Low-carbon economy of Ukraine for climate change prevention: Facilitating investment to scale-up innovative cleantech solutions for low-carbon economy and climate action

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
10454

Project Type
MSP

Type of Trust Fund
GET

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

Project Title
Low-carbon economy of Ukraine for climate change prevention: Facilitating investment to scale-up innovative cleantech solutions for low-carbon economy and climate action

Countries
Ukraine

Agency(ies)
UNIDO

Other Executing Partner(s)
Greencubator, National Research Foundation of Ukraine (NRFU), Network for Global Innovation (NGIN), Cleantech Group (CTG)

Executing Partner Type
Others

GEF Focal Area
Climate Change

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

Rio Markers
Climate Change Mitigation
Climate Change Mitigation 2

Climate Change Adaptation
Climate Change Adaptation 0

Submission Date
6/18/2021

Expected Implementation Start
1/1/2022

Expected Completion Date
12/31/2026

Duration
60In Months

Agency Fee($)
117,675.00

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 clean-tech innovation	GET	1,307,500.00	10,515,400.00
		Total Project Cost($)	**1,307,500.00**	**10,515,400.00**

B. Project description summary

Project Objective

To accelerate investments in and uptake of low carbon and clean technologies in Ukraine by supporting the development of innovative green financial and market mechanism for SMEs.

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
1. Transforming early-stage innovative cleantech solutions into commercial enterprises	Technical Assistance	1.1 Start-ups and SMEs are supported in advanced and gender-responsive business growth	1.1.1 The GCIP guidebooks are adapted for the GCIP 2 Ukraine 1.1.2 Pool of at least 10 cleantech financing and investment experts is trained to support the GCIP 2 Ukraine (at least 35% women) 1.1.3 Advanced acceleration services are provided to at least 15 SMEs/start-ups (at least 35% women-led) 1.1.4 At least 40 SMEs/start-ups with innovative cleantech solutions receive post-acceleration and investment facilitation support (at least 35% women-led)	GET	282,095.00	2,725,819.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
1. Transforming early-stage innovative cleantech solutions into commercial enterprises	Investment	1.2 Investment is mobilized to deploy innovative cleantech solutions across various sectors	1.2.1 Financing mechanism tailored for investments in innovative cleantech solutions is designed, validated and operationalized (up to 30 SMEs/start-ups receive seed funding and at least 35% women-led)	GET	562,539.00	3,033,636.00
2. Cleantech innovation and entrepreneurship ecosystem (CIEE) strengthening and connectivity	Technical Assistance	2.1 Policy and regulatory framework is strengthened to stimulate investments in innovative cleantech solutions	2.1.1 Recommendations for enhancement of the policy and regulatory framework and a roadmap for their implementation are developed and validated	GET	59,000.00	1,300,000.00
2. Cleantech innovation and entrepreneurship ecosystem (CIEE) strengthening and connectivity	Technical Assistance	2.2 Institutional capacity building of the cleantech innovation and entrepreneurship ecosystem (CIEE) actors is conducted	2.2.1 Capacity of national institutions (at least 6) is strengthened to coordinate, streamline, and accelerate investments into cleantech solutions (at last 35% women participants)	GET	75,000.00	1,300,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
3. Knowledge management, project monitoring and evaluation, and programme coordination and coherence	Technical Assistance	3.1 Efficiency and sustainability of the GCIP 2 Ukraine is ensured through programme coordination and coherence with other GCIP country projects	3.1.1 The GCIP internal guidelines for project management teams ara adapted and implemented by the GCIP 2 Ukraine 3.1.2 Knowledge exchange is facilitated among CIEE actors at national and global levels	GET	120,000.00	700,000.00
3. Knowledge management, project monitoring and evaluation, and programme coordination and coherence	Technical Assistance	3.2 Impacts and progress of the GCIP 2 Ukraine are tracked and reported	3.2.1 The GCIP methodology for impact assessment is adapted and applied 3.2.2 Project activities are tracked an reported, as well as the external mid-term review and independent terminal evaluation are conducted	GET	90,002.00	500,000.00
				Sub Total ($)	**1,188,636.00**	**9,559,455.00**

Project Management Cost (PMC)

Project Management Cost (PMC)		
GET	118,864.00	955,945.00
Sub Total($)	**118,864.00**	**955,945.00**
Total Project Cost($)	**1,307,500.00**	**10,515,400.00**

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($)
Recipient Country Government	Ukrainian Start-Up Fund (USF)	Grant	Investment mobilized	500,000.00
Recipient Country Government	National Research Foundation of Ukraine (NRFU)	Grant	Investment mobilized	500,000.00
Private Sector	LCF Law Group	In-kind	Recurrent expenditures	120,000.00
Private Sector	Promprylad Renovation	In-kind	Recurrent expenditures	800,000.00
Recipient Country Government	Ministry of Environmental Protection and Natural Resources of Ukraine (MENR)	In-kind	Recurrent expenditures	550,000.00
Civil Society Organization	Greencubator	In-kind	Recurrent expenditures	240,000.00
Civil Society Organization	Greencubator	Grant	Investment mobilized	1,220,000.00
GEF Agency	UNIDO	Grant	Investment mobilized	35,400.00
GEF Agency	UNIDO	In-kind	Recurrent expenditures	50,000.00
Private Sector	Digitizing Space	In-kind	Recurrent expenditures	600,000.00
Private Sector	APPAU	Grant	Investment mobilized	300,000.00
Private Sector	APPAU	In-kind	Recurrent expenditures	300,000.00

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
Private Sector	UDP Renewables	Grant	Investment mobilized	1,500,000.00
Private Sector	Severo-Zapad	In-kind	Recurrent expenditures	500,000.00
Private Sector	KNESS Group	Grant	Investment mobilized	2,500,000.00
Other	Lviv Business School	In-kind	Recurrent expenditures	800,000.00
			Total Co-Financing($)	**10,515,400.00**

Describe how any "Investment Mobilized" was identified

The GEF grant is focused on supporting the formative stages of cleantech enterprises, i.e. prototyping, proof of concept, ecosystems building. Co-financing from the public sector (predominantly in-kind) creates the enabling framework conditions that de-risk the key interventions by the GCIP project. As was already confirmed by the findings of the Independent Evaluation of the previous GCIP cycles, co-financing in the form of grants, seed funding, equity from angels, venture capital funds, impact investors, crowd funding platforms etc. will be mobilized during the implementation of the project from the private sector in the phases of development, growth and scale-up of the start-ups/SMEs. In line with GEF Guidelines on Co-financing (https://www.thegef.org/documents/co-financing), paragraph 9, co-financing that will be mobilized from the private sector during the implementation of the project will be monitored and reported through the regular reporting mechanisms to the GEF. Under the GCIP Global, a strategic partnership will be established between GCIP and the Private Financing Advisory Network (PFAN), under which GCIP alumni companies will be systematically connected to PFAN for specialized project development, business coaching and investment facilitation services and introduction to investors, hence mobilize co-financing. Furthermore, in countries where PFAN operates, GCIP activities will be linked to the PFAN network of expertise and investors. The co-financing modalities were discussed with interested entities, including the Ukrainian Start-Up Fund (USF), the National Research Foundation of Ukraine (NRFU), Greencubator, APPAU, UDP Renewables and KNESS Group prior to and during the PPG phase. With regard to "Investment Mobilized", in the framework of these discussions it was agreed that: 1) The grant co-financing provided by USF would support the creation of a dedicated acceleration track together with GCIP 2 Ukraine as well as it would be used to compensate some of the GCIP 2 Ukraine costs related to the provision of mentoring and other costs accruing to entrepreneurs and associated with their participation in GCIP 2 Ukraine; 2) The NRFU would launch a special call for research projects in the field of low-carbon innovations and climate technologies, with the view to ensuring an increased sustainability of GCIP 2 Ukraine by supporting the generation of a pipeline of projects for future acceleration rounds (and in

particular by providing selected projects with grants); 3) Greencubator would encourage the GCIP 2 Ukraine entrepreneurs to apply for the Climate Innovation Vouchers that are managed as grants by Greencubator and disbursed in the framework of its FINTECC project funded by the EBRD; 4) APPAU would provide grants to cleantech solution developers (in particular with focus on Industry 4.0 solutions); 5) UDP Renewables would provide grants and seed funding to cleantech solution developers; 6) KNESS Group would provide grants and seed funding to cleantech solution developers (in particular with focus on hydrogen and energy storage technologies).

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	Ukraine	Climate Change	CC STAR Allocation	1,307,500	117,675
				Total Grant Resources($)	**1,307,500.00**	**117,675.00**

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 **true**

PPG Amount ($)

50,000

PPG Agency Fee ($)

4,500

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)
UNIDO	GET	Ukraine	Climate Change	CC STAR Allocation	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	126000	0	0
Expected metric tons of CO?e (indirect)	0	630000	0	0

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

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

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

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (direct)		126,000		
Expected metric tons of CO?e (indirect)		630,000		
Anticipated start year of accounting		2022		
Duration of accounting		10		

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

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

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

Technology	Capacity (MW) (Expected at PIF)	Capacity (MW) (Expected at CEO Endorsement)	Capacity (MW) (Achieved at MTR)	Capacity (MW) (Achieved at TE)

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

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female		147		
Male		273		
Total	0	420	0	0

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

Part II. Project Justification

1a. Project Description

1. From the substantive point of view, the design of the ?Low-carbon economy of Ukraine for climate change prevention: Facilitating investment to scale-up innovative cleantech solutions for low-carbon economy and climate action? project (further referred to as GCIP 2 Ukraine) proposed in this CEO Approval Request is fully consistent with that presented in the original PFD and related child project concepts (approved by the GEF CEO in December 2019). However, as deemed appropriate and based on additional consultations with relevant stakeholders in the PPG phase: 1) Terminologies and wording used in the Project Description Summary (Table B) and accordingly in the Project Description were amended in order to better align this child project to the GEF-UNIDO Global Cleantech Innovation Programme (GCIP) Framework (GEF ID 10408) (hereinafter referred to as GCIP Framework) and to be more gender responsive; 2) Selected Components/Outcomes/Outputs were merged or split; 3) The budget allocation was adjusted on the basis of consultations conducted during the PPG stage with the national project executing entities (Greencubator and NRFU), the amount of co-financing was reduced (due to challenges in mobilizing co-finance associated with uncertainties around the COVID-19 pandemic), and the attribution of co-financing was revised. Nevertheless, additional private co-financing is expected to be raised during the implementation period of the project in line with the *GEF Guidelines on Co-financing* (para 9): ?*Agencies may report Co-Financing that is expected to be mobilized during project implementation from entities that are not known at the time of CEO Endorsement/ Approval, particularly in the case of Co-Financing from the private sector or beneficiaries. In such cases, Agencies may provide supporting evidence in the form of official project documentation with requirements that such Co-Financing be mobilized at a clearly expressed minimum level, over a pre-defined time frame."*

2. An overview of the main changes is further detailed in the Tables 1 and 2 below.

Table 1: Comparison of the Project Description Summary (Table B) between the original PFD (and related child project concepts) and the CEO Approval Request version (project structure).

original PFD and related child project concept version	CEO Approval Request version
1. Transforming early-stage innovative cleantech solutions into commercial enterprises	1. Transforming early-stage innovative cleantech solutions into commercial enterprises
1.1 Advanced acceleration and business growth support	1.1 Start-ups and SMEs are supported in advanced and gender-responsive business growth
1.1.1 Advanced acceleration services provided to at least 40 SMEs/start-ups with focus on enhancing readiness to access cleantech-specific financial and market mechanisms	1.1.1 The GCIP guidebooks are adapted for the GCIP 2 Ukraine 1.1.3 Advanced acceleration services are provided to at least 15 SMEs/start-ups (at least 35% women-led)
1.1.2 Pool of cleantech financing and investment experts trained to support GCIP accelerator	1.1.2 Pool of at least 10 cleantech financing and investment experts is trained to support the GCIP 2 Ukraine (at least 35% women)
1.2 Investment mobilized for high-impact potential cleantech SMEs for piloting and scale-up	1.2 Investment is mobilized to deploy innovative cleantech solutions across various sectors

1.2.1 At least 30 SMEs/start-ups with innovative cleantech solutions receive post-acceleration support and investment 2.1.2 Financial instrument tailored for investments in cleantech solutions and low-carbon projects designed and validated, including a detailed strategy for mobilizing and deploying of first 10 mil EUR investment.	1.1.4 At least 40 SMEs/start-ups with innovative cleantech solutions receive post-acceleration and investment facilitation support (at least 35% women-led) 1.2.1 Financing mechanism tailored for investments in innovative cleantech solutions is designed, validated and operationalized (up to 30 SMEs/start-ups receive seed funding and at least 35% women-led)
2. Strengthening of cleantech innovation and entrepreneurship ecosystem and financial mechanisms of Ukraine	2. Cleantech innovation and entrepreneurship ecosystem (CIEE) strengthening and connectivity
2.1 Policy and regulatory framework support to stimulate investments in innovative cleantech solutions	2.1 Policy and regulatory framework is strengthened to stimulate investments in innovative cleantech solutions
2.1.1 Policy recommendations and strategic roadmap to accelerate investments for cleantech solutions developed for inclusion in the National Energy and 2030 Climate Plan (NECP)	2.1.1 Recommendations for enhancement of the policy and regulatory framework and a roadmap for their implementation are developed and validated
2.2 Building national capacity of key ecosystem players (local public and private stakeholders) for managing the financing of clean and low-carbon technologies	2.2 Institutional capacity building of the cleantech innovation and entrepreneurship ecosystem (CIEE) actors is conducted
2.2.1 Capacity of national institutions strengthened to coordinate, streamline, and accelerate investments into cleantech solutions	2.2.1 Capacity of national institutions (at least 6) is strengthened to coordinate, streamline, and accelerate investments into cleantech solutions (at least 35% women participants)
3. Knowledge management, project monitoring and evaluation	3. Knowledge management, project monitoring and evaluation, and programme coordination and coherence
3.1 Increased awareness and strengthened partnerships for replication and scale-up of cleantech solutions in Ukraine	3.1 Efficiency and sustainability of the GCIP 2 Ukraine is ensured through programme coordination and coherence with other GCIP country projects
3.1.1 Knowledge management and communication strategy for impact capturing and monitoring developed and implemented, including a knowledge repository (web-based interactive platform, social media pages, etc.) in place	3.1.1 The GCIP internal guidelines for project management teams are adapted and implemented by the GCIP 2 Ukraine 3.1.2 Knowledge exchange is facilitated among CIEE actors at national and global levels 3.2.1 The GCIP methodology for impact assessment is adapted and applied
3.1.2 Awareness raising initiatives conducted including two ?Low-Carbon Economy? annual forums	
3.1.3 Knowledge exchange facilitated among ecosystem actors at regional and global levels	
3.2. Facilitating smooth and successful project implementation and achievement of project results	3.2 Impacts and progress of the GCIP 2 Ukraine are tracked and reported
3.2.1 Project monitoring and mid-term review conducted 3.2.2. Project terminal evaluation conducted	3.2.2 Project activities are tracked and reported, as well as the external mid-term review and independent terminal evaluation are conducted

Table 2: Comparison of the Project Description Summary (Table B) between the original PFD (and the related child project concept) and the CEO Approval Request version (project budget).

original PFD and the related child project concept version	CEO Approval Request version
Component 1 budget GEF project financing: USD 762,588 Co-financing: USD 11,500,000	Component 1 budget GEF project financing: 842,389 Co-financing: 5,759,455
Component 2 budget GEF project financing: USD 226,048 Co-financing: USD 700,000	Component 2 budget GEF project financing: 134,000 Co-financing: 2,600,000
Component 3 budget GEF project financing: USD 200,000 Co-financing: USD 900,000	Component 3 budget GEF project financing: 212,247 Co-financing: 1,200,000
Project management budget: GEF project financing: USD 118,864 Co-financing: 100,000	Project management budget: GEF project financing: 118,864 Co-financing: 955,945
Total GEF project financing: USD 1,307,500 Total co-financing: USD 12,850,000	Total GEF project financing: 1,307,500 Total co-financing: 10,515,400

Background

3. In 2011, the United Nations Industrial Development Organization (UNIDO), with the support of the Global Environment Facility (GEF) and the Government of South Africa, successfully launched the ?Greening the COP17? project. One of the four components of the project focused on the design and implementation of the first South Africa Cleantech Competition (2011 SA Cleantech) for green entrepreneurs (mainly small and medium-size enterprises, further referred to as SMEs) with innovative ideas and concepts in the areas of energy efficiency, renewable energy, and green building practices. All participants were given an opportunity to present their solutions and get feedback, while the best ones were offered additional training, mentoring and access to cleantech networking events.

4. This success of the 2011 SA Cleantech encouraged the project expansion into the Global Cleantech Innovation Programme (GCIP) for SMEs, simultaneously launched in Armenia, India, Malaysia, Pakistan, Turkey and South Africa in 2014. The GCIP takes a competition-based approach to identify pool of promising entrepreneurs and support them through ongoing mentoring, webinars and networking events to grow their innovative ideas and concepts into full-fledged products and services ready for entering the national and global markets. Under the 2014 competition cycle, a total of 555 applications were received across the six countries, from which 159 innovative cleantech entrepreneurs were selected to take part in an accelerator programme. The entrepreneurs were chosen across four cleantech categories: 58 in renewable energy, 41 in energy efficiency, 32 in waste to energy, and 28 in water efficiency.

5. Having progressed through the GCIP, these entrepreneurs were connected with potential customers, investors, partners and policy-makers at national and international levels through Investor Connect events and National Academies. In addition, the very best GCIP entrepreneurs were given the opportunity to attend the Cleantech Open Global Forum, held in November 2014 in Silicon Valley, USA, involving more than 100 cleantech exhibitions and networking events, giving the GCIP winners a high level of exposure to broaden their networks, and to benefit from the global linkages.

6. In 2015 Thailand joined GCIP and about 10 countries, including Vietnam, Brazil, Ukraine, Nigeria, Indonesia and Kazakhstan had expressed interest in becoming part of it thereafter. In the period from 2014 to 2016, GCIP received almost 3,000 applications in the eight countries it was operating, from which 580 entrepreneurs were selected for further acceleration and mentoring, as well as receiving access to investors and media. The growth rate of applications GCIP has received

between 2014 to 2015 and 2015 to 2016 was 62.5% and 33% respectively, indicating strong and constant increase in interest towards the acceleration programme.

7. Ukraine started with the implementation of the ?Global Cleantech Innovation Programme for SMEs? (GEF ID: 160246; further referred to as GCIP 1 Ukraine), that was developed under the GEF-6 replenishment, in 2018. The lifespan of the project is 36 months. The project primarily aims to promote an innovation ecosystem in Ukraine by: identifying and nurturing cleantech innovators and entrepreneurs; building capacity within national institutions and partner organizations for the sustainable implementation of the cleantech ecosystem and accelerator approach; and supporting and working with national and sub-regional policy makers to strengthen the supportive policy framework for SMEs and entrepreneurs through South-South Cooperation.

8. Building on the success and the lessons learned within GCIP in the first 5 years and taking into account the increased need to accelerate the pace of cleantech innovation, UNIDO together with its counterparts has developed this project. The project is in line with the GEF?s Climate Change Mitigation Focal Area Strategy under the GEF-7 Programming Directions and the GEF Private Sector Strategy. It is also fully aligned with key national priorities of Ukraine as well as UNIDO?s mandate to promote inclusive and sustainable industrial development (ISID).

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

Introduction

9. In order to shift markets towards low-carbon economy there is a need for full engagement in mobilising the private sector to leverage innovation, knowledge transfer, investment and market access. In this context, it also needs to be noted that the widespread adoption and utilization of innovative cleantech has significant potential to address the serious environmental problems and risks faced globally. Cleantech innovations can fuel the next industrial revolution that will shape tomorrow?s global economy, environment, and job market. The SMEs/start-ups are supposed to play a vital role in catalysing breakthrough cleantech innovations.

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

Ukrainian context

Current GHG emissions and relevant sectors

11. Ukraine is one of the most carbon-intensive countries in the Eastern European region, mainly due to its obsolete technology in the power generation and industrial facilities inherited from Soviet times. Excluding Land Use, Land Use Change and Forestry (LULUCF), the country emitted about 323.36 Mt of greenhouse gases (GHG) in 2015, which is about 0.77% of the global GHG emissions.[1][1]

12. The Verkhovna Rada (Parliament) of Ukraine ratified the United Nations Framework Convention on Climate Change (UNFCCC) on October 29, 1996. Ukraine became a Party to the UNFCCC on August 11, 1997. In accordance with Articles 4 and 12 of the UNFCCC, Ukraine as a Party to the UNFCCC has the commitments to develop, periodically update, publish, and submit to the UNFCCC Secretariat national inventories of anthropogenic emissions by sources and removals by sink of all GHGs not regulated under Montreal Protocol.[2][2]

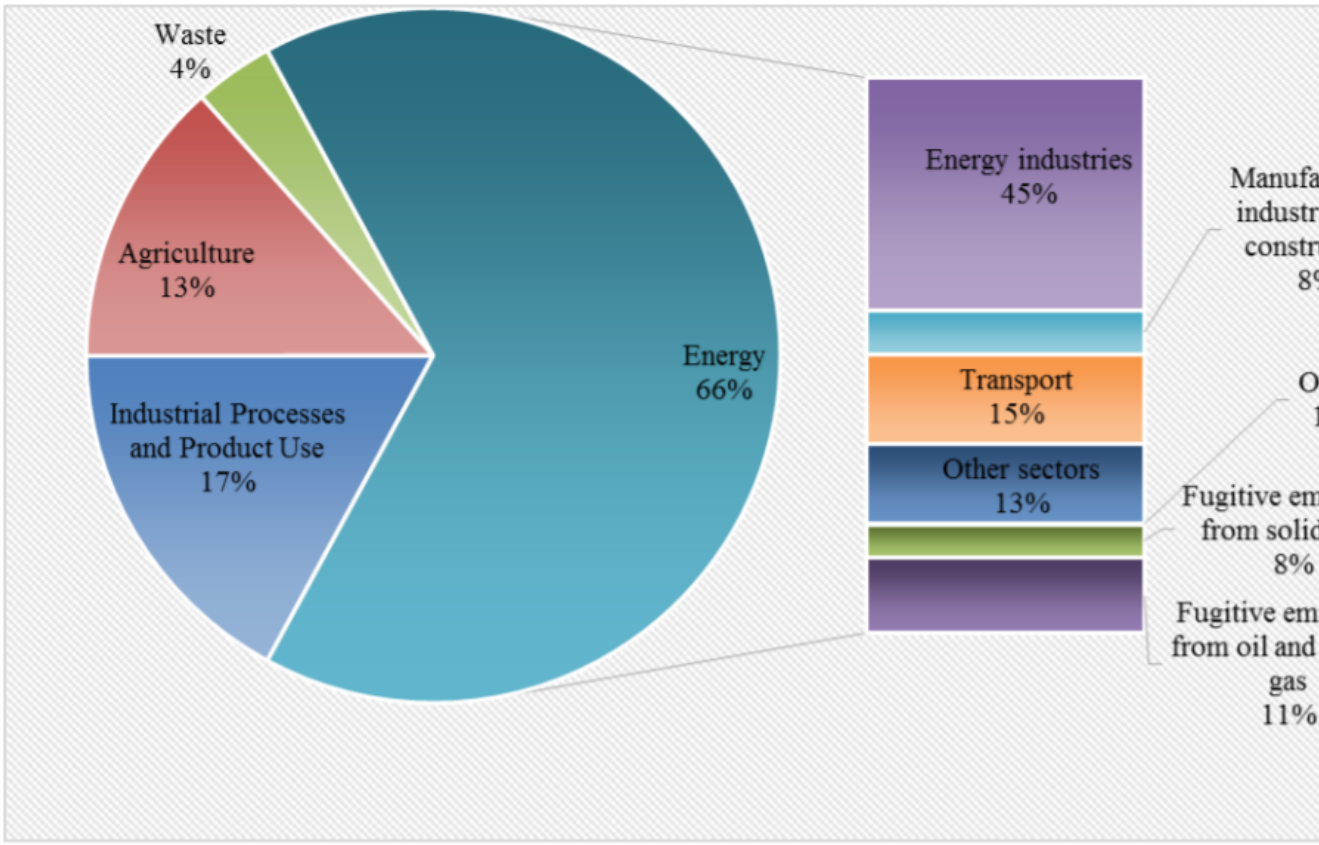
13. According to the latest Ukraine?s GHG Inventory[3][3], National GHG emissions have decreased dramatically since 1990, however some sectors demonstrate upward trends and additional GHG emission reductions would be required to meet Paris Agreement goals. The GHG emissions take place in all sectors, and net removals of GHG emissions are evident in the LULUCF sector. The GHG emissions in 1990 amounted to 646.18 Mt and decreased as of 2016 by 69.7%, to the level of 213.30 Mt CO2e. The economic decline, that followed the collapse of the USSR in 1991, led to initial significant reduction of energy consumption, and thus in decreasing of GHG emissions.

14. The largest GHG emissions in Ukraine take place in the energy sector. In 2017, this sector (without LULUCF) accounted for around 73% of GHG emissions. About 80% of emissions in this sector were due to fuel combustion (in categories such as energy industries, manufacturing industries and construction, transport, and others), and 20% were due to fugitive emissions from fuels. The largest source of GHG emissions in the energy sector are thermal power plants (TPPs) which accounted for 37.1-45.6% of total GHG emissions in the sector. In particular, the share of GHG emissions from coal burning at TPPs is increasing annually.

15. In terms of largest GHG emissions in Ukraine, the energy sector is followed by industrial processes and product use sector. The GHG emissions in this sector include emissions from manufacture of industrial products, as well as from use of limestone, dolomite and soda in various technological processes. The total emissions from the sector in 2017 were 49.4 Mt CO2e. or 18.1% of the total emissions. The third largest sector in terms of emitted GHG in 2017 was the agricultural sector. This sector emitted 49.4 Mt CO2e, which is 15.4% of the overall emissions. The emissions from this sector originated from enteric fermentation, manure management, agricultural soils, burning of agricultural residues, liming, and the application of mineral fertilisers. Finally, the last major emitting sector is the waste sector. Emissions from this sector in 2017 were 12.5 Mt CO2e, which accounts for approximately 4% of the overall emissions.

16. The following Figure illustrates sectoral emissions in Ukraine.

Figure 1: Sectoral emissions in Ukraine.



Forecasted GHG emissions

17. The latest all-encompassing projections on the issue of climate change in Ukraine under the UNFCCC obligations were published in Sixth National Communication (NC6, 2013). According to NC6, a significant change is expected in climate indicators both for national and regional levels during the next years compared to the historical 1991-2010 period. In particular, these changes are expected to be reflected in the following: the growth of average air temperature in the summer months as well as an increased number of days with high and extreme temperatures; the growth of average air temperature in the winter months as well as increased precipitation; the reduction of average values for river flows; the increase in quantity and seasonal unevenness of precipitations; the increase in the frequency of extreme rainfall and drought; the increased frequency of extreme weather events; the intense acidic precipitation; the increase in the salinity of rivers and reservoirs. [4][4] In general, it is expected that the average annual temperature will constantly increase in all the regions of Ukraine and for the latest 20-year period of the 21st century it will be more than 3?C higher compared to the historical period of 1991-2010.

Root causes

Energy sector

18. Ukraine?s energy mix is dominated by fossil fuels and nuclear energy, with renewable energy playing a minor role. Ukraine is one of the largest countries in Europe with rich natural resources, including non-renewables such as coal and large mineral deposits. Fossil fuels dominate the country?s total primary energy supply, with natural gas? share in 2015 standing at 31%, followed by coal at 29%, nuclear at 25% and oil at 12%. The renewable energy sources barely feature 4% of total primary energy supply. [1]

19. There is significant potential for energy efficiency and domestic renewable energy sources. Ukraine?s economy consumes 2.6 times more energy per unit of GDP than the OECD developed Member States. These factors render the country?s economy highly sensitive to energy imports volatility and highlight the importance of alternative energy solutions to enhance the country?s energy security and contribute to global efforts to combat climate change. The key driving forces of high-level energy consumption ? and correspondingly high GHG emissions ? in all of Ukraine?s economic sectors have been continued reliance on obsolete and outdated Soviet-era fossil fuel-based capital stock in the power generation and industrial processing sectors, as well as old and outdated building stock. The total installed power generation capacity of Ukraine by the end of 2017 (excluding power generating facilities of the Crimean Electric Power System and the Uncontrolled Territory of the Donbas Electricity System) was 51,7 GW, 59% of which belonged to thermal power plants (TPPs, CHPs, block stations), 26.7% - nuclear power plants, 12% - large hydro power plants and hydro storage power stations (PSPs), and 2.3% - power plants working on renewable energy sources - wind, solar, biomass, small hydro.

20. Anticipated climate impacts include disruptions to the production and transport of Ukraine?s energy, specifically coal and natural gas. These comprise more than 70% of energy consumption. Ukraine is also a natural gas and petroleum liquids transit country between Russia and elsewhere in Europe, but higher ambient air temperatures lower the efficiency of gas distribution systems. The renewable energy sources ? mostly hydropower ? provide about 4% of energy, although Ukraine?s National Renewable Energy Action Plan set a target of 11% renewable energy in total energy consumption by 2020. What is more, the increased water demand for intensification of natural gas production and unconventional gas reserves development could increase competition for water resources with other needs (industry, households, etc.).

Agricultural production

21. A warmer climate may benefit crop yields in Ukraine?s colder and humid north, but would negatively impact fertile regions in the south, where water availability is limited. Increases in precipitation may not be correlated with the crop cycle and higher carbon may lower grains? nutritional value, offsetting potential gains in productivity. Ukraine is a major wheat and barley exporter, and 69% of land area is used for agricultural production. The sector is dependent on rainfall, with only 6% of cultivated land under irrigation. Ukraine?s fertile black ?chernozem? soil, characteristic of the long-grass steppe, is known for its high organic matter content, which is highly efficient in its use of rain to maintain soil moisture. However, it has been degraded by intensive agricultural production since Soviet times as well as by water and wind erosion. The cost of soil loss from erosion is estimated at one-third of agricultural GDP each year. In turn, the soil erosion impedes the sector?s resilience to climate variability and extreme events. The implications of drought events were evident in 2009, when a 30% reduction in Ukraine?s wheat yields was a major trigger in the rise of global food prices.

