with various other accelerators with a view to establishing strategic partnerships and synergies. Such accelerators include Cleantech Scandinavia, Impact Hub, and Climate-KIC. In the case of Climate-KIC, UNIDO recognized the need for a strategic partnership on GCIP and other programmes. Accordingly, UNIDO and Climate-KIC will sign Memorandum of Understanding to promote partnership under GCIP so as to leverage opportunities for co-innovation and joint ventures between GCIP alumni and Climate-KIC alumni. Part of the collaboration is focused on creating linkages between the two programmes (KIC and GCIP) as well as on application of common methodologies and tools, and onorganization of joint events that will give the opportunity for GCIP alumni to link with each other and with investors. Next to collaborating with other accelerators, GCIP also engages with R&D institutes. They are a key stakeholder in GCIP?s ecosystem approach, which is reflected for example in the GCIP child project stakeholder engagement plans, and targeted activities, such as the train-the-trainer programme that is conducted in cooperation with national universities.
	United States	
1	We are supportive of this project, through there were initial concerns that the program appears to be duplicative of other major UN programs and IERNA efforts. Reviewers noted that as long as UNIDO, IRENA, the World Bank, Clean Energy Ministerial, CSL F, IEA, OECD, USAID, the EU, GiZ, and other major donors who are active in this space coordinate and de-conflict their efforts, or receive funding for their efforts from the program, it seems fine to promote innovation in clean technologies	In the meeting the Secretariat clarified that the GCIP uniquely combines an array of comprehensive and interlinked services to promote innovative cleantech solutions in developing countries and emerging economies. There are no known overlaps with any existing programmes or initiatives pursued by the UN, IRENA or other institutions. As specified in the descriptions of baseline scenario and any associated baseline projects in the respective RCEs, all child projects are designed with careful consideration of other ongoing project/ initiatives and with the objective to maximize synergies and avoid duplications with them.

2	Other reviewers are supportive of this initiative and think it is well-designed for Cambodia. However, there is concern about partnering with UNIDO who has struggled with implementing programs in the past.	The independent evaluation by GEF IEO - https://www.gefieo.org/evaluations/evaluation-gef-unido-global-cleantech-innovation-programme-2018 of past GCIP projects unequivocally concluded that the programme was successfully implemented. These evaluation findings and feedback from participants have served as a basis to design the activities of the GCIP Global child project and cascaded to all the 10 countries. Further details regarding the findings of the GEF IEO thematic evaluation of GCIP are provided in Annex N. Furthermore, UNIDO has also been successfully implementing projects under other GEF programmes within the GEF 7 CCM focal area but with focus on topics other than cleantech, such as e-mobility and sustainable cities. In implementing GCIP, UNIDO will continuously review lessons from these and other successful programmes pursued by various institutions, so as to learn and apply best practices.

ANNEX C: Status of Utilization of Project Preparation Grant (PPG). (Provide detailed funding amount of the PPG activities financing status in the table below:

Project Preparation Activities Implemented	*GETF/LDCF/SCCF Amount ($)*		
	Budgeted Amount	***Amount Spent Todate***	***Amount Committed***
Consultation with stakeholders; review of other global cleantech competitions; selection of GPEEs, detailed planning of activities, gender analysis, stakeholder engagement plan, environmental and social management plan, finalizing co-finance and implementation and execution arrangements	50,000	40,072.50	
Support project launching phase, project launch workshop, Marketing materials			9,927.50
Total	50,000	40,072.50	9,927.50

ANNEX D: CALENDAR OF EXPECTED REFLOWS (if non-grant instrument is used)

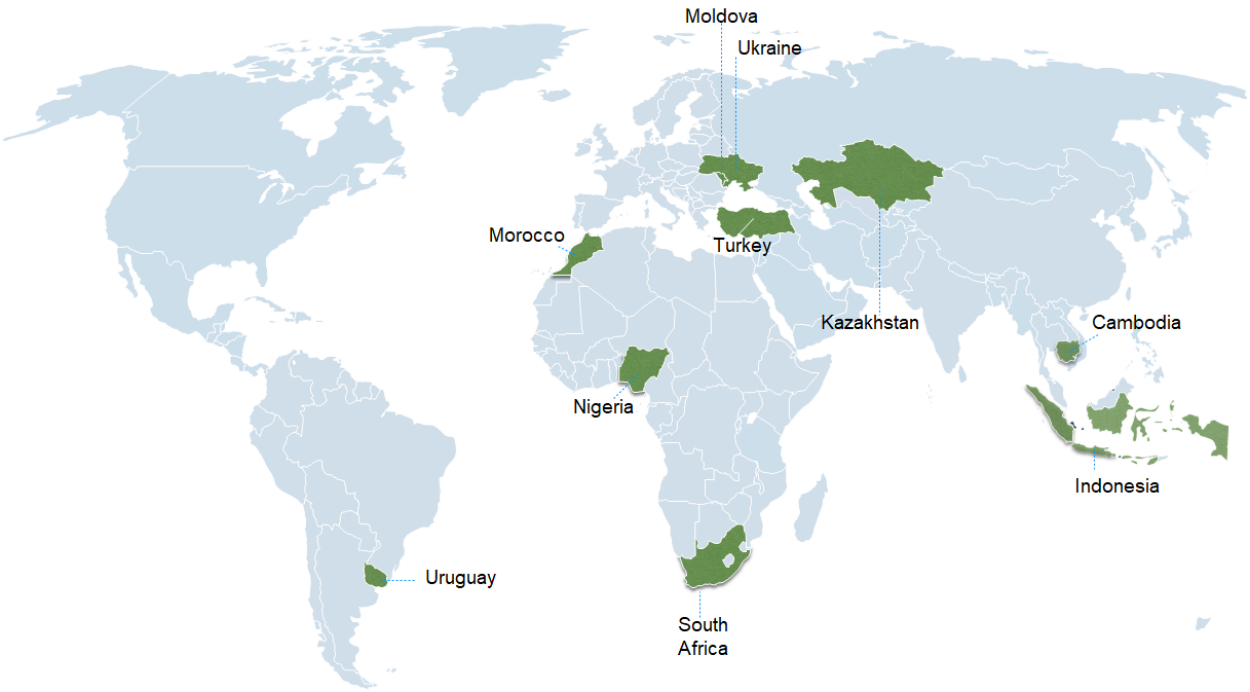
Provide a calendar of expected reflows to the GEF/LDCF/SCCF/CBIT Trust Funds or to your Agency (and/or revolving fund that will be set up)

N/A

ANNEX E: Project Map(s) and Coordinates

Please attach the geographical location of the project area, if possible.

The global child project has its central operations located at the Vienna International Centre, Vienna, Austria (48? 12' 36.1188" N and 16? 21' 48.4164" E.) but coordinates the 10 countries shown below.



ANNEX F: Project Budget Table

Please attach a project budget table.

See Annex F separately