22. Climate change is expected to cause the shifting of a crop-growing zone from south to north as well as to lead to a further increase of the vegetation period and creation of a new thermal zone in the south of Ukraine. Besides, climate change will result in intensifying erosion and loss of soil productivity due to the increasing droughts. There will be also an increased risk of plants suffering from diseases and pests due to favourable conditions for the active development of many of their pathogens, as a result of an increase of cumulative winter temperatures.[2]

Industrial and waste sector

23. Industrial emissions are responsible for much of the environmental pollution in Ukraine, including air pollutants, wastewater and industrial waste. Not only are these contaminants a threat to the environment, but they are also detrimental to human health and contribute to climate change.[3] According to the Roadmap for a Green Financial Policy in Ukraine under the EU Association Agreement issued in 2019, currently about a quarter of the working population of

Ukraine is employed in various fields of industrial production, which thus form about 25% of GDP. Heavy industries, especially mechanical engineering, ferrous metallurgy, and the coal industry make up a large proportion of the structure of Ukrainian industry. Heavy industries account for more than 80% of the total value of industrial goods sold. Over the years the electricity & heating sector has been the highest contributor to harmful GHG emissions, being responsible for some 20% of these, followed by the metallurgy sector, with approximately 18% and ?solid fuels? with 14%. In fact, 75% of total energy consumption in Ukraine comes from burning fossil fuels. Obsolete Ukrainian production technologies caused the highest level of GHG emissions per GDP of all countries at the beginning of the 1990s. The Soviet states? emissions rates exceeded those of the OECD countries almost fivefold. The economic and financial crisis further highlighted the structural problems of Ukraine?s economy. Most of Ukrainian industry is uncompetitive on the international market. The production capacities of Ukrainian enterprises are out of date, while labour productivity is low. The Ukrainian economy is marked by one of the highest levels of consumption of resources and energy. There is an urgency to diversify the structure of the economy and export, which in turns indicates an imminent need for a high level of innovation and strong market dynamics.

24. Despite a clear increase in environmental awareness over the years in Ukraine, the majority of public and private companies are facing an inability to utilize their resources accordingly. The financial constraints of many Ukrainian producers make it impossible for them to invest in up to-date technical equipment. In addition, the armed conflict between Ukraine and the Russian Federation has had a significant negative impact on the Ukrainian economy. The economy recovered modestly by 2.3% in 2016, with a bumper agriculture harvest leading to stronger growth of 4.8% in the fourth quarter. Decisive reforms in the face of unprecedented shocks in 2014 and 2015 helped to stabilize confidence.[4] Once these problems are overcome, Ukraine will have to restore its industrial facilities and infrastructural systems. Consequently, at least the metals, construction, transport and other industrial sectors are expected to generate a larger amount of GHG emissions.[5][5]

Enabling policy environment relevant to the GCIP 2 Ukraine

25. Ukraine was among the first countries to ratify the Paris Agreement in July 2016. Ukraine prepared and communicated a **Nationally Determined Contribution (NDC)** that it intends to achieve with the level of GHG emissions not exceeding 60% of 1990 GHG emissions level in 2030. The NDC covers such economic sectors as energy; industrial processes and product use; agriculture, land use, land-use change and forestry; and waste.

26. The priorities of national climate policy were defined in the **Concept of State Policy Implementation in the Area of Climate Change** until 2030 (further referred to as the Concept). The goal set therein was to ensure the achievement of the NDC for 2030, as well as to pursue an ambition increase before 2020 with a due consideration of the national conditions of social and economic development. An action plan for the implementation of the Concept was approved in 2017, and it foresaw implementation of a number of climate-related policies (e.g. monitoring, reporting and verification and emission trading, improvement of fiscal instruments for GHG emission reduction, public-private partnership tools, etc.), and development and approval of a complex **National Energy and Climate Plan (NECP)** for the period 2021-2030 in the year 2020. The NECP is not likely to be adopted before 2021, partly due to its interlinkage with the development of the second NDC and the **Energy Strategy 2035** revision.

27. In 2018, Cabinet of Ministries adopted Ukraine 2050 **Low Emission Development Strategy (LEDS).** At the national level, the LEDS is an instrument for public administration and shaping of a climate responsible behaviour of both businesses and citizens, while at the international level, it supports a global target on stabilization of GHG concentration in accordance with the scenario of global average temperature increase confinement to well below 2?? of preindustrial level.

28. Ukraine is a member of the **Energy Community (EnC)** and has signed and ratified the Association Agreement with the EU. Along with it, it committed to increased energy efficiency and increased share of renewable energy in primary and final energy consumption. The implementation of the renewable energy and energy efficiency acquis is based on comprehensive, multi-annual action plans. As a first step, the Parties draft and adopt the action plans that set the steps for achieving the negotiated targets. They are subsequently obliged to report on the progress achieved in regular reports.

29. Ukraine?s current energy strategy is laid out in the **Energy Strategy 2035** (approved by Cabinet of Ministers of Ukraine Resolution of 6 June 2018, ? 497-r). It has a core focus on mobilizing investments, increasing market competitiveness, creating a more supportive investment climate for energy investments and harmonizing Ukrainian legislation with a number of EU directives. The Energy Strategy 2035 estimates that an investment of approximately USD 20 billion is required to realize the set objectives. Pursuant to this, there is a need for the State Agency for Energy Efficiency jointly with other government bodies to set up conditions for implementation of a green bond market in Ukraine as an instrument for attracting investments into clean energy and energy efficiency projects. In 2020, the Law of Ukraine "On Amendments to Certain Legislative Acts of Ukraine Concerning the Simplification of Attraction of Investments and the Introduction of New Financial Instruments" was enacted to provide for the introduction of green bonds in Ukraine.

30. However, a step-by-step implementation plan for the Energy Strategy 2035 has not yet been developed and the Government needs further support to accelerate the transition to and mainstreaming of green finance. Despite the growing interest that Ukraine has shown in the green bond market, the Government of Ukraine lacks the capacity to coordinate and scale-up the necessary efforts to achieve the foreseen goals. Ukraine has to address the institutional co-ordination issues that have hampered effective establishment, management and implementation of policies and regulations to support the development of clean energy markets. Likewise, the Government of Ukraine must build capacity to create awareness on existing international best practices and the benefits of the green bond market among potential bond issuers and investors.

31. Furthermore, Ukraine has made significant progress in transposing several relevant **EU directives**. More specifically they include: a) Approximation of the **Energy Efficiency Directive 2012/27/EU**. It was transposed in the Law on Energy Efficiency. Additionally, 1st National Energy Efficiency Action Plan was developed and it is soon be replaced by the 2nd National Energy Efficiency Action Plan that will be effective until 2030. Ukraine also enacted the Law on Energy Efficiency Fund (the Fund has been operating since 2019); b) Approximation of the **Renewable Energy Directive 2009/28/EU**. In 2014, Ukraine developed its National Renewable Energy Action Plan. The renewable energy related issues are regulated by two main laws - the Law on Electricity Market and the Law on Alternative Energy Sources (that sets tariff rates and premiums); c) Approximation of the **Energy Performance Building Directive (EPBD) 2010/31/EU**. The EPBD was transposed through the Law on Energy Efficiency in Buildings which was adopted by the Government in 2017 and establishes the minimal requirements for the energy efficiency of buildings in Ukraine and also implements a mandatory certification system.

32. Ukraine has also developed legislation enabling promotion of green procurement. More specifically, legislative changes adopted in 2020 to the **Law on Public Procurement** allow for the use of lifetime economic cost criteria and other non-financial criteria (up to 30% from the total evaluation of tender proposals) in public procurement.

33. The **Strategy for Agrarian Sector Development** until 2020 included a strategic goal of the rational use of agricultural lands and the reduction of the technogenic pressure of the agricultural sector on the environment. Priority actions to achieve the strategic goals included environmental protection measures, such as the support of organic agriculture, ensuring the effective use of natural resources through the implementation of monitoring and quality control system for

agricultural lands, creating conditions for the soil conservation, as well as the renovation of irrigation systems.

34. Ukraine has not yet approved the national industrial strategy, though the draft of the **Strategy for Industry Development** until 2025 has been discussed by key stakeholders during recent years. A **Strategy for Development of Innovation Activities** until 2030 was approved in 2019 and has a goal to develop a national innovation ecosystem to ensure fast and effective transition of creative ideas into innovative products and services, and ultimately to increase the innovation level of the national economy. It defines measures for the creation of favourable conditions for commercialization of innovations, in particular via support of start-up development, including venture business activities, simplified taxation and reporting requirements for innovative small enterprises, and state support for businesses developing innovative products and services.

35. The waste management sector is governed by the **Law on Waste** which is currently under review, and a number of related draft laws is under consideration to approximate national legislation with the EU Acquis. The **National Waste Management Strategy** up to 2030 was approved in 2017 and followed by the approval of the **National Waste Management Plan** up to 2030. The Strategy defines national targets to be achieved in waste management by 2030, as well as preliminary priority technologies to be implemented for efficient waste management, including separate collection, reuse, recycling, composting, and incineration with energy recovery.

36. Even though it is clear that Ukraine has made progress in the development of national environmental legislation and strategies, efforts are still insufficient. Some pieces of legislation remain in draft form or lack the necessary technical sub-regulations and implementing arrangements to make them effective. Policy-makers should further enhance the necessary primary and secondary regulations underpinning sustainable energy investment, particularly in relation to the Energy Strategy 2035.

SMEs and cleantech innovation and entrepreneurship ecosystem (CIEE) in Ukraine

37. The Ukrainian SME sector growth remains slow due to the key pending reforms needed to strengthen investor confidence. The GDP grew by 2.5% in 2017 and 2.3% in 2016, which was a weak recovery after a cumulative 16% contraction in 2014?15. The growth of fixed investment slowed down in the second half of 2017, while foreign direct investment (FDI) remained weak at 2.1% of GDP in 2017 compared to 5% on average before the crisis. Investor confidence has been affected by the slow pace in adopting key reforms in light of macroeconomic vulnerabilities.[6][6]

38. As of the end of 2016, there were about 305,598 SMEs in Ukraine, a marked increase compared to the previous year. These SMEs contributed significantly to job positions in Ukraine with a total of 4,214,500 employees in 2016. Small enterprises accounted for almost 38% of SMEs? employees in 2016, while medium-sized enterprises employed a total of 2,622,800 people, which represents 45.2% of all enterprises operating in Ukraine.

39. The **Strategy for SME Development in Ukraine** until 2020 was adopted in May 2017 and largely calls on better coordination among various authorities and levels of government that cover SME operations. The document acknowledges various regulatory deficiencies and sets a reform path to their resolution, including improved access to finance for SMEs. The Ministry of Economic Development and Trade is currently building an SME portal where it plans to collect and share information on all available programmes and opportunities for technical assistance that may also lead to access to finance, as a one-stop info shop.

40. The **Strategy for the Development of Innovation** until 2030 was approved by the Cabinet of Ministers in 2019 together with a corresponding action plan for its implementation. The Strategy

identified six strategic directions for state-level SME support: 1) creating a favourable environment for SME development; 2) improving access to finance; 3) simplifying tax administration; 4) promoting entrepreneurial culture and developing entrepreneurial skills; 5) promoting internationalisation; 6) improving competitiveness and developing the innovation potential of SMEs.

41. The policy in the field of innovation is formed by the: **Ministry of Education and Science (MES)** (ensures the formation and implementation of state policy in the fields of education and science, scientific, scientific and technical activities, innovation in these areas, technology transfer), **Ministry of Economic Development and Trade (MEDT)** (ensures the formation and implementation of state policy in the field of innovation in the real sector of the economy), and **Ministry of Digital Transformation (MDT)** (ensures the formation and implementation of state policy in the field of digital innovations and technologies). Evidently, there is a need to define a common goal as well as policies and mechanisms for the monitoring of its implementation.

42. Ukraine?s Small Business Act (SBA)[7][7] scores are weak and the country ranks below the EU average. It scores particularly low in the ?skills and innovation? category. More specifically, Ukraine is significantly below the EU average in terms of the percentage of SMEs introducing product or process innovations; the percentage of SMEs introducing marketing or organisational innovations; and the percentage of innovative SMEs collaborating with others.[8][8]

43. According to the World Bank?s report on ?Innovation and Entrepreneurship Ecosystem Diagnostic in Ukraine? published in 2017, the overall observation is that enterprise innovation in Ukraine is weak and generally declining, both in large and small companies. Ukraine?s innovation survey, which follows EU Community Innovation Survey methodology, found that the percentage of Ukrainian industrial enterprises conducting innovative activity in 2015 was 17.3% compared to an EU average of 48.9%. The bulk of Ukrainian innovation is ?new to the enterprise? innovation rather than ?new to the market? innovation. Of the 414 enterprises that reported introducing product innovation in 2015, 114 introduced new to the market innovations while 342 introduced ?new to the enterprise? innovations. Similarly, on a per product basis, of the 3,136 innovative products introduced, 548 (17.5%) were ?new to the market? while 2,588 (82.5%) were ?new to the enterprise?. Additionally, there are a number of barriers still hindering the development of the innovation environment in Ukraine. More specifically those include access to knowledge and technology.[9][9]

44. The Global Competitiveness Index ranked Ukraine 99 out of 140 countries on ?intensity of local competition?, 98th in ?extent of market dominance?, and 136th in ?effectiveness of anti-monopoly policy?.[10][10] Large enterprises do not act as drivers for innovation in the economy. The lack of demand for innovation from large firms limits the market for new technology-based firms to serve as suppliers of innovative products to the large firms and limits the demand for local innovation.

45. Ukraine has a sound system of education and a high level of public educational background: over 79% of adult Ukrainians have a college or university degree. There are nearly 900 colleges and universities in Ukraine, the most prominent of them are located in Kyiv, Lviv and Kharkiv. The number of persons with a university degree in the age group 20-29 per 1,000 population increased over the past ten years from 41.2 in 2004 to 49.1 in 2010, although the share of natural and technical sciences graduates in the total number of graduates has declined. However, despite a strong educational system, university curricula are outdated and do not follow the modern business

and economics principles. Universities receive little research funding and are (with some important exceptions) poorly connected to industry. As a result, many faculties are viewed as both out of date in their fields and unable to prepare students for research or work in private companies.

46. In 2019-2020, the **Ministry of Environmental Protection and Natural Resources of Ukraine (MENR)** conducted a Technology Needs Assessment (TNA) project with the selection of priority climate mitigation technologies in agricultural and waste sectors and prepared a Barrier Analysis and Enabling Framework Report. Identified barriers for the diffusion of prioritized mitigation technologies in agriculture and waste sectors include economic and financial barriers related to high capital expenditure and high cost of capital, technological barriers, regulatory barriers (e.g. nutrients management, soil quality monitoring, waste management), barriers related to market conditions (e.g. low waste disposal tariffs and lack of appropriate business models), capacity barriers, information and awareness barriers, organizational barriers, environmental barriers, and cultural barriers.

Analysis of barriers to CIEE development

47. Interventions under the project will focus on the national level. Ukraine has made some progress in the development of national environmental and climate legislation and strategies, as described above in more details. Some pieces of legislation remain in draft form or lack the necessary technical sub-regulations and implementing arrangements to make them effective (e.g. amendments of the green tariff mechanism, regulations on operationalizing of monitoring, reporting, and verification system for GHG emissions). Policy makers should further develop the necessary primary and secondary regulations underpinning sustainable energy investment, particularly in relation to the Energy Strategy 2035. Additional relevant EU directives could be transposed, and clear institutional arrangements should be introduced in order to improve the legal and business environment for international private capital.

48. Ukraine has not yet implemented a carbon pricing mechanism that would support investment in low-carbon technologies and projects. The environmental tax on GHG emissions is established at the rate of approximately EUR 0.3 per tonne of CO2 and being among the lowest worldwide. As such, it does not have a material impact on investment decisions.

49. During stakeholder consultations the following were stated as the main policy barriers: a) State policy to support innovation remains weak and there are very limited financial and non-financial tools for supporting commercialization of innovative technologies; b) The Strategy for the Development of Innovation was approved in 2019 but overall regulatory framework on innovation support has not yet been developed; c) Coordination between different institutions and stakeholders responsible for innovation support remains weak, which hinders innovation development.

50. In addition, an analysis of 500 companies in the industrial and commercial sectors in Ukraine has revealed that access to finance, including high upfront investment costs of energy efficiency technologies and lack of capital, remains to be among the strongest barriers to deployment of energy efficiency technologies. The cost of finance remains high mainly due to the foreign exchange loans exposed to the local currency risk and higher transaction costs, necessary for energy audits, monitoring, and feasibility studies. All of these features significantly contribute to reducing the attractiveness of green investments, generating a financial gap and reducing the overall funds available for cleantech projects, especially for SMEs.

51. Similarly, the length of finance maturities available in Ukraine (on average, below 20 months) is too short for the potential payback periods for capital investment in cleantech solutions. It is commonly the case that collateral requirements for borrowers in Ukraine are up to 200%, making it difficult for SMEs to access financing. In addition, a substantial part of the cleantech projects that could benefit from green classification tend to be stand-alone projects of small to medium scale (often below 1 million euro) whilst an average investment size project is not below EUR 5 million.

52. To achieve the ambitious goals outlined in the Energy Strategy 2035, innovations and significant changes in the public and private investment patterns will be required. Commercial banks in Ukraine hardly manage to provide a robust financial mechanism that would improve the deployment of cleantech solutions to the desired level. Given the creditworthiness concerns of sectors such as communal housing, public building and municipal infrastructure, and many others, it is crucial to pool together the national and international funds to create financing market mechanisms that would be transformative in their size and scope. The summary of the barriers for SMEs are stated in the Table 3 below.

Table 3: Barriers to CIEE development.

Barrier	Description
Policy, legal and regulatory barriers	The current policy and regulatory frameworks do not comprehensively support the demand for cleantech finance. Additionally, they do not envisage innovative market mechanisms, particularly these suiting the needs of the SME sector, that would incentivize uptake of cleantech. Also, there are no mechanisms to regulate additional cost of external verification, enhanced disclosure (in the case of green bonds) and the participation of institutional investors and the capital market to indirectly stimulate demand. Ukraine has developed state policy measures aimed at supporting GHG emission reduction, however there are still some regulatory gaps limiting the development, procurement and deployment of cleantech. In particular, policy barriers relate to the expected changes in the support of renewable energy projects with potential significant reduction of green tariffs for solar and wind power projects, regulatory gaps for energy storage and demand-response management projects, lack of incentives for renewable heat and transportation fuel use, low carbon taxes, etc. During stakeholder consultations it was noted that there are significant capacity barriers for green procurement since employees responsible for procurement do not have the knowledge on cleantech products and services, as well as an expertise in developing tender documentation using non-financial criteria. Also, there are policy, regulatory and legal barriers that are related to the general weakness of the national judicial system, currency control regulations, currency exchange risks, access to capital, and political stability in the country, all of which results in registration of Ukrainian cleantech companies in other jurisdictions.

Barrier	Description
Capacity and technical barriers	At the institutional level, there remain significant weaknesses in the organization and capacity around sustainable energy planning and low-carbon development in general. Government entities have limited national capacity to manage the planned energy transition and to mobilize finance at the necessary scale. The absence of a platform to efficiently operationalize and leverage the various available green and low-carbon financial instruments hurdle their mainstreaming. The relevant national actors are not fully aligned and coordinated along the green financing cycle. Furthermore, private and public sector lack experience, knowledge and skills in cleantech, including available market mechanisms and financing sources. In addition, start-ups/SMEs lack expertise in identifying and developing bankable innovative cleantech projects. The limited technical capacity makes it difficult for them to source green investments. In particular, this includes a lack of capacity related to business model elaboration and aspects related to passing detailed due-diligence (proof of concept, financial aspects, legal aspects, etc.) of the projects and companies, which enhances the risks of bankruptcy and financial losses or litigation cases at later stages of product development. The barriers also include limited capabilities in moving an idea to product manufacturing and aspects such as prototype development, identification of production sites and partners, establishing supply chains and logistics, etc. Besides, capacity barrier also relates to lack of understanding of climate change aspects and potential climate mitigation and adaptation benefits of the cleantech products and services.
Financial barriers	Despite the large array of financial mechanisms, there are significant constraints for the uptake of cleantech projects in the country. Access of start-ups/SMEs to green finance remains limited mainly due to a) the high cost of finance associated with high interest rates and the fact that the foreign exchange loans are exposed to currency risk; b) very short finance maturities for cleantech; c) high collateral requirements for borrowers. Therefore, traditional financing sources that are available today are insufficient. In general, there is lack of innovative financing schemes for start-ups/SMEs, that could help leverage existing instruments, as well as limited transparency in the conditions and availability of financial support. Given SMEs share in country?s economy, facilitating their access to green financing schemes and mainstreaming green financing into generic SME financing products becomes a central challenge.
Awareness and knowledge barriers	There exists a lack of awareness in government sector about the potential of financial innovations and market mechanisms in accelerating low-carbon economy development, along with a limited knowledge and awareness among project developers about the potential benefits from investments in cleantech solutions and low-carbon projects. Similarly, there is a lack of supportive sectoral and cross-sectoral cooperation and partnership among SMEs, academia, finance and policy-making entities. SMEs lack knowledge of financing options and are often not up to date about the support that they can access. As a result, the new green financing products, for which there is a demand, may not succeed, as the information about them does not reach the relevant target beneficiaries. During stakeholder consultations a language barrier was also stated. More specifically, there is a number of engineers and potential cleantech start-ups/SMEs that miss out on the advanced acceleration and post-acceleration opportunities due to the fact that some of them are conducted in English.

2) The baseline scenario and any associated baseline projects

GCIP

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

54. The success of GCIP was confirmed through the GEF?s evaluation in 2018.[11][11] In its framework it was also recommended that: a) Any future GCIP or similar program should be structured using a more globally coordinated approach with appropriate choice of interventions based on strategic country selection; b) GCIP should actively support national-level coordination to dynamize the CIEE; c) There should be sufficient time allowed to customize and sharpen the focus on policy strengthening and regulatory frameworks to foster cleantech innovation and its adoption; d) The network of private sector partners should be expanded to address GCIP participant needs for business expertise and early stage technology validation; e) Direct and indirect impacts of the GCIP should be measured by establishing adequate monitoring and evaluation systems and ensure that they are implemented using standardized and relevant indicators; f) Country engagement should be deepened during the project period, including a plan and resourcing to sustain activities and expand outcomes after project closure.

55. As already mentioned, based on the above-mentioned recommendations UNIDO designed the GCIP Framework in 2019. The GCIP Framework consists of ten country child projects, all of which are connected to the three driving pillars, including a) Pillar 1. Transforming early-stage innovative cleantech solutions into commercial enterprises; b) Pillar 2. Cleantech innovation and entrepreneurship ecosystems strengthening and connectivity; c) Pillar 3. Programme coordination and coherence. The coherence withing the GCIP Framework is ensured through the GCIP global coordination child project (GEF ID 10461) (hereinafter referred to as GCIP Global).

56. The GCIP Framework builds upon the achievements and key lessons learned from the implementation of the GCIP projects so far. In particular, it benefits from the collective feedback by various stakeholders including national counterparts, institutions and SMEs successfully participating in GCIP as well as strategic partners at the global level. The Table 4 below provides an overview of the lessons learnt as well as enhancements proposed in the GCIP Framework in general, and in GCIP 2 Ukraine in particular.

Table 4: Enhancements of the GCIP Framework.

Lessons learned from GCIP in 2011-2018 and following recommendations	Enhancements of the GCIP Framework	Specific GCIP 2 Ukraine outputs which address corresponding recommendations

Lessons learned from GCIP in 2011-2018 and following recommendations	Enhancements of the GCIP Framework	Specific GCIP 2 Ukraine outputs which address corresponding recommendations
a) More focus on investor outreach and connecting with investor networks; as well as outreach and marketing of the program and showcasing of GCIP supported innovations at global events	Pillar 1 will specifically address this need by organizing Investor Connect events that link GCIP alumni directly with potential investors, financiers and networks. Further, each country child project is expected to have activities dedicated to investor outreach and marketing at national and global levels. Pillar 3 includes global communications, advocacy and outreach activities which will also market the program and advocate innovators at local and global events.	1.1.3 Advanced acceleration services are provided to at least 15 SMEs/start-ups 1.1.4 At least 40 SMEs/start-ups with innovative cleantech solutions receive post-acceleration and investment facilitation support 3.1.2 Knowledge exchange is facilitated among CIEE actors at regional and global levels
b) Improved cross-country coordination and system to ensure coherence and quality	Pillar 3 will include programmatic coherence and coordination activities in order to provide support to national child project project management units (PMUs), share guidelines and internal standards as well as promote interaction between PMUs.	3.1.1 The GCIP internal guidelines for project management teams are adapted and implemented by the GCIP 2 Ukraine
c) Enhanced quality of support	Pillar 1 will develop and provide a GCIP Accelerator, Advanced Accelerator, and Post-Accelerator guidebooks which will equip country child projects with standard GCIP approach and methodology to promote cleantech innovation and entrepreneurship. The guidebooks will also include practical tools and guidelines for operations and management of the acceleration services. Specific effort will be focused on ensuring that the support will be adapted to the local context of the countries.	1.1.1 The GCIP guidebooks are adapted for the GCIP 2 Ukraine

Lessons learned from GCIP in 2011-2018 and following recommendations	Enhancements of the GCIP Framework	Specific GCIP 2 Ukraine outputs which address corresponding recommendations
d) Advanced business-support for start-ups/SMEs after GCIP acceleration needed	Pillar 1 will provide standard approach for advanced investment and commercialization support to GCIP alumni. This will include further mentoring for advanced business growth, match-making services with interested corporations, investors, governments, and also offering opportunities for start-ups/SMEs to be showcased at high-level international events.	1.1.3 Advanced acceleration services are provided to at least 15 SMEs/start-ups 1.1.4 At least 40 SMEs/start-ups with innovative cleantech solutions receive post-acceleration and investment facilitation support
e) Increased focus on policy strengthening and regulatory frameworks to foster cleantech innovation	Pillar 2 will cater for policy and regulatory aspects of developing a mature CIEE. The GCIP Framework will assist child projects in strengthening the policy and regulatory frameworks through the sharing best practices, policy dialogue and cross-country exchange of success stories.	2.1.1 Recommendations for enhancement of the policy and regulatory framework and a roadmap for their implementation are developed and validated
f) Global peer networking among entrepreneurs	Pillar 1 of the GCIP Framework 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.	1.1.3 Advanced acceleration services are provided to at least 15 SMEs/start-ups 3.1.2 Knowledge exchange is facilitated among CIEE actors at national and global levels
g) Knowledge exchange between national executing agencies and government counterparts	Pillar 2 includes a focus on knowledge management and exchange and is designed to maximize the impact of GCIP by identifying synergies between national CIEEs and ensuring that the successes and achievements of GCIP are captured in knowledge products. Networking will be facilitated between national PEEs and government counterparts.	3.1.1 The GCIP internal guidelines for project management teams are adapted and implemented by the GCIP 2 Ukraine 3.1.2 Knowledge exchange is facilitated among CIEE actors at national and global levels

Lessons learned from GCIP in 2011-2018 and following recommendations	Enhancements of the GCIP Framework	Specific GCIP 2 Ukraine outputs which address corresponding recommendations
h) Improved monitoring and evaluation of impact	Pillar 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 comparisons. Each country child project will use the same methodology and feed their results into the global figures.	3.2.1 The GCIP methodology for impact assessment is adapted and applied
i) Widening the reach of GCIP	GCIP Global Accelerator will be organized under Pillar 1 of the GCIP Framework to support high impact cleantech innovations with commercialization potential beyond domestic markets. This will ensure that cleantech innovations with potential global impact receive specific mentoring and business support for entering global markets.	1.1.3 Advanced acceleration services are provided to at least 15 SMEs/start-ups 1.1.4 At least 40 SMEs/start-ups with innovative cleantech solutions receive post-acceleration and investment facilitation support

57. It is also noteworthy that the design of the GCIP 2 Ukraine was informed by the lessons learnt from the GCIP 1 Ukraine. The below Table 5 provides an overview of remaining gaps, based on the review of progress made by the GCIP 1 Ukraine, and inputs from the GCIP 1 Ukraine PMU that were gathered in the framework of stakeholder consultations during the PPG phase. In addition, it should be noted that an independent mid-term review of GCIP 1 Ukraine is currently ongoing and planned to be finalized at the beginning of July 2021. Its preliminary results were also used to enhance the GCIP 2 Ukraine project design with the view of increasing its relevance, effectiveness, efficiency, sustainability and impact.

Table 5: GCIP 1 Ukraine - overview of remaining gaps.

GCIP 1 Ukraine Component	Remaining gaps
Component 1. National cleantech platform to promote clean technology innovations for global environmental benefits and green jobs in Ukraine	GCIP 1 Ukraine is currently successful in conducting the acceleration services. However, there is a clear need for advanced acceleration and securing access to venture capital and other finance sources for supported start-ups/SMEs. Otherwise, there is no chance for most of the entrepreneurs to achieve market readiness.
Component 2: Building national capacity to support and promote clean energy technology innovations	GCIP 1 Ukraine is currently on track with activities related to capacity building and awareness raising. However, as mentioned above, there is a need for advanced acceleration/investment facilitation, and also for related capacity building activities.

Component 3: Policy and regulatory framework strengthened for a national cleantech innovation and entrepreneurship ecosystem	State policy to support innovation remains weak and there are very limited financial and non-financial tools for supporting commercialization of innovative cleantech solutions. There is also still a continued need to facilitate coordination between different institutions and stakeholders responsible for innovation support. In particular, the policy and regulatory frameworks and institutions that deal with cleantech finance should be strengthened.

National baseline projects

58. Among the government programs and initiatives that are either ongoing or under development, the following ones are those that the proposed GCIP 2 Ukraine project will build on and synergize with. The following Table 6 presents the description of the relevant national baseline projects in Ukraine with elaboration of their relevance for GCIP 2 Ukraine.

Table 6: Overview of national baseline projects.

Project title	Project description	Project relevance for GCIP 2 Ukraine	Implementation period
Resource Efficiency and Cleaner Production Centre (RECPC)	RECPC was established in January 2013 with financial support from Switzerland and Austria, and technical assistance from UNIDO. RECPC is a registered NGO and in 2017 it was certified according to ISO 9001. RECPC contributes to the green modernization of Ukrainian economy through the introduction of a resource-efficient and cleaner production (RECP) concept in industrial enterprises. RECPC provides technical advice for SMEs to help them increase economic efficiency while reducing industrial risks for people and negative footprint on the environment.	Innovative cleantech ideas resulting from the proposed GCIP 2 Ukraine project could be considered and promoted by the RECPC in Ukraine.	2013 - ongoing

Project title	Project description	Project relevance for GCIP 2 Ukraine	Implementation period
Ukraine Sustainable Energy Lending Facility (USELF)	USELF is an investment facility of up to EUR 140 million established by the European Bank for Reconstruction and Development (EBRD) in October 2010 for fostering renewable energy projects in Ukraine. USELF is structured to provide debt financing (loans) directly from the EBRD for small and medium projects with a simplified and rapid approval process, so reducing transaction costs. So far, the program has received 200 project applications and by the end of March 2018 had signed loans in the value of EUR 136.65 million.	The entry conditions of the USELF are not feasible for SMEs. The provided loan scheme starts from EUR 1.5 million and requires the potential applicants to prove track record and sound credit history, making it not suitable for small scale projects and start-ups. Project developers have to contribute not less than 30% of the investment needs themselves. The proposed GCIP 2 Ukraine supplements the existing USELF by creating a financing mechanism tailored for innovative cleantech solutions that allows for longer payback periods in comparison to USELF loans.	2010 - ongoing

Project title	Project description	Project relevance for GCIP 2 Ukraine	Implementation period
The Energy Efficiency Fund of Ukraine (EEF)	The EEF was founded in 2018 by the Government of Ukraine, European Union, Germany and International Finance Corporation (IFC). The EEF finances the implementation of projects in the field of thermic modernization, effective monitoring and management systems, installation of effective heating and cooling systems and equipment as well as the replacement of existing systems. The EU and Ukraine signed a EUR 50 million agreement to support pilot projects from 9 regions of Ukraine. Germany additionally contributed EUR 15 million, while the Government of Ukraine has also committed around EUR 50 million.	The EEF only provides funding for energy-efficiency measures in the Ukrainian residential sector. However, possible cooperation will be investigated during the proposed GCIP 2 Ukraine project?s implementation period, in particular with the view to the development of the dedicated financing mechanism.	2018 - ongoing
Competitive Energy Markets Program	It is a five-year USAID program that started in August 2018 and aims to increase the resilience of energy supplies in Ukraine and to improve the legal and regulatory environment of the energy sector. The program provides technical services to support private sector led energy investments to increase renewable energy generation in Ukraine. Specific tasks include completing renewable energy generation assessments and developing financial incentives to facilitate private sector investment in renewable energy production.	The Competitive Energy Markets Program and the Energy Security Project are oriented towards the energy sector which also falls within the thematic scope of GCIP 2 Ukraine. The GCIP 2 Ukraine will promote innovative cleantech	2018 - ongoing

Project title	Project description	Project relevance for GCIP 2 Ukraine	Implementation period
Energy Security Project	USAID?s Energy Security Project (ESP) works with Government of Ukraine, private sector, and civil society leaders to improve Ukraine?s energy security, and transform Ukraine?s energy sector into a modern, market-oriented, EU-integrated engine of growth. The improvement of the legal and regulatory environment and increased resilience of the energy supply will help Ukraine to achieve broad-based, resilient economic development.	solutions that can be applied in the energy sector. What is more, it will contribute to the improvement of the related policy and regulatory framework, building on the achievements of the Competitive Energy Markets Program and the Energy Security Project as well as synergizing with them.	2018 - ongoing
Energy Efficiency in Companies Programme	It is a five-year GIZ program that started in 2017 and aims to initiate energy-saving modernization measures in Ukrainian companies. The project provides: 1) advice for companies on energy efficiency, 2) pilot energy efficiency measures and demonstration of the technical and economic feasibility of the solutions, 3) advisory services to ministries and government sector on designing the incentive structures to enhance energy efficiency in companies.	GCIP 2 Ukraine will build on the achievements of the Energy Efficiency in Companies Programme in terms of capacity built among the relevant stakeholders. GCIP 2 Ukraine will also promote the supported start-ups/SMEs and their cleantech solutions among the Energy Efficiency in Companies Programme beneficiaries.	2017 - ongoing

Project title	Project description	Project relevance for GCIP 2 Ukraine	Implementation period
Energy-Efficient Pilot Project	This GIZ pilot complex demonstrated an energy-efficient, resource-saving building concept using modern, environmentally friendly technologies. In cooperation with the project, policy-makers, associations, planners and private sector representatives sought a suitable pilot project to showcase energy-efficient construction. Many international organisations are using the complex as a showcase project to demonstrate the use of European standards in energy-efficient construction.	The construction sector being one of the most emission intensive sectors in Ukraine, may benefit from GCIP 2 Ukraine promoted cleantech solutions, while GCIP 2 Ukraine will build on the policy achievements made in the area of sustainable construction and investment policies.	2009-2019

Project title	Project description	Project relevance for GCIP 2 Ukraine	Implementation period
Energy Efficiency in Municipalities I and II	This GIZ project promotes the development and dissemination of advisory and support services on municipal energy management which are optimally adapted to smaller municipalities. The project helps present energy savings potential in a clear and transparent manner, raise awareness of energy efficiency approaches across all segments of the population, and select measures on the basis of verifiable cost-benefit considerations. In frame of the project, a support mechanism has been set up for all partner towns to promote energy efficiency for public buildings in order to intensify the dialogue and cooperation between towns and energy efficiency service providers.	These projects are oriented towards the energy sector which also falls within the thematic scope of GCIP 2 Ukraine. The GCIP 2 Ukraine will promote innovative cleantech solutions that can be applied in the energy sector and hence both the Ukrainian energy sector can benefit from emerging cleantech solutions as well as GCIP participants will be able to benefit from the emerging opportunities on the Ukrainian energy market. What is more, it will contribute to the improvement of the related policy and regulatory framework, building on the project achievements as well as synergizing with them.	2013-2017 and 2017-2020

Project title	Project description	Project relevance for GCIP 2 Ukraine	Implementation period
Competitive Economy Program (CEP)	This USAID program is a USD 42 million activity to advance a strong, diverse, and open Ukrainian economy by supporting SMEs and business startups to become more competitive in domestic and international markets. CEP?s principal objectives are to foster a better business enabling environment, provide support for competitive industries and firms, and boost Ukraine?s exports and trade. CEP supports the development of selected industries that have the potential to grow rapidly, increase revenue, and generate investment and jobs in an environmentally sustainable way. CEP is focused on several key sectors ? information technology (IT), furniture and wood processing, tourism, and film industry.	While this program pursues similar objectives to the GCIP 2 Ukraine project, in that start-ups and SMEs shall be supported in enabling their sustainable growth and increased investment opportunities, these two projects complement each other in that they focus on different sectors and hence can synergize by sharing lessons learnt.	2018 - ongoing

59. Although the above-mentioned projects tackle several aspects that are also relevant for GCIP 2 Ukraine, they lack tailored mechanisms to promote SME green financing and specific measures necessary to create enabling environments and systematically address policy, institutional, financial, technical and awareness barriers to encourage investment in innovative cleantech solutions. The GCIP 2 Ukraine will specifically address these issues, while simultaneously closely coordinating and synergizing with the above-mentioned projects.

International baseline projects

60. **PFAN (Private Financing Advisory Network**) is an initiative hosted jointly by UNIDO and the Renewable Energy and Energy Efficiency Partnership (REEEP) and it 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 mobilizes private financing to reduce GHG emissions and build climate resilience ? contributing to the Paris Agreement and SDGs, i.e. SDGs 7 (Energy), 9 (Industry), 13 (Climate Action), and 17 (Partnership). A network of 99 in-country private sector experts in 39 countries is supported by 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 mobilize 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 have been mitigated annually and an additional 975 MW of clean power was installed. This year already, PFAN has facilitated at least 69 investment-ready projects.
[12]

61. **SME Instrument Program under Horizon 2020** was a business innovation support scheme that targets SMEs in EU Member States and Horizon 2020 associated countries which include Ukraine. The program comprised of two phases with Phase 1 providing a lump-sum grant of EUR 50,000 to carry out a concept and feasibility assessment and Phase 2 providing funds in the range

between EUR 500,000 and EUR 2.5 million for innovation activities such as testing, prototyping, scale-up studies and market replication. SMEs also received tailored business innovation coaching and business acceleration services within the scheme. Overall, more than 10 Ukrainian companies received support under the SME Instrument Program including some climate-friendly technologies and products.

62. **EIC Accelerator Pilot** is the successor of SME Instrument Program which supports high-risk, high-potential innovative SMEs willing to develop and commercialise new products, services and business models that could drive economic growth and shape new markets or disrupt existing ones in Europe and worldwide. The EIC Accelerator Pilot is part of the European Innovation Council endeavours that support top class innovators, entrepreneurs and small companies with funding opportunities and acceleration services. The main focus of the EIC Accelerator Pilot is on innovations that shape new markets and generate jobs, growth and higher standards of living. The EIC Accelerator Pilot provides full-cycle business innovation support and also offers coaching and mentoring. Besides, through grant funding it offers equity finance in the amount of up to EUR 15 million.

63. **EIT Climate-KIC Accelerator** is the only EU acceleration programme focused on climate impact by cleantech commercialisation. EIT Climate-KIC Accelerator is the EU?s largest public-private partnership addressing climate change through innovation to build a zero-carbon economy. It covers four priority themes: urban areas, land use, production systems, climate metrics and finance. The EIT Climate-KIC Accelerator is supported by the European Institute of Innovation and Technology (EIT), a body of the European Union. This Accelerator has also already supported start-ups from Ukraine.

Main stakeholders within the CIEE in Ukraine

64. There are a number of stakeholders relevant for the CIEE in Ukraine. For the purpose of this project proposal they have been disaggregated into public stakeholders, incubators/accelerators, and venture capital/angel investors.

Public

65. The **Innovation Council**, launched by the Cabinet of Minister in March 2018, is a platform for cooperation among the government, entrepreneurs, and the scientific community. It is also a relevant decision-making body in the innovation-related areas.

66. The **National Research Foundation of Ukraine (NRFU)** is the largest funding body in Ukraine that supports scientific activities of all researchers, independently of their affiliations. This support is provided in a form of research grants that are awarded on the basis of an independent peer review. NRFU is governed by two collegial bodies - Scientific Board and Supervisory Board.

67. The **Ministry of Economic Development and Trade (MEDT)** and the **Ministry of Education and Science (MES)** are responsible for coordinating the science, technology and innovation policy in Ukraine. What is more, MEDT has a specialized department dealing with investment, innovation and public-private partnerships. The **Ministry of Environmental Protection and Natural Resources of Ukraine (MENR)** is engaged in the formation and implementation of the state policy in the field of environmental protection, biological/genetic/radiation safety, waste management, pesticides and agrochemicals, and rational use/reproduction/protection of natural resources. The **Ministry of Energy and Coal Mining (MECM)** is the main body in the central government responsible for realization of electric power-generation state policies. The **Ministry of Communities and Territories Development (MCTD)** is responsible for public housing infrastructure development as well as it designs energy efficiency regulations and facilitates energy efficiency projects in the country. The **Ministry of Digital Transformation (MDT)** manages the implementation of state policy in the field of informatization, e-government, and information society development. The **Ministry of Strategic**

Industries (MSI) is responsible for development and implementation of state industrial policy with the focus on military and defence industry, aircraft construction and space activities, and other strategic industries. As such, it is relevant with the view to enterprises in strategic industries that could be a source of demand for specific cleantech solutions developed by GCIP 2 Ukraine SMEs/start-ups, and thus be a potential partner for commercialization of technologies. The **Ministry of Finance (MF)** is the central executive agency in Ukraine charged with developing and implementing national financial and budget policies, and with defining national policies in customs and taxation. What is more, the **Office of Vice-Prime-Minister for European and Euro-Atlantic Integration** is actively involved with EU Green Deal projects and hydrogen projects.

68. The **State Finance Institution for Innovations (SFII)** was established to provide financial support to business entities of various ownership models. It seeks to protect and promote domestic commodity producers and facilitate export. The SFII also selects innovative projects in different industry sectors and provides financial support for their development. The projects include manufacturing of equipment, materials, alternative fuel types, software and automation solutions, set up of production facilities, etc. SFII is also directly responsible for the implementation of innovation policy through the provision of financial instruments, full administrative support, co-investment and project management. It also plays a key role in the implementation of the GCIP 1 Ukraine.

69. The **Ukrainian Start-up Fund (USF)** is a state fund launched in 2019 and run by the SFII. The fund provides pre-seed (USD 25,000) and seed funding (USD 50,000) for Ukrainian start-ups with a focus on international markets. The USF budget amounts to approximately EUR 15 million. Target sectors include, but are not limited to, Artificial Intelligence, Augmented Reality, BigDat?, Blockchain, Cyber Security, Defence, Medical and Healthcare, Travel, FinTech, EdTech, Robotics, Professional Services, Software as a Service, Manufacturing, E-commerce, Internet of Things. An example of a start-up supported is the SmartMac (with a resource consumption monitoring tool).

70. The **State Agency on Energy Efficiency and Energy Saving (SAEE)** implements the state policy in the field of efficient use of fuel and energy resources, energy saving, renewable energy and alternative fuels. It is responsible for ensuring an increase in the share of renewable energy sources and alternative fuels in the energy balance of Ukraine. What is more, the SAEE together with other governmental bodies has been setting up conditions for implementation of a green bond market in Ukraine as an instrument for attracting investments into energy efficiency projects (among others, it was involved in government work on related legal regulations in 2019).

71. The **Investment Promotion Office (UkraineInvest)** is a regular advisory body to the Cabinet of Ministers of Ukraine established in October 2016. Its objective is to promote foreign direct investments and improve Ukraine?s image as an attractive country for investing.

72. The **National Academy of Sciences of Ukraine (NASU)** is a key network of research and development institutes (nearly 200) and so-called sectoral research institutes. NASU is an independent entity but coordinates its activities with the MES. It also supported the establishment of technological parks in Ukraine. NASU has also a considerable impact on the policy-making process in the field of science.

Incubators and accelerators

73. There are a number of incubation and acceleration programs supported by private companies or international organizations present in Ukraine. Such programs typically have one or several specific focal areas mainly related to agriculture, IT, and industry. Some of the incubators and accelerators include low-carbon oriented categories and connection with national and international initiatives. As already mentioned, the GCIP 1 Ukraine includes already established and ongoing innovative cleantech acceleration services. Apart from it, there are other examples of incubation and acceleration programs open for low-carbon start-ups which include:

? 1991 Open Data Incubator that is focused on start-ups using energy and environmental-related open data,
? MHP accelerator 2.0 which targets AgriTech start-ups focusing on energy efficiency improvements and GHG emission reductions,
? Sikorsky Challenge Business Competition (created and supported by NTUU "Kyiv Polytechnic Institute" and Science Park "Kyivska Polytechnika") that unites the country's institutions interested in the development of the Ukrainian open innovation economy (universities, research institutions, state authorities, local authorities, business companies, foundations, and NGOs),
? YEP academic accelerator that is a network of academic business incubators providing a business-related education for youth and contributing to the development of the entrepreneurial ecosystem of Ukraine,
? RadarTech which is a technological cluster that integrates industry-wide corporate accelerators,
? UCU Centre of Entrepreneurship which is an accelerator for start-ups and an educational platform for students and young entrepreneurs in Ukraine,
? EO Business Incubator (USAID).

74. Typically, incubation and acceleration programs present in Ukraine provide mentorship, training on financial literacy, business model development, pitching, as well as community benefits and other opportunities for start-ups. Their winners could also receive some financial support and a possibility to continue cooperation on start-up development with some commercial partners. Besides, there are also examples of Ukrainian start-ups participating in international acceleration programs such as Huge Thing, Techstars Smart Mobility Accelerator, Rockstart Energy Program, Wise Guys Sustainability, etc.

Venture capital providers and angel investors

75. According to the most recent annual venture market report DealBook 2020 prepared by Aventures Capital,[13][12] the total venture capital and private equity funding volume in Ukraine reached USD 544 million in 2019. The increase in funding was, however, driven by a few large-scale funding rounds with 3 companies responsible for 77% of investment (Grammarly, GitLab, people.ai). Early-stage investment remains a challenge and has not demonstrated significant growth during recent years with the volume of USD 46 million reached in 2019, including USD 20 millions of seed funding and USD 26 million of Series A funding. International funds continue to provide the majority of early-stage financing, especially for Series A, while local funds are focused mostly on seed funding.

76. The Ukrainian Venture Capital and Private Equity Overview 2019 released by the Ukrainian Venture Capital and Private Equity Association and Deloitte Ukraine[14][13] estimates that the total volume of venture investments into Ukrainian IT companies has stayed at a similar level of USD 510 million. The estimate includes international capital attracted via Kickstarter campaigns and funding from European institutions and programs such as Horizon 2020 and the EBRD. The report also mentions the increase of angel investments by 7 times in 2019 reaching the amount of USD 6.1 million compared to USD 0.9 million in 2018. Software, online services, hardware, and marketplaces are leading categories in terms of the number of deals and investment volumes. The report also provides a gender perspective on the Ukrainian start-up market, indicating that 25.9% of Ukrainian start-ups, which received funding in 2019, have at least one woman among founders.

77. The venture funds active in Ukraine do not include low-carbon solutions and technologies among their priority areas focusing attention on software, online services, e-commerce, health care, and other industries. Examples include TA Ventures, Aventures Capital, Adventures Lab, Genesis

Investments, SMRK VC Fund, ICU Ventures, Chernovetskyi Investment Group, Overkill Ventures. The key Ukrainian venture capital providers and business angels that have already invested in Ukrainian cleantech solutions are: Startup Network, IoT Hub, SolarGaps, BioSENS, Sirocco, SMRK Fund, Horizon Capital.

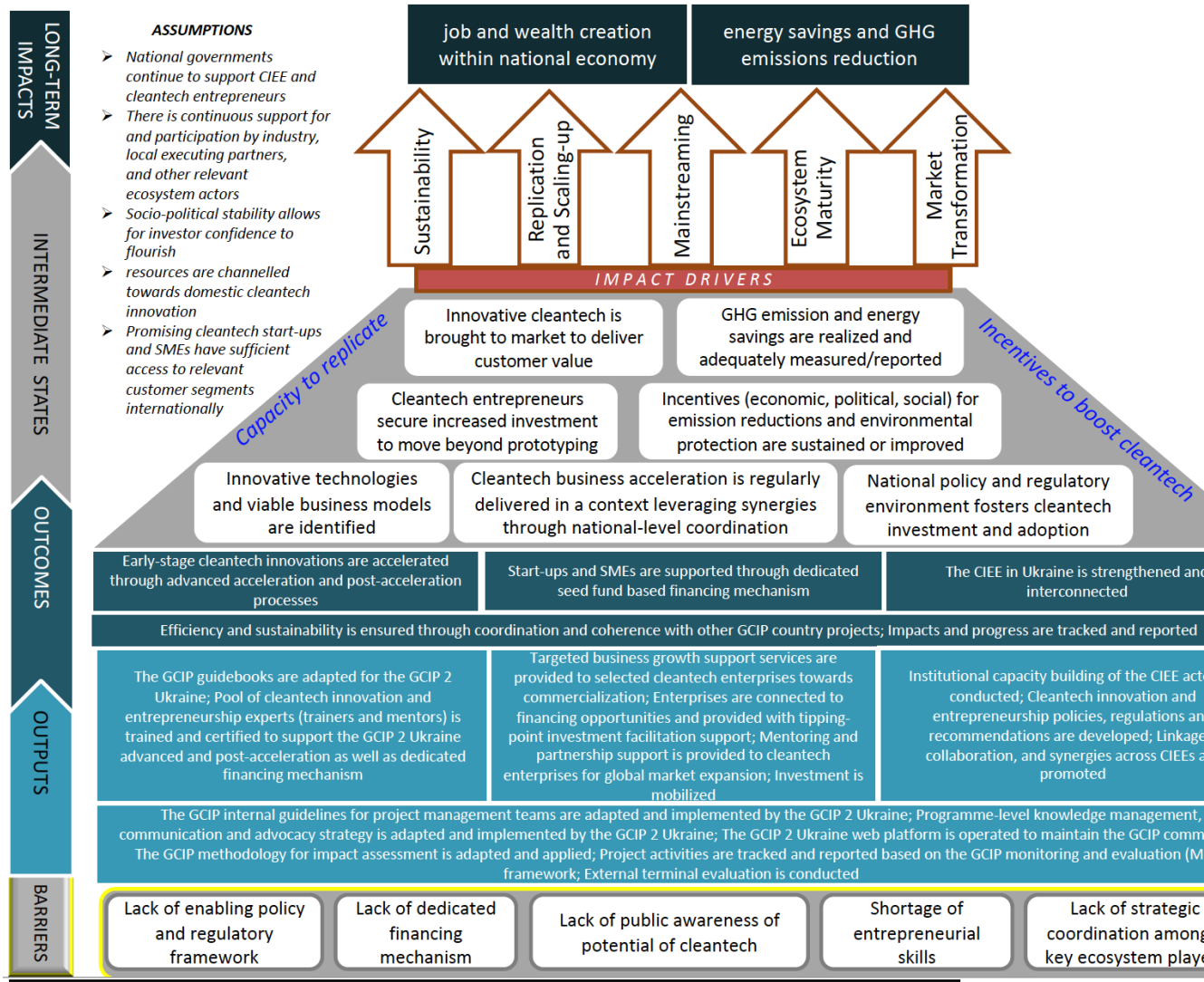
3) The proposed alternative scenario with a description of outcomes and components of the project

78. The proposed alternative scenario will be the implementation of the GCIP 2 Ukraine which forms a part of the GCIP Framework that aims to nurture cleantech entrepreneurs around the world. This project will help cleantech enterprises (SMEs and start-ups) in Ukraine to develop and scale up, and to increase market adoption of cleantech innovations, thus leading to a reduction in emissions and resource consumption. Furthermore, it will facilitate increased investment, job creation and market development

79. This project is developed as a child project of the GCIP Framework. As such, it will link the cleantech innovation and entrepreneurship ecosystem (CIEE) of Ukraine to the global network of CIEEs in other GCIP partner countries, as well as it will receive support from the GCIP Global. More specifically, Greencubator and NRFU, which have been selected as the national project executing entities (national PEEs), will be supported by two global project executing entities (global PEEs), i.e. Network for Global Innovation (NGIN) and Cleantech Group (CTG).

80. In line with the GCIP Framework, the GCIP 2 Ukraine consists of three Components which have been designed based on the current needs of developing countries and GCIP partner countries including Ukraine, as well as recommendations from the GEF?s evaluation of GCIP conducted in 2018, and with feedback from the previous nine GCIP country projects implemented between 2013 and 2019. In particular, the project will 1) transform early-stage innovative cleantech solutions into scalable enterprises; 2) strengthen the capacities of CIEE stakeholders and connect them; and 3) engage with the GCIP Global to ensure programme coordination and coherence, and appropriate knowledge management, project monitoring and evaluation. The project?s Theory of Change (ToC) is pictured in the Figure below.

Figure 2: GCIP 2 Ukraine Theory of Change (ToC) ? graphical and descriptive presentation.



The entrepreneurs (start-ups and SMEs) in Ukraine face several barriers, as described in the section a) ?the global environmental and/or adaptation problems, root causes and barriers that need to be addressed?. These barriers include: lack of an enabling policy and regulatory framework, limited access to early-stage finance, lack of public awareness of the potential of cleantech, shortage of entrepreneurial skills, lack of strategic coordination among key CIEE players, as pictured on the bottom of the graph above. In order to alleviate the above-mentioned barriers, the GCIP 2 Ukraine focuses on the following lines of intervention (Outputs): 1) adaptation of GCIP 2 Ukraine guidebooks; training of a pool of cleantech financing and investment experts; provision of advanced acceleration services; provision of post-acceleration and investment facilitation support; design, validation, and operationalization of a financing mechanism tailored for investments in innovative cleantech solutions; 2) provision of recommendations for enhancement of the policy and regulatory frameworks; capacity building of national institutions; 3) adaptation and implementation of the GCIP internal guidelines for project management teams; facilitation of knowledge exchange; adaptation and application of the GCIP methodology for impact assessment; tracking and reporting of project activities based on the GCIP monitoring and evaluation (M&E) framework, as well a conducting an external mid-term review and independent terminal evaluation.

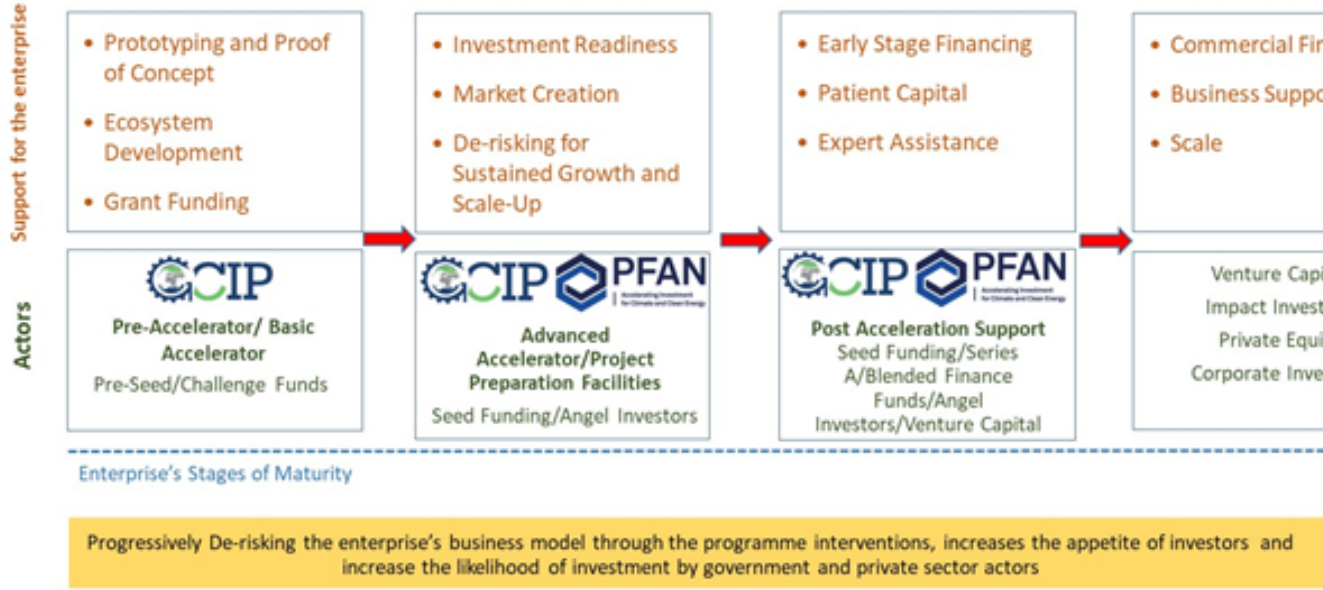
IF the above listed Outputs are successfully realized; **THEN**: innovative cleantech is brought to market to deliver customer value, GHG emission and energy savings are realized and adequately measured/reported, cleantech entrepreneurs secure increased investment to move beyond prototyping, incentives (economic, political, social) for emission reductions and environmental protection are sustained or improved, innovative technologies and viable business models are identified, cleantech business acceleration is regularly delivered in a context leveraging

synergies through national-level coordination, and national policy and regulatory environment fosters cleantech investment and adoption; **BECAUSE**: start-ups and SMEs are supported in advanced and gender-responsive business growth; investment is mobilized to deploy innovative cleantech solutions across various sectors; policy and regulatory framework is strengthened to stimulate investments in innovative cleantech solutions; institutional capacity building of the cleantech innovation and entrepreneurship ecosystem (CIEE) actors is conducted; efficiency and sustainability of the GCIP 2 Ukraine is ensured through programme coordination and coherence with other GCIP country projects; impacts and progress of the GCIP 2 Ukraine are tracked and reported. Ultimately, the project will deliver multifaceted environmental and socio-economic high-level impacts, including job and wealth creation, energy savings, and GHG emissions reductions.

81. The GCIP approach under Component 1 is to accelerate innovations that have highest GHG emission reduction potential and have highest chances of going to the market through a number of scale-up phases and together with its partners like PFAN, as well as to continually de-risk the enterprise business models in order to increase the likelihood of investor interest. This is important to note since the sources of investment that the GCIP start-ups/SMEs will be able to mobilize will depend on the alignment of the priorities of the institutions that have shown interest to invest. Most pressingly in Ukraine, there is a need to enable access to finance, in particular to venture capital. The GCIP 2 Ukraine will boost the identification and development of innovative cleantech start-ups/SMEs by linking them to financing opportunities to commercialize their products and services, which will in turn transform the nascent cleantech market into a dynamic and vibrant one which will have a long-lasting positive effect in the national economy and the global environment.

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

Figure 3: Start to Scale-up journey, De-risking for investment readiness



82. The objective underpinning the linkages established between GCIP and PFAN is to offer the ventures supported by the GCIP 2 Ukraine a continuum of support services as they mature towards commercial viability and scaling up. GCIP combines a top-down (policy support) with a bottom-up (support for home-grown innovation) approach. It is technology-neutral and its theory of change is grounded in sustainability (incl. energy) transition theories and as such, the type of the innovations that are supported are not pre-determined. This will ensure that entrepreneurs with economically viable and transformative cleantech innovations are able to follow a continuum of support to commercialization and scale-up.

83. The final investment decisions are made between the entrepreneur and the investor, once they find common value. A start-up/SME may have several investors, which may result in blending of public and private financing. The coordination between the country child projects (including GCIP 2 Ukraine) and the GCIP Global enables investors at a global level to access start-ups/SMEs from different countries under the GCIP Framework, i.e. through activities like Investor Connect, National Forums and the Global Forums.

84. The GCIP 2 Ukraine envisages to have a significant impact on energy, agriculture, industry, and waste sectors. These sectors were identified during the PPG phase as the ones with the most potential for the implementation of cleantech innovations. The GCIP 2 Ukraine will also significantly contribute towards the GEF?s ?CCM-1 Objective 1: Promote innovation and technology transfer for sustainable energy breakthroughs?. The project envisages accelerating GHG emissions mitigation ideas with a high replicability potential. Importantly, GCIP 2 Ukraine will build upon the achievements of the GCIP 1 Ukraine. As already mentioned, the GCIP 1 Ukraine PMU, along with other key stakeholders, stated the need for introduction of an advanced acceleration and post-acceleration support, and the establishment of a financing mechanism that would ensure market readiness and spur Ukrainian innovation sector towards low-carbon development.

85. The GCIP 2 Ukraine will adopt an inter-disciplinary holistic approach by engaging several stakeholders such as start-ups, SMEs, ministries and government institutions, academia and research centres, business associations, financing institutions, foundations, venture capitalists, etc. The GCIP 2 Ukraine will closely coordinate with the GCIP Framework, as well as other similar national and international efforts, as it is critical to maximize synergies and share knowledge and best practices that can help in enhancing entrepreneurs? contributions towards climate change mitigation, while increasing productivity and generating growth and wealth.

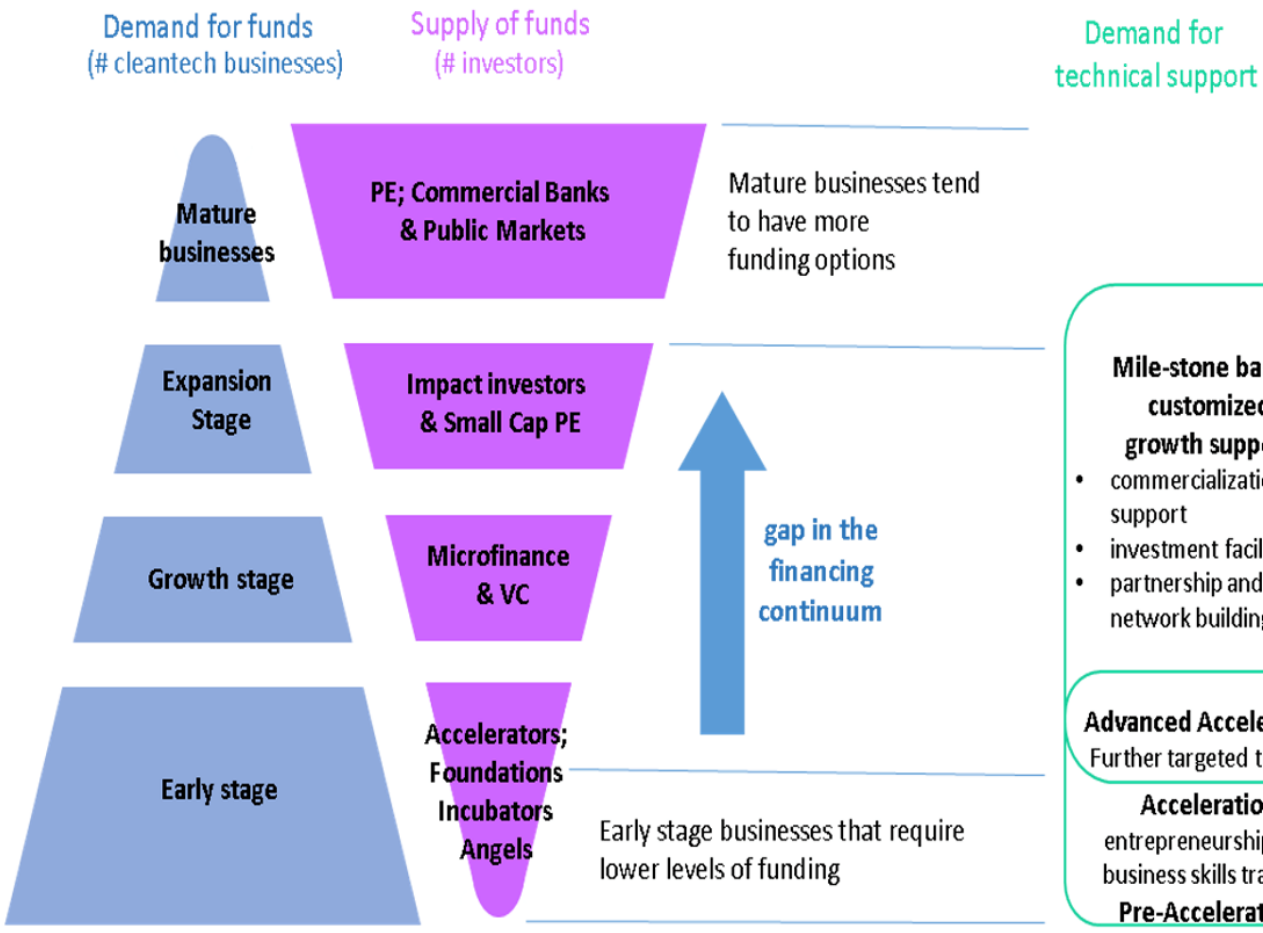
Project description

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

86. The Component 1 aims at providing direct support to SMEs/start-ups to enhance their capacity and competitiveness, and to leverage market opportunities. The main target group of activities foreseen under the Component 1 are the alumni graduating from GCIP 1 as well as other enterprises at a similar stage of development. More specifically, Outcome 1.1 focuses on the provision of support for the advanced and gender-responsive business growth, and Outcome 1.2 on the mobilization of investment to deploy innovative cleantech solutions across various sectors.

87. The Figure below shows the types of assistance required by cleantech enterprises, depending on their stage of growth.

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



For clarification, a brief overview of the available GCIP business acceleration support is provided in the Table 7 below.

Table 7: Overview of the available GCIP business acceleration support.

The **Pre-Accelerator** consists of activities that enable formation of early-stage teams, as well as assist them to develop initial concepts and undergo their validation (i.e. proof of concept). This type of support encompasses workshops, hackathons, start-up camps, and mini-competitions. The Pre-Accelerator takes place before the launch of the main GCIP Accelerator, leading to an increased number of high-quality applications.
The **Accelerator** is a four to six-month curriculum designed specifically to support cleantech innovators to develop viable business models, and thus transform their ideas into fast-growing scalable and investable enterprises. Through the GCIP Accelerator, a cohort of cleantech innovators with a high-impact potential is identified and invited to receive intensive business and entrepreneurship training (as a group training in the framework of the GCIP National Academy), mentoring, and coaching based on the state-of-the-art international expertise, in particular with the aim to a) improve their business skills and investor pitch, b) connect them to potential business partners, financiers, and investors, c) maximize the expected net climate benefits of their solutions.

The **Advanced Accelerator** is a service offered to selected entrepreneurs participating in the Accelerator and it is focused on providing tailored and needs-based individual support rather than a group training, mentoring, and coaching. The Advanced Accelerator is time-bound and outcome-focused, i.e. there are concrete milestones that need to be achieved within a specific timeframe. The support is provided by one or several Executives in Residence (EIR) that are senior practitioners (executives or entrepreneurs) with hands-on experience in scaling up cleantech enterprises, and it is focused on problem-solving, i.e. tackling very specific operational, financial, and strategic issues.
The **Post-Accelerator** provides entrepreneurs with assistance in four related, but not necessarily linear dimensions: advanced business growth and commercialization, investment readiness, market readiness, and technology readiness. More specifically, a series of trainings (on corporate partnerships and government relationships, international market entry, mergers and acquisitions, exit strategy, challenges specific for selected industry sectors, etc.); needs-based activities; and technology verification, product development, and testing facility support are offered.

88. To ensure coherence and to achieve the highest impact potential of GCIP interventions along the start-up to scale-up journey of a cleantech enterprises, detailed eligibility criteria will be defined for the above-mentioned types of support in the framework of the GCIP Global. These will be related to the proof of concept requirements; level of technology readiness (TRL); business and market readiness levels (BRL/MRL); market potential; proof of evidence of business growth; environmental and social impact potential; and effectiveness of environmental and social risk mitigation measures, among others. The criteria will also include adequate definitions of start-ups and SMEs, as well as they will be in line with the GEF-7 Programming Directions and in particular with the entry points for the Climate Change Focal Area Strategy including: a) de-centralized renewable power with energy storage, b) electric drive technologies and e-mobility, c) accelerating energy efficiency adoption and d) cleantech innovation.

Outcome 1.1 Start-ups and SMEs are supported in advanced and gender-responsive business growth

89. The already ongoing GCIP 1 Ukraine runs an Accelerator that provides early-stage development support to innovative cleantech start-ups and SMEs. While the GCIP 1 Ukraine has established a certain level of relevant capacity, the GCIP 2 Ukraine is designed to build on its achievements and to simultaneously address the still existing barriers discussed above. Ultimately, the GCIP 2 Ukraine will provide a significant contribution to closing the gap in the financing continuum, as pictured in the Figure above. In particular, the project envisages providing advanced acceleration and post-acceleration services, and connecting start-ups and SMEs with the national and international venture capital sources of financing. These activities will require a significant level of technical assistance to secure sufficient and high-quality capacity level. To achieve this, the project will also undertake activities related to creating a pool of experts trained to aid identified start-ups and SMEs.

Output 1.1.1 The GCIP guidebooks are adapted for the GCIP 2 Ukraine

90. The GCIP guidebooks (for Advanced Accelerator and Post-Accelerator), that are to be developed under the GCIP Global, will be comprehensive documents that articulate the GCIP approach to promoting cleantech innovation and entrepreneurship in developing countries. As such, they will guide the operation and management of the GCIP 2 Ukraine, in that they will for example include proposed schedules; eligibility requirements and selection criteria for the participants; training curricula and handbooks for applicants and experts. The guidebooks will be shared with Greencubator and appropriate training will be provided by the GCIP Global on their adaptation and use.

91. The GCIP guidebooks will be reviewed and adapted for Greencubator to reflect the context of Ukraine?s CIEE (i.e. the GCIP 2 Ukraine guidebooks will be developed), including for example market conditions, policy environment, development priorities, technology focus (incl. for example a thematic focus on agriculture, mini-grids, etc.), and local examples. In addition, the GCIP 2

Ukraine Advanced Accelerator and Post-Accelerator training curricula and delivery format will be customized to meet national needs, with the support from the GCIP Global.

92. The GCIP 2 Ukraine guidebooks will be finalized in consultation with the government, business and civil society organizations, and other relevant stakeholders in the CIEE. Moreover, the guidebooks will be translated into the local language. Suggestions for improvement of the GCIP Global guidebook will be shared by Greencubator with the global PEEs. With due consideration of the framework conditions developed by the GCIP Global for each type of the available GCIP support, the GCIP 2 Ukraine guidebooks will set the final selection criteria for the Advanced Accelerator and Post-Accelerator. In particular, they might include focus on cleantech such as renewables, hydrogen, energy storage, Industry 4.0 solutions and others, the interest in which was expressed by companies and institutions that issued co-financing letters in support of GCIP 2 Ukraine.

Output 1.1.2 Pool of at least 10 cleantech financing and investment experts is trained to support the GCIP 2 Ukraine (at least 35% women)

93. The provision of Advanced Accelerator and Post-Accelerator services requires highly skilled and specifically trained experts. Developing a pool of cleantech financing and investment experts to act as trainers and mentors is critical for ensuring the effectiveness and long-term sustainability of the GCIP 2 Ukraine Advanced Accelerator and Post-Accelerator. What is more, this is crucial for facilitating an uninterrupted scale-up of enterprises graduating from the GCIP 1 Ukraine towards more advanced business models. While there has been a pool of experts (mentors and judges, 45% being women), also created in the framework of GCIP 1 Ukraine, the particular focus was placed on supporting the GCIP 1 Ukraine Accelerator participants, i.e. cleantech innovators that are at early stages of their idea and business development (with focus on topics such as business plan and financial model development, marketing, team management, investor pitch, gender mainstreaming and sustainability, basic introduction into international markets, etc.). The advancement towards next stages of business growth requires additional expert support that addresses several specific operational, financial, strategic issues associated with enterprise scale-up, commercialization, investment readiness, market readiness, technology readiness, internationalization, etc.

94. The experts (trainers and mentors) to be trained in the framework of activities under Output 1.1.2 of GCIP 2 Ukraine will be identified through a GCIP 2 Ukraine call for application and they might have diverse professional background in private business, corporate, finance, universities, public institutions, etc. The experts being senior practitioners (executives or entrepreneurs) with hands-on experience in scaling up cleantech enterprises are referred to as Executives in Residence (EIRs) within the GCIP Framework and their support is particularly relevant for the Advanced Accelerator. In this context it has to be noted that the Advanced Accelerator focuses on the provision of tailored and needs-based individual support rather than standardized and uniform trainings for broader groups of participants. Therefore, with the view to ensuring the availability of this support, there is a need to create a pool of adequately trained cleantech financing and investment experts. With regard to the Post-Accelerator support, the experts (in order to be able to act as trainers and mentors) will need to be trained in four related, but not necessarily linear dimensions of support: advanced business growth and commercialization, investment readiness, market readiness, and technology readiness.

95. The experts are also key stakeholders in Ukraine?s CIEE as well as they are expected to positively influence the cleantech innovation and entrepreneurship initiatives at the global level. The cleantech innovation and entrepreneurship expert training and certification system, which is to be developed by the GCIP Global, will be shared with the GCIP 2 Ukraine. The system will include training curricula/materials, guidance on the training delivery methods, as well as certification requirements, all of which will be tailored to the needs of different expert groups (trainers and mentors supporting enterprises at different business development levels). Also, the system will encourage increased participation of the GCIP alumni as experts.

96. The cleantech innovation and entrepreneurship expert training and certification system will be reviewed by Greencubator and NRFU and, with support from the GCIP Global, it will be adapted for the GCIP 2 Ukraine with the view to addressing specific national needs (e.g. specific thematic focus on agriculture, mini-grids, etc.) and ensuring synergies with other existing training and certification systems. Also, relevant documents will be translated in the local language. Greencubator and NRFU will receive support from the GCIP Global in the operationalization of the training and certification system, including webinars and guidance on the provision of the first training and certification cycle (with some follow-up support in the second year). A total of 10 experts (trainers and mentors) will be trained and certified with at least 35% being women.

97. In addition, PFAN will offer workshops structured as half day events, covering brief presentation of PFAN, its project development journey, gender lens investment principles, and successful examples of enterprises supported. The goal of this activity is both to support the training of experts (trainers and mentors) selected by GCIP 2 Ukraine on the one hand, and the enable the GCIP 2 Ukraine experts, after they are provided with project sourcing and investment facilitation skills and tools, to join PFAN as new advisors.

Output 1.1.3 Advanced acceleration services are provided to at least 15 SME/start-ups (at least 35% women-led)

98. Experience from previous GCIP interventions has shown that start-ups and SMEs require further assistance ? beyond the Accelerator ? to be able to scale up. Therefore, building on activities conducted in the framework of GCIP 1 Ukraine, additional support will be provided by the GCIP 2 Ukraine to selected enterprises from the GCIP 1 Ukraine pipeline and other SMEs/start-ups that are interested in GCIP 2 Ukraine support and fulfil its application requirements. In total, the Advanced Accelerator support will be provided to at least 15 SMEs/start-ups (at least 35% women-led).

99. At the same time, the emphasis of the Advanced Accelerator is placed away from the competition aspect (applied strongly during the Accelerator) and efforts focus on individual case-by-case assistance. While the GCIP 2 Ukraine Advanced Accelerator participants may be clustered in small groups sharing similar needs and challenges, under the supervision of experts (to be trained as outlined under Output 1.1.2) they will perform individual time-bound and outcome-focused activities, so that concrete milestones are achieved within a specific timeframe.

100. Also, it is expected that several GCIP 2 Ukraine supported cleantech innovations will have potential for replication in other developing countries. Therefore, international mentors will be assigned in the target country of expansion to facilitate connections and network building. This service will be offered through the GCIP Global, with support from the GCIP 2 Ukraine in identifying a suitable mentor with the appropriate expertise. In addition, the GCIP 2 Ukraine participants will be offered curated peer networking opportunities with GCIP alumni enterprises from other countries, as well as cleantech enterprises within UNIDO?s partner network. Through peer networking, the enterprises will explore opportunities for technology collaboration, product co-development, joint venture for market expansion, etc. in a business-to-business context.

101. On an ad-hoc basis, as opportunities arise, matchmaking services for the GCIP 2 Ukraine enterprises will be provided with interested corporations, investors, and governments. Further, opportunities to showcase cleantech innovations at high-level national and international events, such as the UN Climate Summit, UNFCCC Conference of Parties (COP), Vienna Energy Forum, etc. will be offered. Such high-profile events will be instrumental in enabling the GCIP 2 Ukraine enterprises to build their global presence and extend their partnerships and networks. In addition, Greencubator will nominate a few GCIP 2 Ukraine enterprises for the GCIP Global Accelerator, and support their participation. This activity will be closely coordinated with GCIP 1 Ukraine whose Accelerator semi-finalists and finalists might also directly apply to the GCIP Global

Accelerator, without benefitting from the GCIP 2 support. What is more, UNIDO will encourage application of GCIP 2 Ukraine alumni for PFAN support.

102. Under the GCIP Global there will be an annual GCIP Global Forum organized as an integral part of efforts to ensure connectivity between CIEEs. The GCIP Global Forum will bring selected participants of national GCIPs together for recognition and awards, and for opportunities to be connected with potential partners, customers, technology scouts and investors from around the world. Importantly, the GCIP Global Forum will also serve as a platform for innovation showcasing, and investment matching, and will be an important annual milestone for networking, advocacy, and knowledge exchange among CIEE players. The GCIP Global Forum will not be a stand-alone event, but it will be organized on the margins of highly visible global gatherings, such as for example the UNFCCC COP, Cleantech Group forums, etc.

103. In addition, as part of the global GCIP Framework, the national PEEs will receive membership in the Network for Global Innovation for the duration of the project. This will provide them and other GCIP 2 Ukraine stakeholders with access to international best practices and with opportunities to build cross-border connections with partners in additional countries. What is more, Greencubator will prepare a global engagement strategy (including engagement with international corporates) and organize workshops with relevant stakeholders in the GCIP 2 Ukraine?s CIEE to provide briefings on global investment trends, engagement modes with international stakeholders (including corporates), and on assessing the comparative attractiveness of different international CIEEs (with the use of benchmarks).

Output 1.1.4 At least 40 SMEs/start-ups with innovative cleantech solutions receive post-acceleration and investment facilitation support (at least 35% women-led)

104. The GCIP 1 Ukraine alumni and other interested enterprises will be encouraged to apply for the GCIP 2 Ukraine Post-Accelerator support if they meet requirements set out in the GCIP 2 Ukraine guidebook for the Post-Accelerator (to be developed under Output 1.1.1).

105. While some post-acceleration services have also been provided in the framework of GCIP 1 Ukraine (under Output 1.2.1), the GCIP 2 Ukraine will add value to them in that: 1) it will enable additional enterprises (not only those participating in GCIP 1 Ukraine, but also others) to take advantage of Post-Accelerator support); 2) it will be part of the GCIP Framework, and as such institutionalized, i.e. organized according to carefully developed and state-of-the art training curricula in cooperation with global executing entities, thus offering an internationally standardized approach and global networking/partnership opportunities,; 3) it will be provided by specialized experts (trained in the framework of Output 1.1.2); 4) it will be offered in combination with the Advanced Accelerator support that is focused on individual needs-based support rather than group training.

106. The Post-Accelerator support is provided in four related, but not necessarily linear dimensions: advanced business growth and commercialization support, investment readiness, market readiness, and technology readiness. More specifically, a series of trainings (in form of webinars) will be organized that will cover topics such as: 1) corporate partnerships and government relationships (3-4 virtual training modules of 1-2 hours each); 2) international market entry, mergers and acquisitions, and exit strategy (3-4 virtual training modules of 1-2 hours each); 3) challenges specific for selected industry sectors (3-4 virtual training modules of 1-2 hours each). The trainings will be based on the state-of-the-art international knowledge and best practices.

107. Moreover, for selected enterprises (minimum 5) with high impact potential, there will be technology verification, product development, and testing facility support provided. This may encompass collaboration with research institutions and universities that house relevant expertise, as well as with the industrial sector. In addition, partnerships will be explored with national agencies responsible for standardization and appraisal of product quality. The GCIP 2 Ukraine will also

provide support in overcoming product related market entry barriers, including protection of intellectual property and product life cycle assessments.

108. Identifying investment opportunities for cleantech products and services is a lengthy and iterative process. In many instances, high-impact and high-market potential cleantech innovations/businesses fail due to lack of access to financial resources. Recognizing this need, under Output 1.1.4 there will be also support provided in addressing the financing gap. In particular, taking advantage of various investment and promotion opportunities in Ukraine, direct support for the GCIP 2 Ukraine participants will be provided to connect them with potential investors, financiers, and tech scouts of large corporations. To this end, half-day Investor Connect events will be co-organized regularly (at least 1 annually) with partners including corporations and government agencies to highlight opportunities for investment, technology adoption, and partnerships.

109. In addition to support services designed to benefit enterprises, specific activities to engage the investment community (e.g. venture capital funds, angel investor networks, impact investors, etc.) will also be conducted. Greencubator will establish a robust network with national financial institutions and funds to raise the awareness of financiers representing them, as well as to train them and sensitize on the opportunities and risks associated with cleantech products and market trends. For example, communication efforts tailored for investors will be made to promote the profitability and impact potential of the cleantech businesses, thereby influencing the cleantech investment landscape. The intention is to broaden the engagement of impact investors in the country, both in terms of number of investors, as well as scope of their interest. What is more, in order to encourage the participation of seed funding providers from the national, regional and global stages in the GCIP 2 Ukraine and to leverage on the experience and knowledge of other GCIP countries, a number of suitable regional and international events will be organized or attended by a representative of the GCIP 2 Ukraine.

Table 8: Outcome 1.1 Activities and responsibilities.

Activity	**Detail**	**Responsibility**	**GCIP 2 Ukraine Budget (USD)**
Output 1.1.1			
1.1.1a	to review the GCIP guidebooks for Advanced Accelerator and Post-Accelerator; to share suggestions for improvement of the GCIP guidebooks with NGIN (feedback loop)	Greencubator	15,000
1.1.1b	to adapt the GCIP guidebooks to reflect the context of Ukraine?s CIEE, including market conditions, policy environment, development priorities, technology focus, local examples, etc. (i.e. to develop the GCIP 2 Ukraine guidebooks); to organize information and consultation sessions with relevant CIEE stakeholders; to disseminate the GCIP 2 Ukraine guidebooks among relevant CIEE stakeholders	Greencubator with support from NGIN	16,525
Activities to be carried out by the GCIP Global as a service to the GCIP 2 Ukraine: 1) NGIN to develop GCIP guidebooks for Advanced Accelerator and Post-Accelerator, including e.g. proposed schedules; eligibility requirements and selection criteria for the participants; training curricula and handbooks for applicants and experts (mentors, trainers); 2) NGIN to develop tools for a) assessment of needs of GCIP 2 Ukraine entrepreneurs (applicants, participants, and alumni), and b) planning and monitoring of key GCIP 2 Ukraine events; 3) NGIN to develop (including the identification of interested corporate partners) and pilot the Global Innovation Challenge as part of the GCIP Global Accelerator (as from 2022); 4) PFAN to provide workshops on the PFAN project development journey, gender lens investment principles, and successful examples of enterprises supported.			
Output 1.1.2			

1.1.2a	to get acquainted with the GCIP cleantech innovation and entrepreneurship expert training and certification system; to share suggestions for its improvement with NGIN (feedback loop)	Greencubator	8,265
1.1.2b	to adapt the GCIP cleantech innovation and entrepreneurship expert training and certification system to national circumstances, including translation where relevant (i.e. to develop the GCIP 2 Ukraine cleantech innovation and entrepreneurship expert training and certification system), and to operationalize the training and certification system	Greencubator with support from NGIN	18,846
1.1.2c	to provide training and certification to at least 10 experts (trainers and mentors) with at least 35% being women as well as to conduct the evaluation of experts (based on the NGIN assessment framework) and to support their accreditation	Greencubator	24,333
Activities to be carried out by the GCIP Global as a service to the GCIP 2 Ukraine: 1) NGIN to develop the GCIP cleantech innovation and entrepreneurship expert training and certification system for the GCIP 2 Ukraine experts (trainers, mentors), including training curricula/materials, guidance on the training delivery methods, and certification requirements; 2) NGIN to develop an assessment framework for evaluation of experts (trainers, mentors) as well as to facilitate the expert accreditation at global institutions/initiatives; 3) NGIN to capture recommendations from GCIP 2 Ukraine experts (trainers, mentors) to ensure continuous improvement of the GCIP cleantech innovation and entrepreneurship expert training and certification system.			
Output 1.1.3			
1.1.3a	to provide time-bound and outcome-focused Advanced Accelerator support to at least 15 start-ups/SMEs (with at least 35% women-led)	Greencubator	59,500
1.1.3b	to nominate/select GCIP 2 Ukraine alumni for the GCIP Global Accelerator and to support their participation	Greencubator	8,150
1.1.3c	to prepare a global engagement strategy and to provide related workshops to relevant stakeholders	Greencubator	70,500
Activities to be carried out by the GCIP Global as a service to the GCIP 2 Ukraine: 1) NGIN to identify and facilitate cross-border networking and matchmaking opportunities and for stat-ups/SMEs supported by the GCIP 2 Ukraine with internationally recognized mentors, GCIP alumni enterprises, corporations, investors, and governments; 2) NGIN to enable the GCIP 2 Ukraine enterprises to showcase their cleantech innovations at high-level national and international events (including GCIP Global Forum and other major international events); 3) NGIN to organize the GCIP Global Forum; 4) NGIN to facilitate Ukraine?s membership in the Network for Global Innovation for the duration of the project; 5) UNIDO to encourage applications of the GCIP 2 Ukraine alumni for PFAN support; 6) NGIN to provide application assistance to GCIP 2 Ukraine participants selected/nominated by Greencubator for support by the GCIP Global Accelerator.			
Output 1.1.4			
1.1.4a	to conduct 4 cycles of the GCIP 2 Ukraine Post-Accelerator focused on advanced business growth and commercialization support, investment readiness, market readiness, and technology readiness (based on the GCIP 2 Ukraine guidebooks developed under Output 1.1.1) to benefit at least 10 enterprises per cycle (at least 35% women-led)	Greencubator with support from NGIN in the first year	26,545
1.1.4b	to provide technology verification, product development and testing facility support to enterprises with high impact potential (minimum 15 enterprises in total of which at least 35% are women-led)	Greencubator	12,000
1.1.4c	to organize national investment facilitation events (Investor Connect) for the GCIP 2 Ukraine start-ups/SMEs (at least 1 annually)	Greencubator	15,500

1.1.4d	to establish a robust network with national financial institutions and funds, and to manage related communication and outreach activities, including awareness raising activities for the local investor community to increase investor confidence and ensure accurate risk perception with regard to cleantech solutions; as well as to organize or attend suitable events in order to encourage the participation of seed funding providers from the national, regional and global stages in the GCIP 2 Ukraine, and to leverage on the experience and knowledge of other GCIP countries	Greencubator	6,930
Activities to be carried out by the GCIP Global as a service to the GCIP 2 Ukraine: NGIN to deliver a series of trainings/webinars (in the framework of the GCIP 2 Ukraine Post-Accelerator) on 1) corporate partnerships and government relationships (3-4 virtual training modules of 1-2 hours each); 2) international market entry, mergers and acquisitions, and exit strategy (3-4 virtual training modules of 1-2 hours each); 3) challenges specific for selected industry sectors (3-4 virtual training modules of 1-2 hours each); as well as to provide a report on best practices for acceleration based on state-of-the art international knowledge.			

Outcome 1.2 Investment is mobilized to deploy innovative cleantech solutions across various sectors

110. The Advanced Accelerator and Post-Accelerator services are expected to result in market ready businesses that can attract commercial investment. Additionally, the GCIP 2 Ukraine will undertake a comprehensive set of activities to develop a financial mechanism tailored to the needs of cleantech start-ups/SMEs. An institutional framework for financing start-ups/SMEs has already been established in Ukraine as well as other relevant supporting activities were conducted. Based on these achievements so far, the GCIP 2 Ukraine will engage with relevant stakeholders to define and develop the financial mechanism that would increase probability and effectiveness of securing investments in innovative cleantech with high replication and scaling up potential.

Output 1.2.1 Financing mechanism tailored for investments in innovative cleantech solutions is designed, validated and operationalized (up to 30 SMEs/start-ups receive seed funding and at least 35% women-led)

111. The GCIP 2 Ukraine will undertake comprehensive consultations with various representatives of relevant public institutions such as for example Ukrainian Start-up Fund (USF) and Energy Efficiency Fund (EEF) as well as with representatives of venture capital investors and other relevant stakeholders in order to first conceptualize (incl. validation of the design) and then establish/institutionalize a financing mechanism (i.e. an early-stage development fund) through which seed funding will be disbursed to innovative cleantech enterprises (start-ups and SMEs) supported by GCIP 2.

112. The financial mechanism conceptualization and establishment/institutionalization process will involve considerations and decisions related to the role of public-private partnerships (PPPs), long-term sustainability and ownership of the mechanism, mobilization of the first replenishment for the fund, selection/eligibility criteria for enterprises supported through the financial mechanism, financial instruments applied in its framework (loan, equity, grants, blended finance, possible cooperation with green bond issuers, etc.), maximum disbursement amount per enterprise, thematic focus (e.g. on renewables, Industry 4.0, hydrogen, energy storage, etc.), and others.

Table 9: Outcome 1.2 Activities and responsibilities.

Activity	Detail	Responsibility	GCIP 2 Ukraine Budget (USD)
Output 1.2.1			
1.2.1a	to conduct consultations with relevant stakeholders with the aim of conceptualizing and validating the design of the financing mechanism (i.e. an early stage development fund)	Greencubator	17,500
1.2.1b	to define operating procedures for the financing mechanism and to establish/institutionalize it	Greencubator	29,500
1.2.1c	to disburse funds to selected innovative cleantech enterprises supported by GCIP 2 Ukraine (up to 30 SMEs/start-ups of which at least 35% women-led)	Greencubator	515,539

Component 2. Cleantech innovation and entrepreneurship ecosystem (CIEE) strengthening and connectivity

113. The policy framework and institutional capacity are integral parts of GCIP?s ?ecosystems approach?, and also of strategic relevance in ensuring that the outputs and outcomes of the project are contributing to the national priorities and are sustained after the project closure. Therefore, the objective of the Component 2 is to build capacity of key CIEE stakeholders in Ukraine to engage in cleantech acceleration and commercialization. Further, the GCIP 2 Ukraine will assist the government in improving national policies and regulations that are conducive to cleantech innovation and commercialization.

114. The GCIP Global will provide tools (Global Cleantech Innovation Ecosystem Benchmark; cleantech innovation capacity building framework) for CIEE strengthening and connectivity, which will be reviewed and adapted for Ukraine by Greencubator and NRFU. In addition, policy best practices and roadmaps will be identified through desk research and interviews with relevant policy makers by the GCIP Global.

Outcome 2.1 Policy and regulatory framework is strengthened to stimulate investments in innovative cleantech solutions

115. It is to be noted that the GCIP 1 Ukraine has been tackling some policy and regulatory challenges that are particularly relevant for stimulating the emergence and supporting the early-stage development of innovative cleantech start-ups/SMEs. As such, the focus of GCIP 1 Ukraine has been placed on policy analysis of key economic sectors attractive for cleantech, roadmap development for the strengthening of the CIEE, policy recommendations for encouraging engagement of SMEs, (intellectual property, company registration, etc.), policy instruments to mainstream the concept of cleaner production and use of cleantech, etc. As stated in the barrier analysis however, the current policy and regulatory framework still do not adequately stimulate financial flows (private and public) towards sustainable low-carbon businesses. Therefore, the focus on GCIP 2 Ukraine will be placed on policy aspects related to finance mobilization and facilitation of investments into innovative cleantech start-ups/SMEs.

Output 2.1.1 Recommendations for enhancement of the policy and regulatory framework and a roadmap for their implementation are developed and validated

116. The GCIP 2 Ukraine will strongly incorporate a demand-driven perspective on innovative cleantech that is based on acknowledging the key role of financiers/investors in enabling the business scale-up. As such, the key orientation towards supporting the emergence and development of cleantech solutions (i.e. their supply), that has been the focus on GCIP 1 Ukraine, will be complemented by GCIP 2 Ukraine efforts to stimulate the financier/investor interest (i.e. demand)

in these solutions and to facilitate the development of a conducive policy and regulatory framework that mitigates their investment risks.

117. The GCIP 2 Ukraine will closely coordinate with GCIP 1 Ukraine and take advantage of the already delivered analyses and recommendations, including a paper on the need to regulate the activities of venture funds in Ukraine, the overview of modern international and Ukrainian mechanisms and instruments for financing start-ups, the recommendations for the Cabinet of Ministers of Ukraine to design financing mechanisms and initiatives that support innovative cleantech development in all sectors of the economy and promote climate change mitigation and adaptation, etc.

118. The ultimate objective of the GCIP 2 Ukraine will be to facilitate the closure of the financing gap (valley of death) that impedes the scale-up of innovative cleantech solutions on the national level due to barriers in the policy and regulatory framework. Also, as part of the GCIP Framework, the GCIP 2 Ukraine will provide exposure to international investors/financiers, as well as insights into the globally best policy practices that stimulate investment.

119. More specifically, there will be an analysis conducted that will focus on the strengths, weaknesses, opportunities, and threats of the current policy and regulatory framework with the view to its role in enabling mobilization of finance and facilitation of investment in innovative cleantech start-ups/SMEs in Ukraine. Based on its findings, there will be policy recommendations proposed and a roadmap will be designed in order to guide the implementation of the recommendations. The policy recommendations and the roadmap will be discussed with and validated by relevant stakeholders during a workshop.

Table 10: Outcome 2.1 Activities and responsibilities.

Activity	Detail	Responsibility	GCIP 2 Ukraine Budget (USD)
Output 2.1.1			
2.1.1a	to conduct an analysis of the current policy/regulatory framework with focus on its role in mobilization of finance/facilitation of investment in innovative cleantech start-ups/SMEs, and to develop resulting recommendations for the enhancement of this framework; to develop a roadmap guiding the implementation of recommendations	Greencubator with support from CTG	39,000
2.1.1b	to conduct a stakeholder engagement workshop (with GCIP alumni and relevant national CIEE stakeholders) to discuss and validate the policy recommendations and the roadmap	Greencubator	20,000
Activities to be carried out by the GCIP Global as a service to the GCIP 2 Ukraine: 1) CTG to organize a workshop on cleantech innovation policy and strategy for a cohort of all national PEE representatives (including Greencubator and NRFU); 2) CTG to develop the Global Cleantech Innovation Ecosystem Benchmark which will enable comparisons of Ukraine?s CIEE with other countries? CIEEs.			

Outcome 2.2 Institutional capacity building of the CIEE actors is conducted

120. The GCIP 2 Ukraine is unique in its multi-tiered and multi-stakeholder approach to fostering the scale-up of innovative cleantech start-ups/SMEs. Unlike other similar initiatives/programmes, the GCIP 2 Ukraine does not only work with enterprises, but also seeks to strengthen the entire CIEE by building capacity in national institutions, creating strong linkages between the most relevant ecosystem players, and by raising awareness of the society at large.

121. The GCIP 2 Ukraine will in particular focus on enhancing the capacity of the CIEE stakeholders that play a key role in mobilization of finance and facilitation of investment in innovative cleantech start-ups/SMEs. The activities under this Outcome/Output will be as such strongly interrelated and coordinated with activities under Outcome 2.1 (Policy and regulatory framework is strengthened to stimulate investments in innovative cleantech solutions) and Outcome 1.2 (Investment is mobilized to deploy innovative cleantech solutions across various sectors).

122. In addition, the GCIP Global will keep core interest in enhancing the capacities of national PEEs (Greencubator and NRFU) while building on their existing expertise. In particular, Greencubator will be supported in establishing international linkages and expanding knowledge/skills related to acceleration of SMEs/start-ups at relatively advanced staged of growth. In turn, the NRFU will be assisted in strengthening its role as an intermediary between R&D and market needs as well as in leveraging its understanding of academic and policy processes in Ukraine to build a competitive position in the national and possibly international CIEE.

Output 2.2.1 Capacity of national institutions (at least 6) is strengthened to coordinate, streamline, and accelerate investments into cleantech solutions (at least 35% women participants)

123. The capacity building activities will be focused on interested relevant institutions. Importantly, close coordination will be ensured between capacity building activities under this Output and other activities captured under Output 1.2.1, i.e. a particular attention will be paid to the capacity building of those institutions that are crucial for the establishment and management of the financing mechanism.

124. The capacity building will encompass on-the-job-training (covering topics such as knowledge management, benchmarking of technologies, coordination mechanisms, finance schemes, etc.), round-table meetings, and international exchange of knowledge in the framework of South-South Cooperation that will be facilitated by GCIP Global. The round-table meetings will gather representatives from the national institutions involved in the capacity building under GCIP 2 Ukraine, as to offer an opportunity for them to exchange knowledge and lessons learnt as well as to discuss best practices.

125. It has to be noted that although special attention will be dedicated to capacity building of selected institutions (as to ensure that specific GCIP 2 Ukraine targets/objectives are achieved and the impacts are amplified), the project will build capacity of all stakeholders in the CIEE, in that relevant knowledge management and communication activities will be conducted (see Component 3). In their framework, the innovative cleantech solutions will be promoted, as a result of which the awareness the society at large, and investors/financiers in particular, will be strengthened.

Table 11: Outcome 2.2 Activities and responsibilities.

Activity	Detail	Responsibility	GCIP 2 Ukraine Budget (USD)
Output 2.2.1			
2.2.1a	to provide capacity building activities (on-the-job training and round-table meetings) to the representatives of relevant national institutions (at least 6) with focus on managing and promoting innovative cleantech investments (at least 35% women participants)	NRFU	75,000

Activities to be carried out by the GCIP Global as a service to the GCIP 2 Ukraine: 1) NGIN to provide training to Greencubator and NRFU representatives with focus on the operational and managerial efficiency and effectiveness required to successfully execute the GCIP 2 Ukraine, 2) CTG to develop a cleantech innovation capacity building framework.

Component 3. Knowledge management, project monitoring and evaluation, and programme coordination and coherence

126. The activities under Component 3 are aimed at ensuring that the achievements of the GCIP 2 Ukraine are captured and communicated globally, as well as that the GCIP 2 Ukraine and other GCIP country projects are implemented in a coherent and coordinated way. To this purpose, Greencubator and NRFU are expected to collaborate with the GCIP Global through the global PEEs (PFAN, NGIN, CTG, UNIDO), as well as to contribute to information gathering, knowledge sharing, and dissemination efforts.

Outcome 3.1 Efficiency and sustainability of the GCIP 2 Ukraine is ensured through programme coordination and coherence with other GCIP country projects

127. As already mentioned, GCIP 2 Ukraine is developed as a child project under the GCIP Framework. As such, it will link the CIEE of Ukraine to the global network of CIEEs in other GCIP partner countries, as well as it will receive support from the GCIP Global. All the individual country efforts are supposed to be streamlined and reflected in several achievements (cumulative GHG emission reductions, investment mobilized, and other environmental and socio-economic impacts achieved) on the global level. Therefore, the success of the GCIP Framework strongly depends on sound coordination and coherence mechanisms between the GCIP country child projects.

Output 3.1.1 The GCIP internal guidelines for project management teams are adapted and implemented by the GCIP 2 Ukraine

128. To maintain coherence of the GCIP approach across multiple countries, GCIP internal guidelines for project management teams will be developed and disseminated by UNIDO, including 1) operational guidelines for the Project Management Unit (PMU) to be established within Greencubator, 2) a sustainability and exit strategy framework (to be developed in the first year of project implementation, and subsequently shared with the national PEEs for review and adaptation, i.e. for development of the GCIP 2 Ukraine sustainability and exit strategy). The operational guidelines will cover: a general introduction to the GCIP Framework, including explanation of organizational roles within it (e.g. of Global Advisory Board and Project Steering Committees); description of communication channels between GCIP 2 Ukraine and the GCIP Global; information on risk management and data protection; a list of foreseen support activities to be available from the GCIP Global; introduction to the IT management of the GCIP web platform; environmental/social management principles, as well as gender mainstreaming and ESSPP principles to be applied by the PMU in the course of project management. In addition, annual meetings for national PEE representatives (including Greencubator and NRFU) will be organized to offer a platform for training and exchange of experiences/insights related to the implementation of the GCIP internal guidelines.

129. Importantly, the work on sustainability and exit strategy for GCIP 2 Ukraine will incorporate planning activities to design and launch a call for cleantech research proposals to secure a constant supply of high-quality ideas that could then be turned into business plans and further supported through institutions and infrastructure established in the framework of both GCIP 1 and GCIP 2 Ukraine. The call for cleantech research proposals should bridge the GCIP 1 and GCIP 2 Ukraine services (to be continued after the closure of both projects), and ensure that there is a sustained

inflow of cleantech innovations that could be enhanced without interruptions through the entire technology life cycle, starting from the R&D phase, through the ascent phase up to maturity phase.

Output 3.1.2 Knowledge exchange is facilitated among CIEE actors at national and global levels

130. The experience so far has shown that an exchange of learnings among national PEEs and PMUs is key for their successful operation. To facilitate this exchange, a knowledge management, communication, and advocacy strategy framework will be developed by UNIDO with a particular focus on: 1) Promoting visibility of GCIP and communicating its impacts achieved at national and global levels; 2) Increasing awareness of the catalytic role of cleantech in addressing climate change and environmental issues; 3) Showcasing cleantech innovations from the GCIP alumni and enhancing their visibility and credibility. The knowledge management, communication, and advocacy strategy framework will be shared with the national PEEs for review and adaptation to the GCIP 2 Ukraine needs. As a result, the GCIP 2 Ukraine knowledge management, communication, and advocacy strategy will be developed.

131. In line with the knowledge management, communication, and advocacy strategy framework, the national PEEs are expected to provide briefing sessions, press releases, social media presence and advertising, all of which will be targeted at different audience groups, with a special attention to the needs of women and youth. These activities will be supported by partners, including local entrepreneurs, celebrities, GCIP alumni, relevant service providers (e.g. patent attorneys, accountants), university departments and societies (e.g. engineering, entrepreneurship and energy clubs), organizations that are in frequent contact with cleantech entrepreneurs (e.g. trade groups, entrepreneur groups), and investors (e.g. venture capital funds, angel networks).

132. There will be a global GCIP web platform launched to be used as the main vehicle for internal and external communication at the programmatic level, and in particular it will serve four key functions: a) to support project management by the national PEEs and UNIDO (as a platform for dissemination of relevant documents, e.g. guidelines, guidebooks, frameworks); b) to enable execution of the project activities (as a platform for calls for application and their receipt, as well as for submission of assignments and delivery of trainings/webinars during the Advanced Accelerator and Post-Accelerator; c) to facilitate the maintenance of the GCIP community at national and global levels (all CIEE stakeholders, e.g. investors, enterprises, including alumni, and experts will be invited to join the online community, and the enterprises will be given an opportunity to showcase their cleantech solutions to increase their visibility among potential investors); d) to provide a knowledge depository for the general public (all relevant knowledge, communication, and advocacy materials will be available on the website).

133. The GCIP 2 Ukraine will be assigned a section of the global GCIP web platform (i.e. a GCIP 2 Ukraine web platform). The GCIP 2 Ukraine web platform will be used during the project implementation as well as after it (e.g. by alumni companies and potential investors for the purpose of matching, progress tracking). It will also be linked with the GCIP 1 website.

134. On the global GCIP web platform there will be affinity/interest fora created to spur interactions, such as for example self-directed introductions, in specialized groups and to facilitate collaboration, for example between various enterprises from different GCIP 1 and 2 Ukraine cohorts, between alumni and the currently supported entrepreneurs, or between entrepreneurs and investors. Also, there will be a GCIP 2 Ukraine alumni network created and assigned a special section on the GCIP 2 Ukraine web platform.

135. In addition, there will be two forums/workshops organized that will promote the GCIP 2 Ukraine achievements and showcase its start-ups/SMEs. It will be considered to conduct these forums/workshops as regional events, building on the GCIP 1 efforts to engage relevant stakeholders across the country, and in particular universities (as regional acceleration centres) in Kherson (Kherson National Technical University), Slovyansk (Donbas State Pedagogical

University), Mykolayiv (Petro Mohyla Black Sea National University), Ivano-Frankivsk (Vasyl Stefanyk Precarpathian National University), and Sumy (Sumy State University).

Table 12: Outcome 3.1 Activities and responsibilities.

Activity	Detail	Responsibility	GCIP 2 Ukraine Budget (USD)
Output 3.1.1			
3.1.1a	to review and adopt GCIP internal guidelines for project management teams, and to participate in the annual meetings for national PEE	Greencubator and NRFU	24,000
3.1.1b	to develop the GCIP 2 Ukraine sustainability and exit strategy, including planning activities to design and launch a call for cleantech research proposals	Greencubator	18,000
Activities to be carried out by the GCIP Global as a service to the GCIP 2 Ukraine: UNIDO to organize annual meetings for national PEE representatives (including Greencubator and NRFU) to provide a platform for training and exchange of experiences/insights.			
Output 3.1.2			
3.1.2a	to review and adapt the knowledge management, communication, and advocacy strategy framework, i.e. to develop a GCIP 2 Ukraine knowledge management, communication, and advocacy strategy	Greencubator and NRFU	19,000
3.1.2b	to create and maintain a section for the GCIP 2 Ukraine on the global GCIP web platform	Greencubator	13,333
3.1.2c	to capture knowledge gathered by the GCIP 2 Ukraine through 200-300 policy briefs, impact reports, brochures, webinars, and other types of promotional materials, and to disseminate this knowledge through briefing sessions, press releases, social media presence and advertising, etc. (in line with the GCIP 2 Ukraine knowledge management, communication, and advocacy strategy)	Greencubator	11,333
3.1.2d	to organise two national forums/workshops that promote GCIP 2 Ukraine achievements and showcase its participants	Greencubator	34,333
Activities to be carried out by the GCIP Global as a service to the GCIP 2 Ukraine: 1) UNIDO to develop a knowledge management, communication, and advocacy strategy framework; 2) UNIDO to launch the global GCIP web platform and to deliver training on its use to the GCIP 2 Ukraine.			

Outcome 3.2 Impacts and progress of the GCIP 2 Ukraine are tracked and reported

Output 3.2.1 The GCIP methodology for impact assessment is adapted and applied

136. The GCIP methodology for impact assessment will be developed by the GCIP Global and shared with the GCIP 2 Ukraine for review and application. This will ensure a common understanding of estimation, tracking, and reporting approaches amongst all involved stakeholders, and will allow for data aggregation, comparisons, and extrapolation, not only on the national, but also on the global programme level. The methodology will enable assessment of social, economic, and environmental impacts, and at a minimum, it will account for global environmental benefits (GEBs), energy saved, additional renewable capacity installed, job creation, gender mainstreaming, and investment leveraged. The data will be gender-disaggregated and gender-sensitive, and youth participation will also be recorded.

137. Greencubator will receive an online training on the GCIP methodology for impact assessment from UNIDO, and subsequently they will train (online or in person) all GCIP 2 Ukraine Advanced Accelerator and Post-Accelerator participants. Greencubator may request further support to provide a training on the GCIP methodology for impact assessment also to other enterprises supported by the GCIP 2 Ukraine.

138. The GCIP 2 Ukraine enterprises will be expected to periodically provide relevant impact data to Greencubator for validation and consolidation. The enterprise impact data will then be used to develop and publish a GCIP 2 Ukraine impact report, as well as to create other promotion and advocacy materials (news articles, social media posts, brochure and leaflets, videos, etc.) that are tailored to diverse types of audiences (investors, national government agencies, donors, students, etc.). This will benefit the GCIP 2 Ukraine enterprises by providing increased credibility and visibility. The impact data will also be shared with the GCIP Global for consolidation on the programme level.

Output 3.2.2 Project activities are tracked and reported, as well as the external mid-term review and terminal evaluation are conducted

139. There will be a GCIP monitoring and evaluation (M&E) framework provided by the GCIP Global, based on which Greencubator will prepare a GCIP 2 Ukraine M&E plan, including time-bound milestones and deliverables. Greencubator will also draft progress review reports every six months. There will be an external mid-term review of the project conducted half way through project implementation. The ESSPP considerations, as well as gender dimensions and baseline for gender related targets (in line with the Gender Analysis Report, Gender Mainstreaming Action Plan, Stakeholder Engagement Plan, and Environmental and Social Management Plan) will be appropriately captured in the GCIP 2 Ukraine M&E plan, in the progress review reports, project implementation reports (PIRs) as well as in the collection and assessment of relevant data.

140. An independent terminal evaluation will be started six months prior to the expected completion date of the project. The independent terminal evaluation will focus on the assessment of project progress and impact, as well as its long-term sustainability. There will be an evaluation report prepared that will also include recommendations for follow-up activities.

Table 13: Outcome 3.2 Activities and responsibilities.

Activity	Detail	Responsibility	GCIP 2 Ukraine Budget (USD)
Output 3.2.1			
3.2.1a	to review the GCIP methodology for impact assessment (including the accompanying tools) and to participate in the training on its use provided by UNIDO	Greencubator and NRFU	11,000
3.2.1b	to provide 3 trainings on the GCIP methodology for impact assessment to the GCIP 2 Ukraine Advanced Accelerator and Post-Accelerator participants	Greencubator	16,800
3.2.1c	to validate and consolidate the GCIP 2 Ukraine enterprise impact data, and to develop and publish 5 GCIP 2 Ukraine impact reports	Greencubator	8,202
Activities to be carried out by the GCIP Global as a service to the GCIP 2 Ukraine: UNIDO to develop the GCIP methodology for impact assessment as well as to provide training and appropriate tools for the methodology operationalization to Greencubator.			
Output 3.2.2			

3.2.2a	to prepare the M&E plan as well as regular (every six months) progress reports (10), and to conduct an external mid-term review	Greencubator	34,000
3.2.2b	to conduct an independent terminal evaluation	UNIDO	20,000
Activities to be carried out by the GCIP Global as a service to the GCIP 2 Ukraine: UNIDO to provide the GCIP M&E framework.			

141. For an easy overview and to facilitate effective coordination between GCIP 1 and GCIP 2 Ukraine, the Table 14 below provides a summary of the above-described convergence points and synergies between both projects. In terms of coordination modalities, it can be foreseen to i) Include the topic of coordination between GCIP 1 and GCIP 2 Ukraine on the SC meeting agendas. At the national level, the GCIP 1 and 2 Ukraine will have separate project SCs but will share some mutual stakeholders such as the State Agency on Energy Efficiency and Energy Saving of Ukraine (SAEE); the State Financial Institution for Innovation (SFII); and the Ministry of Economic Development, Trade and Agriculture of Ukraine; ii) Set up regular PMUs meetings of both projects to discuss ongoing issues. In addition, the Project Assistants in both PMUs can be assigned an additional role of a liaison officer (i.e. a focal point for all coordination related matters); iii) Perform common communications activities that would benefit both GCIP 1 and GCIP 2 Ukraine, including e.g. case studies on a full project journey throughout GCIP 1 and GCIP 2, cross-references in social media, common outreach efforts, impact reports, etc.

Table 14: Convergence points and synergies between GCIP 1 and GCIP 2 Ukraine.

GCIP 2 Components	Convergence points and synergies between GCIP 1 and 2 Ukraine

Component 1: Transforming early-stage innovative cleantech solutions into commercial enterprises	GCIP 2 aims to facilitate an **uninterrupted scale-up** of enterprises graduating from the GCIP 1 Ukraine towards more **advanced business models.** GCIP 2 Ukraine will also support **investment facilitation**. These efforts include establishment of the **financing mechanism** in the framework of GCIP 2 Ukraine. However, GCIP 2 Ukraine support will be provided not only to selected enterprises from the GCIP 1 Ukraine pipeline (i.e. it will not be exclusive) but also to other Ukrainian SMEs/start-ups that are interested in GCIP 2 Ukraine support and fulfil its application requirements. GCIP 2 Ukraine will support **internationalization** of SMEs/start-ups. Greencubator will nominate a few GCIP 2 Ukraine enterprises for the GCIP Global Accelerator and will support their participation. This activity will be closely coordinated with GCIP 1 Ukraine whose Accelerator semi-finalists and finalists might also directly apply to the GCIP Global Accelerator without benefitting from the GCIP 2 support. There will be also several other international activities supported by the GCIP Global, as specified in the GCIP 2 Ukraine project document. In addition, GCIP 2 Ukraine will address **capacity building needs related to advanced business growth and investment facilitation**. There will be experts trained in the framework of GCIP 2 Ukraine that will then support the GCIP 2 Ukraine enterprises. There will be a call for experts to be trained and the GCIP 1 Ukraine experts might apply in case they would like to acquire additional knowledge/skills related to advanced business growth support and investment facilitation. While there has been a pool of experts (mentor and judges) also created in the framework of GCIP 1 Ukraine, the particular focus was placed on supporting the GCIP 1 Ukraine Accelerator participants, i.e. cleantech innovators that are at early stages of their idea and business development (with focus on topics such as business plan and financial model development, marketing, team management, investor pitch, gender mainstreaming and sustainability, basic introduction into international markets, etc.). In general, while some post-acceleration services have also been provided in the framework of GCIP 1 Ukraine (under Output 1.2.1), the GCIP 2 Ukraine will add value to them in that: 1) it will enable additional enterprises (not only those participating in GCIP 1 Ukraine, but also others) to take advantage of Post-Accelerator support); 2) it will be part of the GCIP Framework, and as such institutionalized, i.e. organized according to carefully developed and state-of-the art training curricula in cooperation with global executing entities, thus offering an internationally standardized approach and global networking/partnership opportunities,; 3) it will be provided by specialized experts (trained in the framework of Output 1.1.2); 4) it will be offered in combination with the Advanced Accelerator support that is focused on individual needs-based support rather than group training.
Component 2: Cleantech innovation and entrepreneurship ecosystem (CIEE) strengthening and connectivity	GCIP 2 will complement GCIP 1 Ukraine's efforts to stimulate the financier/investor interest (i.e. **demand**) for solutions/innovations and facilitate developing a conducive policy and regulatory framework that mitigates their investment risks. GCIP 2 Ukraine will closely coordinate with GCIP 1 Ukraine and take advantage of the already delivered analyses and recommendations, including a paper on the need to regulate the activities of venture funds in Ukraine, the overview of modern international and Ukrainian mechanisms and instruments for financing start-ups.

Component 3: management, project monitoring and evaluation, and programme coordination and coherence	GCIP 2 Ukraine work on the sustainability and exit strategy will incorporate planning activities to design and launch a call for cleantech research proposals to secure a **constant supply of high-quality ideas** that could then be turned into business plans and further supported through institutions and infrastructure established in the framework of both GCIP 1 and GCIP 2 Ukraine. As such, the call will form a loop with acceleration services. GCIP 2 Ukraine will be assigned a section of the global **GCIP web platform** (i.e. a GCIP 2 Ukraine web platform). The GCIP 2 Ukraine web platform will be used during the project implementation as well as after it (e.g., by alumni companies and potential investors for the purpose of matching, progress tracking). It will also be linked with the GCIP 1 website, thus facilitating greater exposure of GCIP 1 Ukraine to international audience. There will be two forums/workshops organized that will promote the GCIP 2 Ukraine achievements and showcase its start-ups/SMEs. It will be considered to conduct these forums/workshops as regional events, building on the GCIP 1 efforts to engage relevant stakeholders across the country, and in particular **universities** (as regional acceleration centres) in Kherson (Kherson National Technical University), Slovyansk (Donbas State Pedagogical University), Mykolayiv (Petro Mohyla Black Sea National University), Ivano-Frankivsk (Vasyl Stefanyk Precarpathian National University), and Sumy (Sumy State University).

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

142. The proposed project is fully aligned with the GEF-7 Climate Change Focal Area Strategy. Especially with the ?Objective 1. Promote innovation and technology transfer for sustainable energy breakthroughs?. According to the same Strategy, ?Technology is key area for the UNFCCC and in Article 10 of the Paris Agreement, and is one of the key means to reduce, or slow the growth in GHG emissions, and to stabilize their concentrations. To that end, technology innovation with the private sector can help create or expand markets for products and services, generating jobs and supporting economic growth. Supportive policies and strategies are fundamental to catalyse innovation and technology transfer for mitigation and enhance private sector investment?.

143. More specifically, this project will help cleantech enterprises (SMEs and start-ups) in Ukraine to develop and scale up; and to increase market adoption of cleantech innovations, thus leading to a reduction in emissions and fossil fuel consumption. Furthermore, it will facilitate increased investment, job creation and market development. This is in line with the guidance from the UNFCCC COP23 which encouraged the GEF to further enhance engagement with the private sector and invited the GEF to support countries in piloting priority technology projects to foster innovation and investment.

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

144. The GEF support for implementation of GCIP 2 Ukraine will enable promotion of innovative cleantech enterprises as well as provision of essential tools and processes for efficient mobilisation of finance and commercialisation of environmentally sound technologies. Taking into consideration lessons learned from the COP17 in 2011 and the on-going projects under the GCIP, development and promotion of clean energy technology innovations is essential part for economic growth and is closely aligned with country?s national priorities. The GEF support is also essential for ongoing implementation and operation of GCIP 1 Ukraine. The GCIP 1 PMU confirmed that one of the main obstacles for innovative cleantech commercialization is the lack of a coordinated

financing mechanism dedicated to cleantech innovations. The GCIP 2 Ukraine, thanks to the GEF funding, will address this issue.

145. The GCIP 2 Ukraine will play a critical and vital role in attracting innovative financing and accelerating the adoption of cleantech in Ukraine. In absence of the requested GEF support, the development of a low-carbon economy in Ukraine will be impeded by the presence of the barriers outlined above, particularly those related to insufficient investments in cleantech. The finance, without innovative market mechanisms necessary for investment in low-carbon development as defined in the Low Emission Development Strategy (LEDS) of Ukraine, would not be tapped into efficiently within a reasonable timeframe. In particular, the access to green financing by SMEs and start-ups will remain hampered by the lack of capacities and suitable green financial instruments catering for the needs of cleantech project developers.

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

147. The proposed project will jump-start innovative financing mechanism and strengthen local capacities in low-carbon economy, thus stimulating low-carbon development growth. Innovations will be facilitated through targeted policy dialogue, dedicated technical assistance and training programme, backed by information outreach and knowledge exchange to improve investor confidence and reduce perceived risks associated with low-carbon projects. The GCIP 2 Ukraine will also provide grant funding in the framework of the financing mechanism to be established, thus supporting up to 30 projects in the prioritized sectors and regions on a pilot basis. The ultimate result will be an accelerated transition towards a low-carbon economy in Ukraine, and contribution to the economic and social development, national energy transformation, and climate change mitigation efforts.

148. Ukraine is requesting GEF funding to help address the barriers to cleantech innovation, which will lead to positive socio-economic (economic growth, green job creation, attraction of foreign and domestic investment, etc.) and environmental (contribution to the reduction of GHG emissions and to global environmental sustainability, etc.) impacts. What is more, these impacts will be amplified through opportunities for coordination and connectivity with other GCIP partner countries, and thus for global cleantech innovation scale-up. In total, at least 126,000 tCO2e (directly) and 630,000 tCO2e (indirectly) should be mitigated thanks to the GCIP 2 Ukraine (as a result of 70 enterprises supported), which is expected to translate into cost effectiveness of 5 to 10 USD/tCO2e.

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

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

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

150. 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). This means that, with GEF funding of almost USD 18 million, GCIP Framework 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 Framework, almost 1000 semi-finalists are expected to be supported through the accelerators in all countries across the programme. Therefore, the target for the minimum projected potential of avoided GHG emissions per enterprise is between 1,800 to 3,600 tCO2e by 2030.

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

152. 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).

153. Secondly, the Independent Evaluation Office (IEO) report of eight GCIP projects included a sample of alumni in its annex with projected avoided emissions between zero (either they had not been estimated yet or the cleantech was not related to CCM) and 5 million tCO2e per year. A median for emission reductions that were reported (which occurred only for a small proportion of the total alumni, namely 60 out of 900) is 88 tCO2 per year. If alumni with estimated reduction are included (34) in the calculations, then the median increases to 12,200 tCO2/year with the interquartile range from 350 tCO2 to 81,000 tCO2/year.

154. Thirdly, the Mission Innovation Framework for Assessing Avoided Emissions, in which a number of GCIP alumni (selected as part of Mission Innovation's 100 innovative clean energy solutions in 2019) were included, shows for example that Atomberg Technologies (which manufactures an energy efficient fan) is estimated to avoid 5 million tCO2e/year by 2030. In turn BEAD, an energy management AI optimization enterprise, is estimated to avoid 319 million tCO2e/year by 2030. These two companies were also covered by the IEO report mentioned above, but Atomberg had not provided an estimate (so was assumed zero) and BEAD's estimate was 5 million tCO2e/year.

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

156. The target of between 5 to 10 USD/tCO2e avoided, that is set for the GCIP Framework, translates into avoided GHG emissions per enterprise of between 1,800 to 3,600 tCO2e. The provided target range will enable the GCIP country child projects to support a mix of technologies

with different GHG emission reduction potentials, and in particular allow innovations into the GCIP Accelerators that a) have a relatively low GHG reduction potential, but a considerable demand and market growth potential (that can lead to amplification of GEBs), as well as b) that create multiple benefits (including socio-economic, such as job creation, gender mainstreaming, etc.).

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

158. This target-based approach for the estimation of GHG emission reductions will be applied across all 10 child projects under the GCIP Framework. A GCIP methodology for the calculation and monitoring of GHG reduction potential will be developed by the GCIP Global in the first year of the project implementation, as well as it will be shared with all GCIP partner countries to enable coherent approach. In order to ensure that the desired GEBs are cumulatively delivered by the GCIP Framework, appropriate measures will be applied across the programme. They will entail placing a benchmark for the estimated GEB to be delivered by the cleantech innovations at the GCIP Accelerator application stage, so that only solutions with sufficient impact potential are supported. If the projected GHG emission reduction does not meet the minimum requirement set, the innovation will not be accepted into the GCIP Accelerators.

ii) Estimation of Global Environmental Benefits of the GCIP 2 Ukraine (GEF ID:10454)

159. The advanced and post-advanced acceleration services of GCIP 2 Ukraine are expected to support at least 40 start-ups/SMEs, while the financing mechanism will benefit up to 30 enterprises. As a result, based on the methodology described above, the avoided direct GHG emissions over a ten-year horizon are estimated at between 126,000 tCO2e and 252,000 tCO2e tCO2e of direct GHG emission savings and 630,000 tCO2 and 1,260,000 tCO2e of indirect GHG emission saving (based on an estimated factor of 5). The lower range has been used as input to the GEF corporate core GHG indicator target (indicator 6) as a conservative estimation.

160. To facilitate the achievement of GEBs, there will be awareness raising and promotional activities during the call for applications to the GCIP 2 Ukraine, and also the applicants will be supported in calculating GHG emission reduction potential of their innovations. In addition to the substantial mitigation of GHG emissions, it is expected that other environmental co-benefits will result from this project. These are likely to include reduction in waste, material use, air pollutants (e.g. NOx, SOx, PM and CO), and improved water quality, among others.

7) Innovation, sustainability and potential for scaling up

Innovation

161. The GCIP 2 Ukraine is unique in its multi-tiered and multi-stakeholder approach to fostering the expansion of start-ups and SMEs into innovative cleantech markets. In comparison with other incubator or accelerator programmes, the GCIP 2 Ukraine does not only focus on enterprises, but also on strengthening the entire CIEE by building capacity in national institutions, developing policy roadmaps, creating strong linkages between the most relevant ecosystem players, and by raising awareness of the society at large. GCIP 2 Ukraine support also focuses on additional Advanced Accelerator and Post-Accelerator support, which is an innovative approach based on the stated needs of alumni.

162. Importantly, the GCIP 2 Ukraine supports entrepreneurs across the whole innovation value chain to develop demand-driven and investment-ready cleantech solutions that will have an extensive positive impact in the global markets. What is more, GCIP 2 Ukraine enables achievement of not only environmental, but also socio-economic benefits, in that it for example promotes gender equality and women?s empowerment. Being one of the 10 child projects under the GCIP Framework, GCIP 2 Ukraine will link the national cleantech innovation ecosystem at global level to create market opportunities for the start-ups SMEs to enable them to grow their businesses beyond their national boundaries, promoting the sharing of experiences and policy best practices to foster learning. This global connectivity, and the related opportunities it provides, is innovative and not being enabled by any similar projects or initiatives.

Sustainability

163. The GCIP 2 Ukraine is designed with the view to ensuring self-sufficiency and long-term sustainability of the acceleration and coordination mechanisms established in its framework through: 1) Enhancing the capacity of Greencubator to provide the Advanced Accelerator and Post-Accelerator services in a self-reliant manner. More specifically, while Greencubator is strongly supported in several activities by the global PEEs in the first year, the assistance is gradually phased out in the subsequent years, so as Greencubator is expected to run all activities and coordinate with relevant stakeholders fully autonomously by the end of the project; 2) Building capacity of local experts (trainers and mentors), so that they are able to offer their services on market terms (independently from GCIP 2 Ukraine) to entrepreneurs not supported by the project; 3) Linking CIEEs across countries and creating incentives for cleantech start-ups/SMEs, policy makers, industry associations, etc. to formalize their commitments, and in particular to sign bilateral cooperation agreements that would guide their cooperation for the next years, without further involvement of GCIP 2 Ukraine; 4) Providing several tools that can be referred to and used by different CIEE stakeholders beyond the lifetime of GCIP 2 Ukraine, such as guidebooks, systems, tools, guidelines, website, etc.; 5) Guiding entrepreneurs to incorporate sustainability considerations in their business models, such as meeting the needs of the present generation without compromising the ability of the future generations to meet their own needs; as well as ensuring business resilience to external shocks and stable growth potential (through a thorough analysis of the demand, competition, etc.); 6) Facilitating early-stage investment, and thus enabling the entrepreneurs to bridge the valley of death in their scale-up journey, which in turns mitigates risks for future investors and increases chances for further rounds of finance, including commercial lending; 7) Creating the GCIP 2 Ukraine section of the global GCIP web platform to be used also after the project lifetime (as a market place, where entrepreneurs will continue to showcase their solutions, investors will continue to scout for new innovations, policy makers and regulators will continue to interact). In fact, the web platform will catalyse connectivity between different stakeholders in a long term; 8) Working closely together with other GCIP partner countries, and thus enabling GCIP 2 Ukraine to be part of a global and recognized brand that is expected to last in the future.

164. What is more, a GCIP 2 Ukraine sustainability and exit strategy will be developed based on a framework delivered by the GCIP Global, and it will among others include specific considerations related to a formal project closure process (based on targets achieved by the GCIP 2 Ukraine) and long-term sustainability of the achieved results.

Potential for scaling up

165. The GCIP 2 Ukraine bears a considerable potential for local and regional expansion in terms of cooperation and networking, as well as sectoral expansion through inclusion of additional cleantech categories. For example, through close relationship with other GCIP partner countries, the GCIP 2 Ukraine stakeholders are enabled to form international partnerships and to enter foreign markets. What is more, through continuous extension of GCIP into additional countries, these opportunities are augmenting.

166. What is more, a close cooperation and coordination with other programmes and initiatives, including the Climate Technology Centre and Network (CTCN) and PFAN, will be sought to strengthen the potential for scale-up. CTCN is the operational arm of the UNFCCC Technology Mechanism co-hosted by UNIDO and UNEP. CTCN aims to promote 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 2 Ukraine objectives. PFAN, a programme co-hosted by UNIDO and the Renewable Energy and Energy Efficiency Partnership (REEEP), provides investment facilitation services for scaling-up of climate and sustainable energy technologies for positive environmental impact. It supports cleantech projects until they reach financial closure.

167. Noteworthy, GCIP has had a successful track record since 2011 when it was launched for the first time in South Africa. Subsequently, its implementation started simultaneously in Armenia, India, Malaysia, Pakistan, Turkey and South Africa in 2014. Under the 2014 competition cycle, a total of 555 applications were received across the six countries, from which 159 innovative cleantech entrepreneurs were selected to take part in an accelerator programme. The entrepreneurs were chosen across four cleantech categories: 58 in renewable energy, 41 in energy efficiency, 32 in waste to energy, and 28 in water efficiency. Having progressed through the GCIP, these entrepreneurs were connected with potential customers, investors, partners and policy-makers at national and international levels through Investor Connect events and National Academies. In addition, the very best GCIP entrepreneurs were given the opportunity to attend the Cleantech Open Global Forum, held in November 2014 in Silicon Valley, USA, involving more than 100 cleantech exhibitions and networking events, giving the GCIP winners a high level of exposure to broaden their networks, and to benefit from the global linkages.

168. As already mentioned, in 2015 Thailand joined GCIP and about 10 countries, including Vietnam, Brazil, Ukraine, Nigeria, Indonesia and Kazakhstan had expressed interest in becoming part of it thereafter. In the period from 2014 to 2016, GCIP received almost 3,000 applications in the eight countries it was operating, from which 580 entrepreneurs were selected for further acceleration and mentoring, as well as receiving access to investors and media. The growth rate of applications GCIP has received between 2014 to 2015 and 2015 to 2016 was 62.5% and 33% respectively, indicating strong and constant increase in interest towards the acceleration programme. This confirms the strong potential for scale-up of the GCIP approach.

---

[1]https://www.climatelinks.org/sites/default/files/asset/document/2016_USAID_Climate%20Change%20Risk%20Profile_Ukraine.pdf.

[2] https://tech-action.unepdtu.org/wp-content/uploads/sites/2/2019/09/final-ukraine-tna-adaptation-report.pdf.

[3] https://www.giz.de/en/worldwide/77236.html.

[4] https://www.worldbank.org/en/country/ukraine/publication/economic-update-spring-2017.

[5] https://www.ufz.de/export/data/global/232525_DP_2019_06_Sokolova_etal.pdf.

[6] https://eu4business.eu/files/community/pdf/country_report_2018_ua_def_lr_0_1.pdf.

[7] Ukraine is a part of the EU?s Small Business Act (SBA). The SBA is an overarching framework for the EU policy on SMEs. It aims to improve the approach to entrepreneurship in Europe, simplify the regulatory and policy environment for SMEs, and remove the remaining barriers to their development. The SBA uses SME performance reviews to assess and monitor country-level implementation progress.

[8] https://ec.europa.eu/neighbourhood-enlargement/sites/near/files/sba-fs-2019_ukraine.pdf.

[9] World Bank (2017). Innovation and Entrepreneurship Ecosystem Diagnostic in Ukraine.

[10] World Economic Forum (2016). The Global Competitiveness Report 2015?2016.

[11] https://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF.ME_C.55.inf_.03_GEF-UNIDO_Cleantech_program_evaluation_2018.pdf.

[12] https://pfan.net/news/pfans-interactive-annual-progress-report/.

[13] https://www.slideshare.net/YevgenSysoyev/aventures-dealbook-2020-229990810.

[14] https://www2.deloitte.com/ua/en/pages/press-room/press-release/2020/investments-into-startups-2019.html

1b. Project Map and Coordinates

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

169. While the project is targeted at beneficiaries (entrepreneurs and all relevant CIEE stakeholders, such as universities, policy makers, financiers, and R&D institutions, etc.) from all over the country, the main project activities will be conducted in the capital city of Ukraine (Kiev with the geo-coordinates: 48.3794? N, 31.1656? E). This is due to benefits resulting from a relatively dense concentration of relevant stakeholders there, and well-developed infrastructure. The project boundary will not overlap any other country?s territory.

170. Please see a map of the country below and in Annex D.

1c. Child Project?

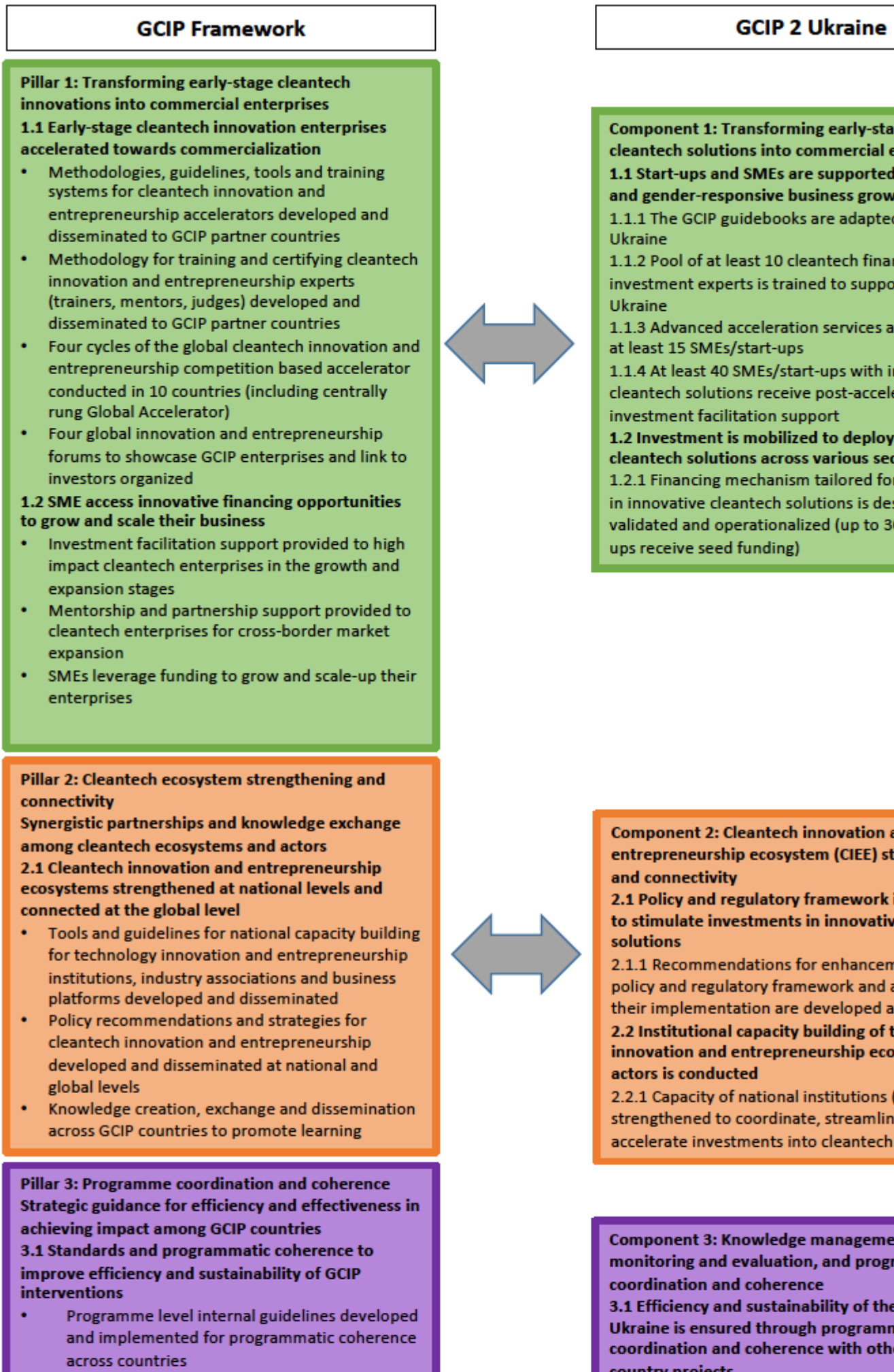
If this is a child project under a program, describe how the components contribute to the overall program impact.

171. The GCIP 2 Ukraine will engage with the GCIP Framework to ensure synergies, knowledge sharing, learning, consistence, efficiency as well as additional support to enable national start-ups/SMEs to scale globally. The Activities, Outputs, and Outcomes of the GCIP 2 Ukraine will contribute to the overall GCIP Framework impact through a number of cleantech innovations and entrepreneurs supported, finance mobilized and the resulting accelerated green growth, jobs created, and GHG emission reductions. This will be facilitated through the cooperation and coordination of the national PEEs (Greencubator, NRFU) with the global PEEs (CTG, NGIN, PFAN).

172. The engagement with the GCIP Framework is integrated into all GCIP 2 Ukraine Components and will affect all stakeholders. It covers following aspects: 1) **Methodologies, guidelines, tools for acceleration, and training systems:** These will be developed and harmonized by the GCIP Global and the GCIP 2 Ukraine will focus on adapting them to the national circumstances. Experiences in applying the methodologies, guidelines, tools, and systems across child project will be used to improve them by the GCIP Global. The Global Accelerators and Global Forums will help national enterprises to bring their innovations to the global stage and link with entrepreneurs from other countries to explore opportunities for joint co-innovation, joint ventures and mobilizing investments; 2) **Investment facilitation and cross border growth support:** Through the GCIP Global, national cleantech start-ups/SMEs will be supported to expand their businesses to other countries. In addition, the GCIP Global will provide investment facilitation services to national enterprises so that they can be linked to investors (impact, venture, angels, and commercial) at regional and global levels. Furthermore, the GCIP Global will provide support to the GCIP 2 Ukraine in establishing market enabling frameworks to promote investments in cleantech; 3) **Targeted training, innovation policy support, knowledge management, and peer-to-peer networking and learning:** The GCIP Global will provide methodologies for training of national institutions, and for development of policies on cleantech innovation and

entrepreneurship. By linking policy makers, institutions, financiers and entrepreneurs across countries, the GCIP Global will facilitate knowledge exchange, documentation of best-practices, and peer-to-peer networking and learning; 4) **Program standards, communication and advocacy, and monitoring and evaluation:** To promote coherence and coordination across all GCIP countries, the GCIP Global will develop program guidelines that will be applied across the GCIP Framework. Through the global web platform, to be developed by the GCIP Global, communications and advocacy will be promoted across countries. In addition, the GCIP Global will develop methodologies for impact tracking and monitoring and evaluation that will then be applied across all countries under the GCIP Framework.

Figure 5: Interlinkages between GCIP Framework and the GCIP 2 Ukraine.


GCIP Framework
GCIP 2 Ukraine
Pillar 1: Transforming early-stage cleantech innovations into commercial enterprises
1.1 Early-stage cleantech innovation enterprises accelerated towards commercialization
• Methodologies, guidelines, tools and training systems for cleantech innovation and entrepreneurship accelerators developed and disseminated to GCIP partner countries
• Methodology for training and certifying cleantech innovation and entrepreneurship experts (trainers, mentors, judges) developed and disseminated to GCIP partner countries
• Four cycles of the global cleantech innovation and entrepreneurship competition based accelerator conducted in 10 countries (including centrally rung Global Accelerator)
• Four global innovation and entrepreneurship forums to showcase GCIP enterprises and link to investors organized
1.2 SME access innovative financing opportunities to grow and scale their business
• Investment facilitation support provided to high impact cleantech enterprises in the growth and expansion stages
• Mentorship and partnership support provided to cleantech enterprises for cross-border market expansion
• SMEs leverage funding to grow and scale-up their enterprises
Component 1: Transforming early-sta
cleantech solutions into commercial e
1.1 Start-ups and SMEs are supported
and gender-responsive business grow
1.1.1 The GCIP guidebooks are adapte
Ukraine
1.1.2 Pool of at least 10 cleantech fina
investment experts is trained to suppo
Ukraine
1.1.3 Advanced acceleration services a
at least 15 SMEs/start-ups
1.1.4 At least 40 SMEs/start-ups with i
cleantech solutions receive post-accele
investment facilitation support
1.2 Investment is mobilized to deploy
cleantech solutions across various sec
1.2.1 Financing mechanism tailored fo
in innovative cleantech solutions is des
validated and operationalized (up to 3
ups receive seed funding)
Pillar 2: Cleantech ecosystem strengthening and connectivity
Synergistic partnerships and knowledge exchange among cleantech ecosystems and actors
2.1 Cleantech innovation and entrepreneurship ecosystems strengthened at national levels and connected at the global level
• 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 for cleantech innovation and entrepreneurship developed and disseminated at national and global levels
• Knowledge creation, exchange and dissemination across GCIP countries to promote learning
Component 2: Cleantech innovation a
entrepreneurship ecosystem (CIEE) st
and connectivity
2.1 Policy and regulatory framework
to stimulate investments in innovativ
solutions
2.1.1 Recommendations for enhancem
policy and regulatory framework and a
their implementation are developed a
2.2 Institutional capacity building of t
innovation and entrepreneurship eco
actors is conducted
2.2.1 Capacity of national institutions
strengthened to coordinate, streamlin
accelerate investments into cleantech
Pillar 3: Programme coordination and coherence
Strategic guidance for efficiency and effectiveness in achieving impact among GCIP countries
3.1 Standards and programmatic coherence to improve efficiency and sustainability of GCIP interventions
• Programme level internal guidelines developed and implemented for programmatic coherence across countries
Component 3: Knowledge manageme
monitoring and evaluation, and progr
coordination and coherence
3.1 Efficiency and sustainability of the
Ukraine is ensured through programm
coordination and coherence with oth
country projects

2. Stakeholders

Please provide the Stakeholder Engagement Plan or equivalent assessment.

173. The proposed project is designed in line with the GEF policy on Stakeholder Engagement that sets out the core principles and mandatory requirements for stakeholders. UNIDO as the GEF Agency is responsible for the project implementation and as such it is accountable to GEF and other funding sources to be provided by the public and private sector. Inclusive stakeholder consultations (the evidence of which is included in Annex L), that took place during the project design period, paved the way for strong involvement and commitment from all relevant actors. This will continue throughout the project, as the facilitation of coordination between all CIEE stakeholders is a key objective of the GCIP 2 Ukraine. A Stakeholder Engagement Plan (SEP) was developed (Annex I) to outline the strategy for interacting with stakeholders, including a range of activities and approaches, from information sharing and consultation, to participation, negotiation, and partnerships. The SEP also sets out resources and responsibilities as well as any related monitoring and reporting requirements.

174. An overview of consulted stakeholders as well as their foreseen roles in the project is included in the Table 15 below.

Table 15: Overview of GCIP 2 Ukraine stakeholders.

Stakeholder name	Current role in Ukraine	Envisaged role in GCIP 2 Ukraine
Greencubator	Greencubator is a Ukrainian NGO founded in 2009 that aims at building an ecosystem for sustainable entrepreneurship, low-carbon innovations and green economy development in Ukraine and Eastern Europe. Its activities are focused on forming a network of entrepreneurs/start-ups and established corporate businesses. The examples of initiatives include conferences, open-air events dedicated to the future of energy industry called Energy Camps, hackathons and competitions, and many others. Greencubator has significant track record in delivery of incubation and acceleration services.	Next to NRFU, Greencubator will be one of two national project executing entities (national PEEs). It will also host the project management unit (PMU).
National Research Foundation of Ukraine (NRFU)	NRFU is the largest funding body in Ukraine that supports scientific activities of all researchers, independent of their affiliations. Its support is provided in a form of research grants that are awarded on the basis of the independent peer review. NRFU is governed by two collegial bodies - Scientific Board and Supervisory Board.	Next to Greencubator, NRFU will be one of two national PEEs.
State Financial Institution for Innovations (SFII)	SFII was established to provide financial support to business entities of various ownership models. It seeks to protect and promote domestic commodity producers and facilitate export. The SFII also selects innovative projects in different industry sectors and provides financial support for their development. The projects include manufacturing of equipment, materials, alternative fuel types, software and automation solutions, set up of production facilities, etc. SFII is also directly responsible for the implementation of innovation policy through the provision of financial instruments, full administrative support, co-investment and project management. It also plays a key role in the implementation of the GCIP 1 Ukraine.	Project partner and member of the PSC

Ukrainian Start-up Fund (USF)	USF is a state fund launched in 2019 and run by the SFII. The fund provides pre-seed (USD 25,000) and seed funding (USD 50,000) for Ukrainian start-ups with a focus on international markets. The USF budget amounts to approximately EUR 15 million. Target sectors include, but are not limited to, Artificial Intelligence, Augmented Reality, BigDat?, Blockchain, Cyber Security, Defence, Medical and Healthcare, Travel, FinTech, EdTech, Robotics, Professional Services, Software as a Service, Manufacturing, E-commerce, Internet of Things. An example of a start-up supported is the SmartMac (with a resource consumption monitoring tool).	Project partner and member of the PSC
Ministry of Strategic Industries (MSI)	MSI is responsible for development and implementation of state industrial policy with the focus on military and defence industry, aircraft construction and space activities, and other strategic industries. As such, it is relevant with the view to enterprises in strategic industries that could be a source of demand for specific cleantech solutions developed by GCIP 2 Ukraine SMEs/start-ups, and thus be a potential partner for commercialization of technologies.	Project partner and member of the PSC
Ministry of Communities and Territories Development (MCTD)	MCTD is responsible for public housing infrastructure development as well as it designs energy efficiency regulations and facilitates energy efficiency projects in the country.	Project partner and member of the PSC
Ministry of Education and Science (MES)	Its main function is the formation and implementation of the state policy in the field of education and science. It also facilitates scientific, technology and innovative activities, transfer of technologies as well as it provides state supervision over the activities of educational institutions.	Project partner and member of the PSC
Ministry of Economic Development and Trade (MEDT)	MEDT is responsible for formation and realization of state economic and social development policies; regulation of consumer prices; industrial, investment and trade economic policies; development of entrepreneurship; technical regulation and security of consumer rights; as well as inter-agency coordination of economic and social cooperation of Ukraine with the EU.	Project partner and member of the PSC
Ministry of Finance (MF)	MF is the central executive agency in Ukraine charged with developing and implementing national financial and budget policies, and with defining national policies in customs and taxation.	Project partner and member of the PSC
Ministry of Energy and Coal Mining (MECM)	MECM is the main body in the central government responsible for realization of electric power-generation state policies.	Project partner and member of the PSC
Ministry of Environmental Protection and Natural Resources (MENR)	MENR is engaged in the formation and implementation of the state policy in the field of environmental protection, biological/genetic/radiation safety, waste management, pesticides and agrochemicals, and rational use/reproduction/protection of natural resources. The GEF Political and Operational Focal Point is nominated at MENR.	Project partner and member of the PSC
Ministry of Digital Transformation (MDT)	MDT manages the implementation of state policy in the field of informatization, e-government, and information society development.	Project partner and member of the PSC

State Agency on Energy Efficiency and Energy Saving (SAEE)	SAEE implements the state policy in the field of efficient use of fuel and energy resources, energy saving, renewable energy and alternative fuels. It is responsible for ensuring an increase in the share of renewable energy sources and alternative fuels in the energy balance of Ukraine. What is more, the SAEE together with other governmental bodies has been setting up conditions for implementation of a green bond market in Ukraine as an instrument for attracting investments into energy efficiency projects (among others, it was involved in government work on related legal regulations in 2019).	Project partner and member of the PSC
State Service of Ukraine on Food Safety and Consumer Protection (SSUFCCP)	SSUFCCP is responsible for several areas that could be related to low-carbon development and climate adaptation, such as consumer protection (incl. on aspects related to energy services), food safety, control over organic products market, animal feed, metrological supervision, and others. SSUFCCP is interested in cooperation with start-ups on digitalization of its services. It has successful experience in cooperating with the Saveecobot project which is run by the non-profit organization SaveDnipro and provides access to environmental information.	Project partner (potentially interested in cleantech solutions supported by GCIP 2 Ukraine)
Unit.City	Unit.City is Ukraine?s first innovation park that unites companies, start-ups, students, professionals and research laboratories. It supports sustainable solutions and has implemented a number of green projects, including silver LEED certification, water treatment and reuse (including rainwater collection), waste collection and recycling, car sharing hub, and others. It also hosts an acceleration program Sector X that works with corporates with specific challenges to improve their operational efficiency or develop new products (to be solved by start-ups).	Project partner (with the view to establishing synergies between GCIP 2 Ukraine and Sector X)
The National Academy of Sciences of Ukraine (NASU)	NASU is a key network of research and development institutes (nearly 200) and so-called sectoral research institutes. NASU is an independent entity but coordinates its activities with the MES. It also supported the establishment of technological parks in Ukraine. NASU has also a considerable impact on the policy-making process in the field of science.	Project partner and member of the PSC
Lviv Business School (LvBS)	LvBS is Ukraine?s leading business school, forming the new generation of business leaders and shaping socially responsible business community around the European values, service to the society and the spirit of innovation. LvBS has a history io being for 13 years on the Ukrainian market of business education. It has 5 master's programs, 25 management development programs and a vast alumni network.	Project partner (supporting the promotion of cleantech solutions and being a source of cleantech business ideas, supporting the provision of mentoring as well as providing access to education and innovation programs for GCIP 2 Ukraine entrepreneurs)

Universities and research institutes	In particular, the universities in Kherson (Kherson National Technical University), Slovyansk (Donbas State Pedagogical University), Mykolayiv (Petro Mohyla Black Sea National University), Ivano-Frankivsk (Vasyl Stefanyk Precarpathian National University), and Sumy (Sumy State University) could be relevant for GCIP 2 Ukraine as they are already involved in GCIP 1 Ukraine as regional acceleration centers.	Project partners (supporting the promotion of cleantech solutions and being a source of cleantech business ideas)
Global Project executing entities (global PEEs): Network for Global Innovation (NGIN), Cleantech Group (CTG), and Private Financing Advisory Network (PFAN)	PFAN, a programme co-hosted by UNIDO and the Renewable Energy and Energy Efficiency Partnership (REEEP), is already present in Ukraine. It provides investment facilitation services for scaling-up of climate and sustainable energy technologies for positive environmental impact. It supports cleantech projects until they reach financial closure.	The global PEEs will provide the GCIP 2 Ukraine with support in execution of several activities.
GCIP 1 Ukraine	GCIP 1 Ukraine was developed under the GEF-6 replenishment in 2018 with a lifespan of 36 months. The project primarily aims to promote an innovation ecosystem in Ukraine by: identifying and nurturing cleantech innovators and entrepreneurs; building capacity within national institutions and partner organizations for the sustainable implementation of the cleantech ecosystem and accelerator approach; and supporting and working with national and sub-regional policy makers to strengthen the supportive policy framework for SMEs and entrepreneurs through South-South Cooperation.	GCIP 2 Ukraine will build on the achievements of the GCIP 1 Ukraine and synergize with it, in that it will for example encourage applications of GCIP 1 Ukraine Accelerator alumni for more advanced support, facilitate further training of GCIP 1 Ukraine trainers and mentors, and leverage on the improvements of the CIEE while further focusing on its advancement in selected areas (including finance and investment).
LCF Law Group	LCF Law Group provides legal services for domestic and international businesses in several areas, including corporate, mergers & acquisitions, tax, intellectual property, white collar crime, compliance, and litigation, etc. It possesses expertise in banking, energy, agribusiness, and other major industries, and it has supported development of renewable energy and energy efficiency projects in Ukraine.	Project partner (providing advice to the GCIP 2 Ukraine supported enterprises as well as policy recommendations and guidance on viable financing mechanisms for innovative cleantech)
UDP Renewables	UDP Renewables is a leading investment and development company in the Ukrainian renewable energy industry, operating 150MW of solar power and with a portfolio of over 300M of wind power projects. UDP Renewables is creating new sources of growth for international renewable energy companies in Ukraine.	Project partner (providing grants and seed investment to Ukraine cleantech solutions developers participating in the GCIP 2 Ukraine)

APPAU	APPAU is an industrial automation association and the leading organization in Ukraine promoting the Industry 4.0. Its mission is to develop the country?s industrial and high-tech sectors in a sustainable way and by establishing strong ecosystem collaboration.	Project partner (providing grants and mentoring to the GCIP 2 Ukraine enterprises)
Digitizing Space	Digitizing.Space is an innovative company that designs digitally inclusive projects & programs helping businesses, communities, and civil society organizations in digital transformation.	Project partner (providing mentoring to the GCIP 2 Ukraine enterprises)
KNESS Group	KNESS is an international group of companies founded in Ukraine that develops technologies and implements renewable energy projects.	Project partner (providing grants and seed investment to Ukraine cleantech solutions developers focusing on hydrogen and energy storage)
Severo-Zapad LLC	Severo-Zapad is an engineering firm that designs and produces custom components for high-reliability systems. The company focuses on creating mechatronic, electronic and energy storage and lighting systems.	Project partner (providing mentoring to the GCIP 2 Ukraine enterprises)
Promprylad Renovation	Promprylad Renovation is an innovation center established on the premises of an old factory. It focuses on four areas of regional development ? new economy, urban design, contemporary art, and education. It follows the impact investing model, where investors contribute to social changes in the region and get a return on investment in the form of dividend payouts.	Project partner (providing support to GCIP 2 Ukraine through mentoring, access to education, innovation programs and networking opportunities to participant enterprises)
Noosphere Ventures	Noosphere Ventures is an international asset management firm, with the strategic vision and capital to transform high-potential companies into definitive market leaders. Noosphere Ventures partners with entrepreneurs, innovators and executives, and provides them with a powerful combination of capital, hands-on management and innovation expertise to help propel their endeavors to the next level and provide a practical path towards long-term success. Noosphere Ventures portfolio has access to investors who have operated successful businesses and have been CEOs themselves. With offices in USA, UK, Singapore, Spain, and Ukraine, Venture Noosphere has a vast international customer network that its companies can leverage.	Project partner (providing mentoring, access to innovation programs, in-kind support, and network of contacts potentially interested in investment in GCIP 2 Ukraine enterprises)

Various venture capitalists, angel investors, and other potential providers of finance	Examples of venture funds include TA Ventures, Aventures Capital, Adventures Lab, Genesis Investments, SMRK VC Fund, ICU Ventures, Chernovetskyi Investment Group, Overkill Ventures. The key Ukrainian venture capital providers and business angels that have already invested in Ukrainian cleantech solutions are: Startup Network, IoT Hub, SolarGaps, BioSENS, Sirocco, SMRK Fund, Horizon Capital.	Project partners and potential finance providers
Organizations promoting gender equality and women?s empowerment	In Ukraine there are several organizations and initiatives promoting gender equality and women?s empowerment. They include: Women?s Energy Club of Ukraine (a non-governmental, voluntary, self-dependent professional association of women working in energy-related spheres in Ukraine), WTECH (the first community in Ukraine for women leaders in the IT & tech business who work with start-ups, in IT companies and in the digital sector), Women Entrepreneurs Agri (a business community that unites female leaders in the agricultural industry), Ukrainian Business Women (a non-governmental organization that aims at strengthening women's role and impact in transformation of Ukrainian society), Digital Women 2020 (a global initiative aimed at empowering women entrepreneurs), JurFem (one of the first Ukrainian associations of women lawyers), and others (International Embassy of Women Entrepreneurs, EBRD Women in Business programme, Women Who Code Kyiv, etc.).	Project partner (promoting GCIP 2 Ukraine among women entrepreneurs, investors and experts/mentors; supporting project outreach; enabling networking)

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.

Select what role civil society will play in the project:

Consulted only;

Member of Advisory Body; Contractor; Yes

Co-financier; Yes

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

Executor or co-executor; Yes

Other (Please explain)

3. Gender Equality and Women's Empowerment

Provide the gender analysis or equivalent socio-economic assesment.

175. Gender equality is a fundamental human right. While some progress has been achieved towards gender equality and women?s empowerment globally, women continue to suffer from discrimination and violence in some parts of the world. Gender issues need to be addressed by creating equal employment and capacity building opportunities, as well as social infrastructure and safe working conditions responding to the specific needs of women. The importance of gender equality and women?s empowerment, particularly women?s economic empowerment, is at the core of UNIDO?s mandate. Commitment of UNIDO towards gender equality and women?s empowerment is demonstrated in its policy on Gender Equality and the Empowerment of Women (2019), and the UNIDO Strategy for Gender Equality and the Empowerment of Women (2020-2023). UNIDO has also developed an operational energy-gender guide to support gender mainstreaming within its sustainable energy initiatives. Gender equality enhances economic growth, reduces household poverty, and enables human development. Women?s entrepreneurship, that can directly contribute to the economic empowerment of women, is often seen as crucial for increasing the quality of life of women in the developing world, as well as a trigger for changes of the status-quo of women and for re-addressing the balance of power within the family.

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

177. Gender asymmetry is apparent in Ukraine and has a direct impact on delivering opportunities and benefits to women and men, and the wider community, as part of an energy sector transformation. Women representation in the energy sector in Ukraine is approximately 27%[1], which is slightly higher than the global average. The agricultural sector in Ukraine provides employment for 17% of the population and is by far the largest employer of women - 19.4%of the paid female workforce.

178. An employer with the least female workforce is Government of Ukraine at 4.7%. Women comprise 12.1% of Parliament; 12.5% of Cabinet of Ministers and 16.7% of senior governmental officials at the highest level[3].. On average, women in Ukraine secure 45% less pension than men and live 12 years longer, while in terms of education are 5 times more likely to select careers in humanities as opposed to mathematics or the sciences[4]. The gender wage gap in Ukraine was 25% in 2016 and 21% in 2017 and reached 40% for some economic activities[5].

179. In 2019, the OECD assigned Ukraine a ?low? rating on the ?Social Institutions & Gender Index? (SIGI), followed by a ranking of 28 out of 40 European nations, signifying poor performance in gender equality. SIGI is based on assessment of: discrimination in the family, restricted physical integrity, restricted access to productive and financial resources, and restricted civil liberties. Similarly, the Gender Inequality Index (GII), which measures the human development cost of gender disparity across health, education and economic status, ranks Ukraine 88 out of 160 countries. The higher the ranking the larger the gender gap ? in this case Ukraine performs poorly on gender equality.

180. In this regard, the situation in Ukraine needs to be improved. According to the *Uniform State Register of Legal Entities, Individual Entrepreneurs (IEs), and Public Organizations (USREOU)* ? maintained by the Ministry of Justice ? the share of women employed in the labour market in 2017 was 55.7%, a low figure if compared to the 69% share of employed men. Similarly, women in employment are more often employees rather than employers and self-employed persons

(compared with men). Access to finance and lack of capital are more important barriers to business development and start-up for women entrepreneurs than for men entrepreneurs. Women-owned SMEs are most likely to self-finance their business at start-up than those owned by men. As a result, women-led businesses in Ukraine represent only 22-23% of all SMEs.

181. A guiding principle of GCIP 2 Ukraine is to ensure that both women and men can equally lead, participate in and benefit from the project (UNIDO Gender Policy 2019). Particularly, in the GCIP 2 Ukraine Advanced Accelerator and Post-Accelerator, gender-responsive activities will be streamlined to ensure the achievement of this goal. Special efforts will be made to promote equal participation of women and men, both at managerial and technical levels, as consultants, participants, entrepreneurs, mentors, etc. at all stages of project implementation. Previous GCIP projects have already shown higher levels of women?s participation than other acceleration and incubation programmes, with 25% of the 900 alumni supported to date being women-led enterprises. This project aims at continuation of this trend and even at an increase of the proportion of women beneficiaries (with a target of at least 35% women beneficiaries).

182. UNIDO?s Guide on Gender Mainstreaming in Energy and Climate Change Projects will serve as a framework for the project implementation, as to ensure that both UNIDO and GEF requirements are fulfilled. Accordingly, attention will be paid to: 1) Gender-sensitive recruitment at all levels where possible, especially with regard to selection of project staff. Gender responsive TORs will be used, and in cases where the project does not have direct influence, gender-sensitive recruitment will be encouraged. Furthermore, whenever possible existing staff will be trained and their awareness raised regarding gender issues; 2) Consideration of gender dimensions in all decision-making processes (e.g. efforts to achieve gender balance/representation in such processes), including PSC meetings; 3) Collection of gender-disaggregated data; 4) Consultations with and involvement of stakeholders focusing on gender equality and women?s empowerment issues, such as gender experts and organizations, CSOs and NGOs.

183. A Gender Analysis Report and a Draft Gender Mainstreaming Action Plan were developed (Annex J) during the PPG phase, which also influenced the ultimate project design. In the project design UNIDO has ensured that the gender dimensions are considered, and that the project log-frame reflects key gender dimensions in the respective outputs, activities, indicators and targets. Also, a review of previous GCIP projects enabled insights into how the GCIP 2 Ukraine can best contribute to the gender equality and empowerment of women. A summary of some suggested approaches to gender mainstreaming is shown in the Table 16 below.

Table 16: Approaches to gender mainstreaming.

Stage/Activity	Gender equality measure
Project execution	Gender sensitization workshops will be conducted for all stakeholders involved in GCIP 2 Ukraine; A gender training package (material for national capacity building on gender awareness) will be adapted for Ukraine from the training package developed by the GCIP Global; Gender focal point will be nominated within Greencubator and gender mainstreaming targets have been included in the ToR.
Training of GCIP 2 Ukraine consultants and experts	Consultants/experts will be required to complete the ?I know gender? UN course; gender-lens investing training course, Mentors and trainers will be provided with training on awareness raising and gender-bias; Consultants will be expected to provide evidence on how gender equality is addressed in the material they develop.
Development of GCIP 2 Ukraine guidebooks	Guidebooks will highlight the need to make special effort to encourage women to apply for the GCIP 2 Ukraine support, including targeted outreach and gender specific communications material (e.g. videos, success stories) and explicit statements that GCIP encourages applications from women; Training materials for entrepreneurs will include topics on gender awareness; Gender equality will be addressed in the curricula and content of all training materials developed for experts.

Application stage for GCIP 2 Ukraine support	Gender-disaggregated data will be collected in application forms; There will be targeted and gender responsive outreach; From the second year of project implementation, it will be considered to organize events specifically targeted at connecting women technicians and engineers with business women; A target of the 35% of women-led enterprise applications is set; Stringent selection criteria will be defined that provide equal opportunities for both women and men; Women will be involved in the mentoring/training processes so that more role models are created; Efforts will be made to ensure gender balance of experts; Special support will be provided to women to participate in GCIP 2 Ukraine, e.g. women could receive possibility to select their meeting slot, so it does not overlap with their household responsibilities or could be offered safe transport to the project activity venue; Evaluation methodology for selection of enterprises to be supported by GCIP 2 Ukraine will consider the gender balance within entrepreneur?s management teams and beneficiaries, as well as gender-responsive policies within their firms.
Special Awards	Special consideration will be given to the creation of a gender related prize (e.g. a prize for the women?s entrepreneur of the year and/or a special award for the team with the product/service with the highest gender equality impact potential). Such a prize was offered in a number of previous GCIPs, which led to an increase in the number of women-led innovators applying for support (e.g. in South Africa, Pakistan, and Morocco the number of applications from women entrepreneurs was between 25% and 40%).
Provision of support to GCIP 2 Ukraine Advanced Accelerator and Post-Accelerator participants	Where considered necessary, GCIP will seek to remove barriers to ensure inclusion of women (e.g. segregated financial training might be offered); The training material will be gender-responsive (e.g. stereotypes will be avoided); Trainings will be organized at times suitable for both women and men, and recordings will be provided.
Forums/events	Women participants will be encouraged to attend the forums/events through focused outreach activities; It will be ensured that topics of interest to women entrepreneurs are included in the forum/event agendas; There will be a targeted event or panel to discuss women?s entrepreneurships; Participant data will be disaggregated.
Investment facilitation	Gender lens investing principles will be applied in all investment decision making processes; Specific training material and guidelines on gender lens investment will be developed for financiers.
Capacity building	Capacity building on gender equality will be mainstreamed throughout the project implementation and with regard to all stakeholders; A gender sensitization training for relevant stakeholders will be organized.
Policy support	Gender and youth empowerment policy framework will be developed.

[1] UATV Head to Head (2019). Women in Ukrainian Energy Sector: The Perspectives. Interview with Robyn Camp, Project Manager at the USAID Energy Security Project.

[2] https://forum2016.iamo.de/microsites/forum2016.iamo.de/fileadmin/praesentationen/B3_Kutsmus_The_Effects_of_Large-Scale_Farming_on_Gender_Equality_in_Rural_Areas_The_Case_of_Ukraine_IAMO_Forum_2016.pdf.

[3] http://un.org.ua/en/resident-coordinator-system/gender-equality.

[4] https://www.academia.edu/4212389/Gender_Problems_in_Ukraine.

[5] http://un.org.ua/en/resident-coordinator-system/gender-equality

[6] https://www.genderindex.org/ranking/
[7] http://hdr.undp.org/en/content/gender-inequality-index-gii.

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 Yes

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

184. The private sector is key to the creation and expansion of market of cleantech products and services, achievement of GEBs, generation of jobs and economic growth. The proposed project is designed in line with the GEF policy on Stakeholder Engagement that sets out the core principles and mandatory requirements for the stakeholder interaction. In order to shift markets towards low-carbon economy there is a need for full engagement in mobilising the private sector to leverage innovation, knowledge transfer, investment and market access. In this context, it also needs to be noted that the widespread adoption and utilization of innovative cleantech has significant potential to address the serious environmental problems and risks faced globally. Cleantech innovations can fuel the next industrial revolution that will shape tomorrow?s global economy, environment, and job market. The private sector engagement is key for the success of this project, as confirmed in stakeholder consultations in the PPG phase. The GCIP 2 Ukraine foresees several areas of interaction with the private sector, as described below.

185. There will be direct interactions with and support for entrepreneurs (SMEs and start-ups) offering innovative cleantech solutions. The entrepreneurs are considered as agents of change that bear the potential of instigating a market transformation. The SMEs and stat-ups will be supported in the framework of GCIP 2 Ukraine Advanced Accelerator and Post-Accelerator, as described before. Under the GCIP Global there will be an annual GCIP Global Forum organized as an integral part of efforts to ensure connectivity between CIEEs. The GCIP Global Forum will bring selected participants of national GCIPs together for recognition and awards, and for opportunities to be connected with potential partners, customers, technology scouts and investors from around the world. Importantly, the GCIP Global Forum will also serve as a platform for innovation showcasing, and investment matching, and will be an important annual milestone for networking, advocacy, and knowledge exchange among CIEE players. The GCIP Global Forum will not be a stand-alone event, but it will be organized on the margins of highly visible global gatherings, such as for example the UNFCCC COP, Cleantech Group forums, etc.

186. The SMEs/start-ups are supposed to play a vital role in catalysing breakthrough cleantech innovations. SMEs/start-ups are well positioned to participate in future cleantech markets. They are instrumental (but often underrecognized) in furthering growth, innovation, and development. Coupled with a growing cleantech sector, they can help build prosperity in low- and middle-income countries. It is estimated that SMEs make up over 90% of cleantech entrepreneurial

endeavours in most countries. Nevertheless, failure rates are high, capital requirements are a barrier, reliance on government policy is a risk, and the technical and commercial capacity required of cleantech SMEs can be a challenge. Despite opportunities for SMEs in cleantech markets, many businesses still fail. While there are no definitive statistics on cleantech SMEs failure rates, they can be estimated as comparable to those in the ICT and biotech sectors (80-90% failure rates).

187. Next to working closely with start-ups/SMEs, there will be corporate partnerships formed to connect GCIP 2 Ukraine participants with various companies with the aim to create joint venture opportunities across borders, to facilitate market expansion and product co-development. This has already been successfully piloted with the Korean Financing Technology Corporation (KOTEC) with collaborations established between Korean SMEs and GCIP alumni from Morocco, Pakistan, Thailand and Turkey. Similar partnerships are expected under this project. In addition, as part of the GCIP Framework, the national PEEs will receive membership in the Network for Global Innovation for the duration of the project. This will provide them and other GCIP 2 Ukraine stakeholders with access to international best practices and with opportunities to build cross-border connections with partners in additional countries, including private sector stakeholders.

188. The GCIP 2 Ukraine will also partner with corporations that seek to identify and invest in innovative cleantech. More specifically, the Global Innovation Challenge will connect selected corporations ? looking for concrete demand-driven solutions ? with GCIP entrepreneurs. Moreover, the private sector is a key source of co-financing, thus the GCIP 2 Ukraine through the PMU will work together with financing institutions, venture capitalists, and angel investors that seek to invest in cleantech solutions. More specifically, Investor Connect events, National Forums and Global Forums will be organized to connect potential financiers (public, private, national, regional, global) with entrepreneurs and to facilitate investments. What is more, the GCIP 2 Ukraine will provide pre-seed and seed financing to selected SMEs and start-ups (disbursed in the framework of the financing mechanism to be designed, validated, and operationalized), which will have a leverage effect, i.e. additional private finance will be crowded in and de-risked.

189. The GCIP 2 Ukraine will also cooperate with industry and business associations such as the Ukrainian Chamber of Commerce and Industry and the Ukrainian League of Industrialists and Entrepreneurs to leverage their know-how, capital and interest in cleantech innovations, as well as to build their capacity. In addition, industry experts will be engaged as mentors, trainers, and EIRs to support the GCIP 2 Ukraine Advanced Accelerator and Post- Accelerator.

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):

190. Ukraine?s population is around 42 million, with GHG emissions per capita of 5.02 metric tonnes. It is ranked 5th globally for energy intensity, which is mainly due to its inefficient energy infrastructure, historically low energy prices and high sectoral demands from industry and agriculture.

191. Ukraine primarily has a temperate continental climate, with a subtropical Mediterranean climate on the southern coast of Crimea. The western and northwestern regions are mild and moist, and the south and southeastern regions are characterized by low precipitation and warmer temperatures. The country features among the 50 largest by area in the world and hosts a diverse natural ecosystems: the Polissya mixed forest zone in the north, a forested-steppe zone to the south and southeast, as well as the Carpathian Mountain region in the west and the Crimean Mountains in the far south. These ecosystems are indispensable for sustaining livelihoods (particularly the agro-economy). Given the

share of the agricultural sector in the total GDP (17%), total export (31.5%) and total state budget revenue (11%), climate-driven changes such as high temperatures have the potential to cause shifts in agricultural zones. Water stress, both climate- and infrastructure-driven, has also become a marked issue in the country.

192. The GCIP 2 Ukraine focuses on delivering GEBs through GEF and co-financing investments in cleantech innovations proposed by start-ups/SMEs and through institutional capacity building. In this context, the consideration of climate risks and their mitigation is important to ensure that the GCIP 2 Ukraine is resilient to climate shocks, but also that the outcomes and consequent impacts of the project endure. Mainstreaming climate risks in project design takes cognizance of both GEF STAP guidance, and also Ukraine?s National Energy and Climate Plan (NECP) for 2021-2030. The Government of Ukraine also adopted the Concept on State Climate Policy Implementation till 2030 in December 2016, and an Action Plan to implement the policy in December 2017.

Observed and projected temperature changes

193. Average annual temperatures in Ukraine range from 5-6?C in the northeast to 9-11? in the southwest. Observed climate trends in Ukraine include: increase in average annual temperatures of 0.8?C from 1991-2010 (compared to the 1961-1990 average). Ukraine is also expected to have an expanded summer period with higher temperatures and prolonged heatwaves during summer months. In fact, 2020 was the hottest year on record, according to data released in January 2021 by Kyiv?s Central Observatory. The magnitude and direction of projected changes vary by region and scenario, but may include increased overall temperatures by 2050, with higher rates of increase expected in the winter, exacerbating colder temperatures in certain regions.

Precipitation trends

194. In Ukraine, on average up to 1200 mm of rain fall annually in the mountains, with a variable range of 300-700 mm in the plains, and decreasing amounts from the north/northwest to south/southeast. Currently, there are no statistically relevant changes in overall rainfall levels, but precipitation seems to be highly variable between seasons and across regions. Additionally, significant increase in frequency and intensity of heavy snowfall from 1971-2010 was noted alongside higher frequency and intensity of convective weather events (e.g. rain, hail).

Natural and climate-induced hazards

195. Ukraine is at risk of hydrometeorological hazards and natural disasters, which primarily affect the agriculture sector and human health through seasonal flooding and periods of drought. Threats from riverine, urban floods and wildfires are considered high. Impacts from climate change make Ukraine increasingly vulnerable to: droughts, high temperatures, heat waves, heavy precipitation, mudflows and floods. Additionally, climate change also introduces unpredictability and increased intensities in natural phenomena both during the warm season (showers, squall, hail, heat waves) and cold season (heavy snow, glazed frost, slush build-up).

196. Floods: With the country?s high number and vast networks of rivers, catchments, and aquifers ? high risk flooding trends are expected to increase. Reductions in river flows in the south and southeast regions are expected due to greater evapotranspiration, while the western regions (Subcarpathia and Transcarpathia), in particular the Dniester basin, are expected to witness flooding. The effects of flooding can be detrimental to the agro-based livelihoods in these regions due to stream bank erosion, soil erosion, and siltation.

197. Droughts: There has been a marked increase in the frequency and intensity of drought events over the last 15 years. It is foreseen that the Black Sea coast will be affected with water stress. With projected changes shifting weather zones southward, the Ministry of Environmental Protection is forecasting further intensification and geographical spread of droughts.

Biosphere and ecosystem degradation

198. Climate change, along with unsustainable land use changes, is driving stresses on Ukraine?s ecosystems? functionality, goods and services. A UNESCO project (*Biosphere Reserves ? BR for Climate Adaptation in Ukraine)*, that focused on the climate change impacts of three target areas: Desnianskyi BR, Roztochya BR and Shatskyi BR, found that urgent investments in both protection and restoration of ecosystems as well as institutional and policy capacities are required. Ground level and surface water in the watersheds are experiencing high levels of pollution, with changes in flood regime patterns affecting agriculture and infrastructure. Decreasing soil moisture (on top of overexploitation due to agriculture) is leading to long-term land degradation that can upend current availability of food and water security in the region. Finally, monoculture pine forests are becoming vulnerable to insect outbreaks, leading to loss of ecosystem functions such as cooling and retention of groundwater. The UNESO project highlighted the urgency of addressing the climate risks in the country, and the need to invest in innovative as well as traditional interventions through different climate finance mechanisms. The Table below includes an overview of key potential hazards for the project implementation that are related to the aspects of the climate scenarios described above. It also includes an assessment of the risk level as well as a proposal for mitigation measures.

Table 17: Potential climate-related risks to project implementation and mitigation measures.

Key GCIP 2 Ukraine activities	**Potential effect of climate risks on project implementation and outcomes**	**Risk level**	**Risk mitigation measures**
Provide the Advanced Accelerator and Post-Accelerator support to enterprises with high-impact cleantech innovation for large-scale deployment and green job creation	? Limited participation in events due to heat stress/flooding and other natural hazards ? Technologies supported increase the likelihood of adverse effects that exacerbate climate risks ? Failure of businesses supported by GCIP 2 Ukraine due to natural hazards within the project area	Moderate	? Some of the support is intended to be face to face. However, if this is not possible due to climate events then the training/events will be organized on-line with the aim of providing an experience as close as possible to the physical events, with side events and one-to-one meetings also possible. ? To safeguard against climate change risks the screening of technologies for selection for GCIP support will include an assessment of the climate risks over the next 30 years, and where a risk is identified it will be necessary for the entrepreneurs to propose suitable adaptation or management measures. ? GIZ?s Climate Expert Tool for example could be made available to entrepreneurs. Once technologies are selected for GCIP 2 Ukraine support, their performance will continue to be reviewed against local climate risks, as part of the support provided through GCIP 2 Ukraine.

Enhance access to financing through investment facilitation support targeted at start-ups and SMEs in growth stage to support commercialization and deployment of cleantech solutions with highly transformational impact for the global commons	In-country financing diluted or diverted to disaster and resilience	Low	? Introduce dedicated categories of cleantech to be supported through GCIP 2 Ukraine that address some of the prevailing climate risks. ? Facilitate the connectivity of CIEEs and greater opportunities for scaling-up of innovations across different countries and globally through the GCIP Global. ? Raise awareness with PMUs to assess climate risks on an annual basis. ? Enhance impact tracking and monitoring of the climate risks through tools such as ?Think Hazard?.
Build a cleantech community consisting of relevant CIEE players at national and global level and build strategic partnerships with key influencers that can lead and guide policy and business decisions in the cleantech space	Diverted human resources, political support, and stakeholder attention with focus on disaster and resilience measures	Low	? Enhance visibility, credibility and understanding of GCIP 2 Ukraine solutions and their role in tackling the climate risks through the Stakeholder Engagement Plan and communications activities. ? Support development and implementation of policy roadmaps that anticipate the effects of possible climate risks. ? Through GCIP Global ensure coordination and cooperation among GCIP national execution partners for knowledge and experience sharing on how to anticipate and mitigate the climate risks identified.
Facilitate production, scale-up and deployment of cleantech innovations	Floods and droughts endangering cleantech production infrastructure, and deployment of innovations	Low	Thanks to the availability of domestic early warning systems, cleantech start-ups/SMEs will be able to avoid severe damages to the production and deployment of their innovations.

199. With the view to enhancing the technical and institutional capacity and information needed to address climate risks, potential measures ? the application of which will be promoted and facilitated in the framework of GCIP 2 Ukraine ? include:

- Ensuring favourable market and policy conditions for cleantech development and deployment (e.g. support to create an enabling market and policy environment, including identification of incentives for innovative activities and recommendations for the design of conducive regulations related to energy production, climate-smart agriculture, digital economy, etc.);
- Supporting infrastructure planning that takes into account mitigation and adaptation to climate risks. Buildings can be designed with the view to enabling adaptation to climate change, such as for example circulation of air for cooling, and with shaded windows in the direction of the sun ? whilst also being constructed with energy-efficient materials. Also, critical infrastructure can be safeguarded to the extent possible, and appropriate urban management practices can be applied (e.g. rainwater storage and flood retention areas can be created);
- Supporting climate resilient land-use planning (e.g. protect high-yield agricultural land, environmentally sensitive areas and natural landscapes from urban sprawl; plan greater inter-connectivity between different land uses and transport; intensify land uses where appropriate; revise flood lines);
- Promoting soft adaptation options, e.g. livelihood protection, social safety nets, support towards cleantech start-ups/SMEs that target the promotion of women and women?s needs;

- Awareness-raising and education as well as communication of climate information and promoting the application of early warning systems. This requires institutional cooperation and coordination across sectors, particularly in planning and development practices that reduce vulnerability to climate hazards.

200. The Tables below provide insights into general projects risks as well as risks and opportunities associated with COVID-19.

Table 18: General risk analysis.

Risks	Risk level	Risk mitigation measures
Limited interest in the GCIP 2 Ukraine Advanced Accelerator and Post-Accelerator support	Low	The GCIP 1 Ukraine Accelerator has been successful and received a high number of applications. The proposed project will leverage on this existing success and awareness. Outreach and communications activities will be a key component of the GCIP 2 Ukraine in the lead-up to the opening of application process and throughout the project to attract entrepreneurs, potential sponsors, partners, and experts. More specifically, the GCIP 2 Ukraine knowledge management, communication, and advocacy strategy will be developed to guide these efforts.
Macroeconomic/country risk	Medium	Deterioration in the macroeconomic and political situation in Ukraine might have an adverse effect on GCIP 2 Ukraine. However, in 2019 Ukraine's economy remained steady. The real GDP has remained steady over the recent years. The economic growth rate in 2019 corresponded to the National Bank?s estimate published in the January 2020 Inflation Report (3.3%). Domestic demand, both consumer and investment, has remained the main driver of economic growth. Standard & Poor's and Fitch's credit ratings for Ukraine stand at B with stable outlook.
Lack of political support and enabling environment for innovative cleantech	Low	Ukraine has made significant strides in building up its innovation capacities. In general, innovation and entrepreneurship are high on the governmental agenda, which is e.g. evidenced by the establishment of the SFII and USF. Within Component 2 of GCIP 2 Ukraine, there will be focus on further strengthening of the policy and institutional framework to promote the CIEE together with the Government of Ukraine. Advocacy and awareness raising activities will be an integral part of the project to support the development of a conducive policy and regulatory environment. What is more, the GCIP 1 Ukraine has already facilitated improvement of the enabling environment, which the GCIP 2 Ukraine will further build on.

Risks	Risk level	Risk mitigation measures
Sustainability risk	Medium	A GCIP 2 Ukraine sustainability and exit strategy will be developed based on a framework delivered by the GCIP Global, and it will among others include specific considerations related to a formal project handover process and the point in time when UNIDO?s exit takes place (based on targets achieved by the GCIP 2 Ukraine). What is more, links are being established with GCIP 1 Ukraine to strengthen the coordination between GCIP 1 Ukraine and GCIP 2 Ukraine as to ensure an uninterrupted support provided to enterprises along their scale-up journey. Also, a financing mechanism will be established in the framework of GCIP 2 Ukraine which will operate beyond the project implementation period.
Lack of interest by mentors and trainers	Low	The GCIP 1 Ukraine has trained mentors/trainers/judges and attracted experts to support the Accelerator. It is also cooperating with leading universities across the country. It is expected that the GCIP 2 Ukraine will be equally successful in attracting GCIP experts from a variety of sectors and providing them with skills necessary to support the Advanced Accelerator and Post-Accelerator services. Also, links will be built with PFAN that has already established a network of coaches, from whose involvement the GCIP 2 Ukraine could also potentially benefit.
Lack of effective coordination between various project partners	Low	Proper coordination will be sought through the PSC and ad-hoc working groups will be established if necessary. The project will also build upon networks built under the GCIP 1 Ukraine.
Insufficient incentive and financial support system	Low	Linkages to other financing schemes for cleantech promotion and innovation will be established as early as possible. The GCIP 2 Ukraine will facilitate cross-fertilization between different similar programmes and initiatives. Also, exposure of supported start-up/SME to regional and global investors and partners will be ensured. The outreach and communications activities will be targeted at, among others, financing institutions, venture capitalists, and angel investors. Moreover, the strong GCIP brand, and the direct involvement of renowned global PEEs are expected to build confidence of national and international financiers. The PSC will include at least one representative of a financing institution or an investor.

Risks	Risk level	Risk mitigation measures
Low success rate of new innovative cleantech businesses	Medium	The GCIP 2 Ukraine aims to promote the CIEE by identifying and nurturing cleantech innovators and entrepreneurs with skills required to develop and commercialize their innovations. The GCIP guidebooks (for Advanced Accelerator and Post-Accelerator) will be comprehensive documents that articulate the GCIP approach to promoting cleantech innovation and entrepreneurship in developing countries. As such, they will help ensure that the businesses supported have real market potential. In particular, they will define eligibility requirements and selection criteria for the participants. What is more, GCIP 2 Ukraine will encourage applications from GCIP 1 Ukraine alumni, and as such tat least some of the GCIP 2 Ukraine participants will have the GCIP 1 Ukraine trainings and acceleration support already accomplished, which could strengthen their success outlooks.
Institutional risks (insufficient administrative, organizational and technical capacity of the national PEEs for successful execution of the project)	Low	Capacity building of the national PEEs will be an ongoing process throughout the project implementation period to ensure that staff are comprehensively trained and sustainability of GCIP 2 Ukraine is ensured. An organizational assessment of the national PEEs was conducted during the PPG phase to evaluate potential execution risks. The results showed the risks to be low/medium in all areas under consideration.
Social and gender risks	Low	To ensure gender inclusiveness of all project activities, UNIDO methodology for gender assessment and gender responsive communication showing the benefits of gender equality for both women and men will be applied. To mainstream women and youth entrepreneurship, adequate and gender responsive activities will be implemented and sensitization workshops will be organized. A full Gender Analysis Report was prepared and conclusions resulting from it were incorporated into the project design.
Climate change risks	Low	Climate change is not likely to have severe impacts on this project, with an exception for cleantech innovation dependent on biomass or water supplies. To safeguard against climate change risks, the screening of technologies to be supported by the GCIP 2 Ukraine will include an assessment of the climate risks with a time horizon of 30 years, and where a risk is identified it will be necessary for the entrepreneur to propose suitable adaptation or management measures. The GIZ?s Climate Expert Tool could be used as a tool available to entrepreneurs in that context.

Risks	Risk level	Risk mitigation measures
Environmental risks	Medium	It is recognized that some technologies that could potentially be supported by the GCIP 2 Ukraine, such as the use of blockchain, could lead to major GHG emissions, unless powered entirely by renewable energy. Similarly, technologies related to energy storage can have harmful environmental impacts if not managed effectively. Therefore, any cleantech innovation supported by the GCIP 2 Ukraine will need to meet strict environmental screening criteria. In addition, an Environmental and Social Management Plan (ESMP) was prepared (Annex K) to mitigate the environmental (and social) risks.

Table 19: COVID-19 risk analysis.

Risk	Risk level	Risk mitigation measures
Technical expertise is not readily available due to the pandemic	Low	Necessary efforts will be made to identify alternative technical experts in case it is required. Planning will be flexible enough to reschedule activities onsite that require specific expertise.
Possible re-instatement of COVID-19 containment measures limits available capacity or effectiveness of project execution/ implementation	Medium	The capacity of stakeholders, and especially the beneficiaries, for remote work and online interactions will be strengthened by securing access to commercially available conferencing systems. The current design of the curriculum for entrepreneurs is based on online interactions and deliverables, using webinars and web platforms, and therefore COVID-19 is not expected to pose a significant risk to the conduct of the acceleration cycles.
Some project supporters, co-financiers or beneficiaries may not be able to continue with project execution/ implementation	Low	The situation will be closely monitored in order to find alternate supporters or co-financiers, or to readjust the list of beneficiaries if needed.
Price increases for procurement of goods/services	Medium	The project team will undertake efforts needed to find alternative providers and make sure that competitive pricing is obtained.

Table 20: COVID-19 opportunity analysis.

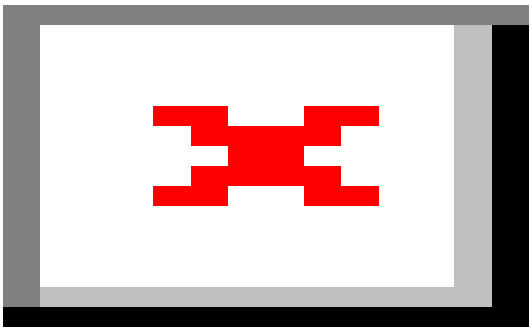
Opportunity	Opportunity level	Opportunity optimization measures

New business opportunities created in response to COVID-19 related restrictions and measures	High	Response to COVID-19 restrictions, such as remote working arrangements and no-contact business modalities will require solutions that can be turned into new business models. These opportunities will be analyzed at the national level and shared with the GCIP 2 Ukraine entrepreneurs. Examples of former GCIP alumni responding to new business opportunities by providing innovative solutions during the pandemic are summarized here: https://www.unido.org/stories/cleantech-innovators-take-covid-19.
New business opportunities to build back better for business continuity and economic recovery post-COVID-19	High	By design, the GCIP 2 Ukraine engages private sector to promote and scale up cleantech products and services, and business models with resilience to climate change (e.g. circular business models). Information on relevant new business opportunities as well as policy/regulations will be added to the GCIP 2 Ukraine curriculum so that the entrepreneurs are fully informed of the market and policy trends.

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.

Figure 6: Relationships between project stakeholders.



Implementation

201. UNIDO as the GEF Agency will be responsible for the implementation of the GCIP 2 Ukraine, which entails oversight of project execution to ensure that the project is being carried out in accordance with agreed standards and requirements. UNIDO as the GEF Agency will also be accountable to the GEF Council for the GEF-financed activities, as well as it will be responsible for project cycle management services and corporate activities.

Execution

202. The GCIP 2 Ukraine will be executed by two national PEEs with support from three global PEE. Greencubator and the National Research Foundation of Ukraine (NRFU) were nominated by the GEF Political Focal Point to be the national PEEs and subsequently underwent an institutional assessment initiated by UNIDO. Greencubator will designate internally, or recruit externally, project management personnel to form the project management unit (PMU). The PMU will consist of the Project Technical Expert and Coordinator and the Project Administration Assistant. The NRFU will designate a liaison officer that will coordinate with and provide inputs to the PMU.

203. The PMU will be responsible for the day-to-day management as well as monitoring of project activities, as to be specified in the project workplan. The national PEEs will sub-contract qualified service providers for the execution of certain activities. An open and competitive process will be applied to select the service providers. Also, a number of activities, as outlined in this document, will be delivered by the global PEEs.

204. The global PEEs, that will support the execution of GCIP 2 Ukraine, are PFAN (Private Financing Advisory Network), Network for Global Innovation (NGIN), and Cleantech Group (CTG). The global PEEs will perform several activities - some as a service to the GCIP 2 Ukraine (i.e., covered from the GCIP Global budget) and some covered from the GCIP 2 Ukraine budget - as specified in details in the Tables 8-13 outlining "Activities and responsibilities" in the project description. NGIN, CTG, and PFAN were identified and selected by UNIDO through an open competitive process according to UNIDO procurement rules and regulations. There will be a contractual agreement between UNIDO and the global PEEs (NGIN, CTG and PFAN) detailing the expected outputs and deliverables.

205. With regard to GCIP 2 Ukraine, NGIN and PFAN will be supporting the execution of outputs related to the Advanced Accelerator and Post-Accelerator as well as investment facilitation (Component 1), whilst CTG will support the execution of outputs related to policy and ecosystem development (Component 2). An integral role of all global PEEs will be to facilitate collective interaction, training, knowledge sharing, and communication with the GCIP country projects through the national PEEs. This includes the development of tools and guidelines for dissemination to Greencubator and NRFU, as well as training and workshops provided to the them to strengthen their capacity to adopt and operationalize the tools and guidelines developed.

Project Steering Committee (PSC)

206. To ensure proper oversight and institutional ownership of the project, as well as to provide advisory inputs, a PSC will be established under the chairmanship of the GEF Operational Focal Point. Representatives from institutions involved in the different project components will be members of the PSC.

207. The PSC will meet twice per year to review the project implementation and execution progress and confirm the workplan for the subsequent year. Any amendments proposed to the workplans and budgets by the PSC are done in accordance with the approved project document, the GEF policy, and UNIDO rules and regulations. Minutes of meetings are signed by UNIDO and the PSC chairperson(s). Greencubator forms the secretariat of and reports to the PSC, and it is not a voting member of the PSC.

Global Advisory Board

208. The GCIP Framework is supported through a Global Advisory Board that is to be established under the GCIP Global and that fulfils a role of a PSC. The Global Advisory Board will provide strategic guidance to the GCIP Framework, including the GCIP Global and GCIP country projects, and is 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 it will also be responsible for defining strategy and advocacy messages.

Coordination with other projects and initiatives

209. This project will be conducted in coordination with ongoing GEF projects in Ukraine as listed in the Table below, as well as other projects and initiatives identified above in the baseline scenario, as to build upon lessons learned, increase synergies, and avoid duplication of efforts.

Table 21: Overview of relevant initiatives with which GCIP 2 Ukraine will coordinate.

Project title	Project description	Project relevance for GCIP 2 Ukraine	Implementation period
Finance and Technology Transfer Centre for Climate Change (FINTECC)	FINTECC in Ukraine was established in 2015 by EBRD. The FINTECC Ukraine framework combines project financing, technical assistance, policy dialogue, and technical and incentive grants to support the development of an enabling environment for technology transfer. At the national level, the project addresses country-specific policy, financial, technical, and institutional barriers to technology transfer to create conditions necessary for successful investment and technology deployment. As a result of FINTECC Ukraine, the eco-labelling regulations for some types of equipment and associated green procurement rules were introduced in Ukraine. Similarly, the project piloted a GEF-funded performance-based ex-post incentive grant that was blended with EBRD direct bank financing and supported 10 pilot climate technology projects.	The EBRD procedures are relatively complicated for start-ups/SMEs. As a result, only some of them can take advantage of the FINTECC. Furthermore, FINTECC only provides incentive grants to the private sector to complement EBRD financing. Also, it usually covers the project preparation costs (energy audits, feasibility studies, etc.). FINTECC does not provide technical assistance that is related to advanced	2015 - ongoing

Project title	Project description	Project relevance for GCIP 2 Ukraine	Implementation period
Climate Innovation Vouchers Program (part of the FINTECC programme)	The Climate Innovation Vouchers Program: is financed by the EU Neighbourhood Facility and implemented by EBRD and Greencubator. It is a EUR 1 million programme that provides Ukrainian companies with an opportunity to receive grant funding for projects related to reducing energy use, GHG emissions, and intensity of production. It involves capacity building, investment preparedness and facilitation of corporate networking. The program provides grants in the amount of up to EUR 50,000 with a minimum 25% of co-financing. The programme was extended in March 2020 and it is now called Climate Innovation Voucher Programme. Its budget amounts to EUR 1.5 million and it covers Ukraine and Belarus.	acceleration and post-acceleration services. As such, GCIP 2 Ukraine will complement FINTECC services, i.e. it will target a different group of beneficiaries (start-ups/SMEs at an advanced level of business growth).	2020 - ongoing
EBRD and GEF - Sustainable Bioenergy Value Chain Innovations	The project promotes investment in innovative bioenergy technologies and practices associated with the use of agricultural residues and waste in Ukraine, leading to substantial development of the agri-waste value chain and increased energy security in the country while improving its energy self-sufficiency. The total budget for this project is USD 55,8 million (USD 4.8 million from the GEF).	There is a considerable potential for cooperation between the Sustainable Bioenergy Value Chain Innovations project and GCIP 2 Ukraine. In particular, mutual cross-fertilization with regard to promotion of technologies supported by both projects and investment facilitation is envisaged.	2019 - ongoing

Project title	Project description	Project relevance for GCIP 2 Ukraine	Implementation period
Improving Energy Efficiency and Promoting Renewable Energy in the Agro-Food and other Small and Medium Enterprises (SMEs) in Ukraine (IEEPRE)	The aim of this project is to develop and promote a market environment for introducing energy efficiency and enhanced use of renewable energy technologies in the Agro-Food and other SMEs in Ukraine with an aim towards scaling up activities to a nation-wide level in order to reduce energy use per unit of product, improve the productivity and competitiveness of units, and reduce overall carbon emissions and improve the local environment. The IEEPRE Ukraine Project was a significant contributor to a list of successfully implemented EE and RE investments in the agro-food subsector. These successfully implemented investments served to boost the awareness and confidence of other industrial SMEs in considering EE and RE measures to reduce their operational costs and increase the competitiveness.	There is considerable potential for GCIP 2 Ukraine to build on the raised awareness for energy efficiency and renewable energy investments in industrial SMEs, which are one of the key outcomes from the IEEPRE project.	2010 - 2017

210. In particular, GCIP 2 Ukraine envisages possible coordination with the EBRD?s Green Innovation Programme (GIP) which supports R&D and deployment of green products, technologies or business models which have beneficial impacts in terms of climate change mitigation, resilience to climate impacts, pollution control or the circular economy. Currently, this programme is operational in neighbouring EU countries.
Also, the GCIP 2 Ukraine envisages the coordination and possible cooperation with the Ukraine FINTECC GEF/EBRD project. This project is part of a broader, multilateral initiative. FINTECC (Finance and Technology Transfer Centre for Climate Change) is a programme that helps companies in participating EBRD countries of operations to implement innovative climate technologies.

211. Also, the GCIP 2 Ukraine will collaborate and benefit from services offered by PFAN. 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.

212. What is more, GCIP 2 Ukraine is part of the GCIP Framework that is implemented in 10 countries in total (including for example Turkey and Kazakhstan) and possibly can be expanded to several other countries in the future. The coordination between all GCIP projects is one of the main elements of the GCIP Framework approach.

Legal Context

213. The Government of the Republic of Ukraine agrees to apply to the present project, mutatis mutandis, the provisions of the Standard Basic Assistance Agreement between the United Nations Development Programme and the Government, signed and entered into force on 2 October 1992.

Transfer of assets

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

7. Consistency with National Priorities

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.

217. The GCIP 2 Ukraine is strongly aligned with the national priorities of Ukraine as elaborated in a number of strategies and plans and will provide a solid contribution towards supporting Ukraine?s transition towards low-carbon development that requires significant financing. The Government of Ukraine sets a high priority for strengthening the country's energy independence by replacing imported energy resources, primarily natural gas, and for development of low-carbon economy. This is described in more detail in the following documents: Low Emission Development Strategy (LEDS), Energy Strategy, National Energy Efficiency Action Plan, National Renewable Energy Action Plan, Nationally Determined Contribution (NDC), etc.

218. Decarbonisation of the economy is one of the priority areas of Ukraine under the LEDS until 2050 approved by Cabinet of Ministers of Ukraine on 18 July 2018, as part of implementation of the Nationally Determined Contribution (NDC) under the Paris Agreements which sets an overall target of keeping the country-wide emissions below 60% of the 1990 levels by 2030. The LEDS recognizes the importance of use and further development of renewable energy sources by providing appropriate regulatory and economic conditions. It also prioritizes wider use of biomass for energy, including through promotion of biomass co-firing with fossil fuels, acceleration of technological innovations in biomass conversion, and integration of wider feedstock streams into energy production. The LEDS also recognizes a need for grid improvements in order to increase stability, efficiency and reduce transmission and distribution losses.

219. According to the Energy Strategy 2035, the development of renewable energy sources is key for ensuring energy independence as well as enhancing reliability and sustainability of the energy system. It is estimated that the share of renewable energy sources in the total primary energy supply will grow substantially ? from 4% in 2015 (3.6 million toe) to 25% in 2035 ? largely due to primary energy production from biomass. It is noteworthy that the Energy Strategy in particular and its focus on renewable energy is referenced in the 6th National Communication to the UNFCCC as being key for climate change mitigation action in Ukraine.

220. Furthermore, the project is aligned with the Strategy for Development of Innovation Activities until 2030 that has a goal to develop a national innovation ecosystem to ensure fast and effective transition of creative ideas into innovative products and services, and ultimately to increase the innovation level of the national economy. It defines measures for the creation of favourable conditions for commercialization of innovations, in particular via support of start-up development, including venture business activities, simplified taxation and reporting requirements for innovative small enterprises, and state support for businesses developing innovative products and services.

221. Close cooperation and coordination with the Climate Technology Centre and Network (CTCN) will also be sought. CTCN is the operational arm of the UNFCCC Technology Mechanism co-hosted by UNIDO and UNEP. CTCN aims to promote 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 2 Ukraine objectives. Therefore, coordination between GCIP 2 Ukraine and CTCN will be ensured.

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.

222. Knowledge management and exchange at the global level is a key strength of the GCIP Framework design. UNIDO has been facilitating information and knowledge exchange among GCIP PMUs and GCIP supported entrepreneurs across borders **since 2013**, and this dimension has proven to be of benefit to all stakeholders. The premise of this project is built upon stakeholder consultations and the conclusions and recommendations from the previous terminal evaluations and ongoing experiences of the GEF5/6 GCIP projects as well as the findings and recommendations of the GEF IEO independent thematic evaluation of GCIP (such as in particular: more focus on investor outreach and connecting with investor networks, improved cross-country coordination and system to ensure coherence and quality, advanced business-support for SMEs post GCIP acceleration, an increased focus on policy strengthening and regulatory frameworks to foster cleantech innovation, knowledge exchange between national executing agencies and government counterparts, improved monitoring and evaluation of impact).

223. Within the project document, **there is an overview of a full range of national and international baseline projects in Ukraine that have provided lessons learned for the GCIP 2 Ukraine approach**. In particular, learnings from the Resource Efficiency and Cleaner Production Center (RECPC) will enable the GCIP 2 Ukraine to build on cleantech innovation ideas that have already been identified. These learnings will be facilitated through collaborative exchange between Greencubator and RECPC. The entry conditions to Sustainable Energy Lending Facility (USELF) are not feasible for SMEs/start-ups, given that their smallest loans are 1.5 million euro. The GCIP 2 Ukraine therefore supplements its offerings by supporting smaller SMEs/start-ups. The Energy Efficiency Fund of Ukraine (EEF) provides support to a narrow range of activities, and Greencubator will continue to collaborate with EEF when developing its dedicated financing mechanism. Finance and Technology Transfer Centre for Climate Change (FINTECC) has taught GCIP 2 Ukraine that only a small part of enterprises can take part of the FINTECC offerings, given the complicated financing structure offered by EBRD. As such, GCIP 2 Ukraine seeks to provide simplified financing modules for SMEs. **The GCIP 2 Ukraine design was informed by the above-mentioned projects and programmes and it will complement their activities.**

224. **Knowledge capture, assessment and documenting** will be a continuous effort during project implementation. Through the various monitoring and reporting exercises, bi-annually and annually, i.e. progress and impact reports, PIRs, mid-term reviews and terminal evaluation, the lessons learned, best examples, recommendations, etc. will be recorded. Best practice processes and examples are to be shared through annual meetings of the country PMUs with UNIDO and the global PEEs. With regard to the key mechanisms for **knowledge exchange as well as learning and collaboration**, it is worth noting that each child project will be assigned a section on the global GCIP web platform, where country-specific project information, press releases, relevant news articles, social media posts, relevant studies and alumni profiles will be made available and maintained by the PMU throughout the project?s lifetime and beyond. This will also allow UNIDO and the country PMU to track alumni progress as well as enable alumni to share experiences and continuously foster their network. The establishment of the National and Global Alumni Networks will also be a key mechanism for knowledge sharing in this project. Knowledge sharing will also be conducted through trainings, workshops, roundtable, printed materials and through the GCIP web platform at global and national levels. The combined set of outreach activities will ensure recognition of and support for GCIP 2 Ukraine at the programmatic level and at national levels beyond the project duration.

225. **Knowledge sharing** will also be conducted through trainings, workshops, roundtable discussions, and printed materials. A set of carefully designed outreach activities will ensure recognition of and support for GCIP 2 Ukraine enterprises at the programmatic and national levels beyond the project duration.

226. The GCIP Global will **institutionalize knowledge sharing and management** across country projects by making the structure of the programme accessible and replicable, and bringing selected entrepreneurs from around the world together, among others to showcase their innovations at the GCIP Global Forum. A key element in knowledge management will be the creation of a national pool of experts (trainers, mentors, EIRs), which will allow for best practices and business knowledge to be shared with participants and stakeholders in a structured manner. The national pool of experts will be created from representatives of universities with business development programs, national banks, investment companies and businesses. All of them will be trained to provide entrepreneurs with the skills needed to participate in the GCIP 2 Ukraine, and ultimately to bring their innovations to the market.

227. With regard to the **proposed knowledge outputs to be produced and shared with stakeholders,** as envisaged under output 1.1.1, GCIP guidebooks and methodologies will be adapted for the GCIP 2 Ukraine. This includes training and certification of cleantech experts, supported through the development of methodologies, tools and training materials. They will guide the operation and management of the GCIP 2 Ukraine Advanced Accelerator and Post-Accelerator, and will for example include proposed schedules; eligibility requirements and selection criteria for the participants; competition rules; training curricula and handbooks for applicants and experts. Moreover, at the programme level, M&E frameworks, and well as impact calculation methodologies will be developed and shared across all child projects, as a blueprint for the development of country-specific documents.

228. A knowledge management, communication, and advocacy strategy framework will be developed by UNIDO with a particular focus on: a) Promoting visibility of GCIP and communicating its impacts achieved at national and global levels; b) Increasing awareness of the catalytic role of cleantech in addressing climate change and environmental issues; c) Showcasing cleantech innovations from the GCIP alumni and enhancing their visibility and credibility. The knowledge management, communication, and advocacy strategy framework will be shared with Greencubator for review and adaptation to the GCIP 2 Ukraine needs, as specified under Output 3.1.2. The GCIP 2 Ukraine knowledge management, communication, and advocacy strategy will specify the exact knowledge products to be delivered along with relevant timelines and milestones. The Table 21 below provides a general overview of deliverables relevant for knowledge management.

229. The Table below provides an overview of proposed knowledge outputs to be produced and shared with stakeholders in the framework of GCIP 2 Ukraine.

Table 22: Overview of deliverables relevant for knowledge management.

Deliverable	Timeline	GCIP 2 Ukraine Budget
a pool of experts (trainers, mentors, EIRs) created (Output 1.1.2)	by the 6 month of project implementation/execution with regular revision/evaluation each year	USD 49,436
the knowledge management, communication, and advocacy strategy framework reviewed and adapted to GCIP 2 Ukraine (Output 3.1.2)	by the 6 month of project implementation/execution with regular updates each year	USD 19,000

policy briefs, impact reports, brochures, webinars and other types of promotional materials distributed through briefing sessions, press releases, social media presence, advertising, etc. ? in line with the GCIP 2 Ukraine knowledge management, communication, and advocacy strategy (Output 3.1.2)	from the 6 month of project implementation/execution and according to the timeline as to be specified in the GCIP 2 Ukraine knowledge management, communication, and advocacy strategy	USD 11,333
GCIP 2 Ukraine web platform created and operationalized including a special section for the GCIP 2 Ukraine alumni network (Output 3.1.2)	by the 6 month of project implementation/execution	USD 13,333
GCIP Global Forum as well as Investor Connect events organized	annually	USD 49,833

230. It is expected that the **knowledge sharing and learning, being key aspects of GCIP 2 Ukraine, will contribute to overall project impact and sustainability in the country.** From training the trainers, through providing support to cleantech innovators, to offering the Advanced Accelerator and Post-Accelerator support, this project?s impact is dependent on successful knowledge sharing and learning that will be provided to its beneficiaries. The knowledge and learning will contribute to the overall impact and sustainability in the following ways:
a) The dissemination of relevant documents, e.g. operational guidelines, guidebooks for impact determination, frameworks, etc., will empower the national PEEs to strengthen their project management capabilities related in particular to the support for cleantech entrepreneurs. This will ensure a competent commercialization of cleantech in the long term and enable the growth of the start-up/SME base in-country.
b) Through the web platform and the adoption of international best practice communications as well as the sustainability and exit strategy, the GCIP community at national level, e.g. investors, enterprises, alumni, and experts will be maintained locally. The continued connectivity in-country and across borders will ensure long-term market and financing opportunities for innovative products/services, resulting in economic and environmental benefits.
c) By providing a knowledge depository for the general public (all relevant knowledge, communication, and advocacy materials will be available on the web platform), the GCIP brand, lessons and successes will encourage further innovation in cleantech and enhance consumer awareness.

231. The GCIP 2 Ukraine also encompasses detailed **plans for strategic communications.** The knowledge management, communication, and advocacy strategy (to be prepared under Output 3.1.2) will include the development of awareness raising and marketing material for entrepreneurs, government officials, and general public. This will include briefing sessions, press releases, social media activity, attendance at events etc. The knowledge management component facilitates South-South and North-South collaboration in policies, methodologies and frameworks promoting innovations in sustainable energy, water and waste management, among others through interaction between the respective UNIDO, global and national PEEs and other international and national counterparts in each of the GCIP partner countries. Annually, the Global Advisory Board comprising of the GEF, UNIDO and government representatives from each GCIP partner country will meet to provide strategic guidance to the programme. It will address potential problems and discuss strategic and policy issues affecting the programme whilst also defining key advocacy messages.

232. All knowledge management activities will be gender responsive, e.g. gender dimensions will be integrated into publications and it will be assured that women, men, and the youth have equal access to and to the same extent benefit from the knowledge created.

9. Monitoring and Evaluation

Describe the budgeted M and E plan

233. The monitoring and evaluation (M&E) will be conducted in accordance with established UNIDO and GEF procedures. The overall objective of the M&E is to ensure successful and quality implementation of the project by: i) tracking and reviewing project activities execution and actual accomplishments; ii) 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 iii) adjusting and updating project strategy and implementation plans to reflect possible changes on the ground, results achieved and corrective actions taken.

234. According to the M&E policy of the GEF and UNIDO, follow-up studies such as Country Portfolio Evaluations and Thematic Evaluations can be initiated and conducted. All project partners and contractors are obliged to (i) make available studies, reports and other documentation related to the project and (ii) facilitate interviews with staff involved in the project activities.

235. The Project Result Framework (Annex A) provides performance and impact indicators for project implementation/execution along with their corresponding means of verification. The actual progress will be reported against the workplan approved by the PSC. In case there are significant deviations between the forecasted workplan and actual implementation, corrective measures will need to be taken.

236. There will be a GCIP M&E framework provided by the GCIP Global, based on which Greencubator will prepare a GCIP 2 Ukraine M&E plan, including timebound milestones and deliverables. Greencubator will also draft progress review reports every six months, the inputs to which will also be provided by the NRFU. Both Greencubator and NRFU will also regularly collaborate on the preparation of the annual PIRs. There will be an external mid-term review of the project conducted half way through project implementation. The ESSPP considerations, as well as gender dimensions and baseline for gender related targets (in line with the Gender Analysis Report, Gender Mainstreaming Action Plan, Stakeholder Engagement Plan, and Environmental and Social Management Plan) will be appropriately captured in the GCIP 2 Ukraine M&E plan, in the progress review reports, as well as in the collection and assessment of relevant data.

237. The GCIP methodology for impact assessment will be developed by the GCIP Global and shared with the GCIP 2 Ukraine for review and application. This will ensure a common understanding of estimation, tracking, and reporting approaches amongst all involved stakeholders, and will allow for data aggregation, comparisons, and extrapolation, not only on the national, but also on the global programme level. The methodology will enable assessment of social, economic, and environmental impacts, and at a minimum, it will account for global environmental benefits (GEBs), energy saved, additional renewable capacity installed, job creation, gender mainstreaming, and investment leveraged. The data will be gender-disaggregated and gender-sensitive, and youth participation will also be recorded.

238. An overview of indicative costs of M&E activities is provided in the Table 23 below.

Table 23: M&E activities.

M&E Activity	Timeframe	GEF Budget (USD)	UNIDO in-kind co-financing (USD)	Greencubator and NRFU in-kind co-financing (USD)	Responsible Parties
M&E plan preparation	first 3 months after implementation start	5000	10,000	10,000	Greencubator

Periodic progress reports	6-monthly	9000	10,000	10,000	Greencubator
External mid-term review	at 2.5 years	20,000	10,000	10,000	External evaluator, submission to UNIDO
Independent terminal evaluation	started six months prior to the expected completion date of the project	20,000	10,000	10,000	External evaluator, submission to UNIDO
	Total	54,000	40,000	40,000	

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)?

239. The project is expected to result in more cleantech start-ups and SMEs being identified and supported, thus acting as a catalyst for entrepreneurship development and cleantech investment in Ukraine. The GCIP 2 Ukraine, as a dedicated national platform for promoting and supporting cleantech innovation, will result in an enhancement of human capital, thereby leading to job creation and poverty reduction as well as to an increased women participation in the entire value chain of technology development. New job opportunities in the country will in turn contribute to stemming the current brain drain. Local development and production of cleantech will very likely result in lower costs benefiting both the technology developers and end-users. It is noteworthy that so far around 84% of start-ups and SMEs, that participated in GCIP globally, have remained in business for minimum of five years. Finally, the increased use of cleantech innovations supported by the GCIP 2 Ukraine will also result in GHG emission reductions.

240. The GCIP 2 Ukraine will highlight the need for a stronger support at the national level for cleantech innovations and start-ups/SMEs. In particular, it will provide added value by bridging the gap between cleantech innovators and investors, thereby paving the way for the creation of new businesses opportunities resulting in a value added for the domestic economy. At the same time, through engaging all relevant stakeholders in the national CIEE, and encouraging their cooperation, as well as through linking different CIEEs across countries, the GCIP 2 Ukraine will provide opportunities for international business scale-up and exchange of knowledge.

241. In summary, GCIP 2 Ukraine yields the following socio-economic benefits as a result of supporting and introducing cleantech into the market, strengthening national institutional capabilities, enhancing the availability of financial instruments, and encouraging inclusivity in the entrepreneurial and job markets. Specifically, these interventions lead to:

Enhancement of human capital

Entrepreneurial, environmental and technological skills development and awareness raising have the effect of a larger number of cleantech products/services being commercialized and entering the market. Better decisions are made by entrepreneurs regarding the sustainability and life cycle approach to the products/services and businesses.

Local product development and production with job creation and income generation
Fostering new local cleantech lowers costs, which benefits both the technology developer and end-user, and encourages consumers to buy more environmentally friendly products/services.
An enriched CIEE
The high-quality institutions build confidence of local and foreign investors as well as the small business community. Among others, this in turn leads to lower transactions costs and results in the increased demand for environmentally friendly technologies both from the investor and consumer side.
Improved energy access for people living in rural areas
At the same time investing in energy access, electrification and renewables are well known to contribute to the decarbonization of the economy. The project is also expected to promote a move away from traditional cooking and heating methods and therefore to reduce health risks.
Promotion of women and youth entrepreneurial development
In general, the promotion of women and youth inclusion tends to enhance the productivity and innovativeness of the economy. What is more, through the gender and youth mainstreaming the cooperation within communities will be enhanced and social cohesion strengthened. This will lead to increased resilience to economic and environmental shocks.

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.

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).

Project Strategy	KPIs/Indicator[1]	Base-line	Target (for the entire project duration)	Means of Verification	Assumptions
Objective To accelerate investments in and uptake of low carbon and clean technologies in Ukraine by supporting the development of innovative green financial and market mechanism for SMEs	USD mln investment leveraged	0	2	Project progress reports Project evaluation reports Project impact reports	Continuous support from the Government of Ukraine and national partner institutions Commitment by CIEE stakeholders Interest by cleantech entrepreneurs and investors
	number of enterprises with economic gains (sales, savings)	0	15 (at least 35% women-led)		
	number of additional jobs created or retained	0	30 (at least 35% women employed)		
	number of enterprises with an increase in exports	0	5-10 (at least 35% women-led)		
	number of SMEs with increased inclusion in value chains	0	10-15 (at least 35% women-led)		
	CO2eq emissions reduced (tons) directly and indirectly	0	at least 126,000 (directly) at least 630,000 (indirectly)		
	MW added generation capacity	0	n/a[2]		
	cumulative improved energy efficiency	0			
	number of new technologies adopted	0	40		
Component 1 Transforming early-stage innovative cleantech solutions into commercial enterprises					
Outcome 1.1 Start-ups and SMEs are supported in advanced and gender-responsive business growth					
Output 1.1.1 The GCIP guidebooks are adapted for the GCIP 2 Ukraine	number of suggestions for improvement of the GCIP guidebooks	0	5-10	Project progress reports Attendance records from consultation meetings Meeting minutes	Continuous support from the Government of Ukraine and national partner institutions Commitment by CIEE stakeholders
	number of GCIP 2 Ukraine gender-responsive guidebooks for Advanced Accelerator and Post-Accelerator	0	2 (1 for Advanced Accelerator, 1 for Post-Accelerator)		

	number of consultation sessions on GCIP 2 Ukraine guidebooks with relevant CIEE stakeholders	0	2	Attendance records from trainings Final product verification assessments and prototypes	Interest by cleantech entrepreneurs and investors Sound experts are interested in becoming GCIP trainers/mentors
	number of stakeholders with whom the GCIP 2 Ukraine guidebooks shared	0	800-1000 (at least 35% women)		
Output 1.1.2 Pool of at least 10 cleantech financing and investment experts is trained to support the GCIP 2 Ukraine (at least 35% women)	number of suggestions for improvement of the GCIP cleantech innovation and entrepreneurship expert training and certification system	0	5-10		
	number of GCIP 2 Ukraine cleantech innovation and entrepreneurship expert training and certification systems	0	2 (1 for trainers, 1 for mentors)		
	number of trainings provided to experts	0	2 (1 for trainers, 1 for mentors)		
	number of participants per one expert training	0	5 (at least 35% women)		
	number of experts evaluated	0	20 (at least 35% women)		
	number of experts accredited	0	10 (at least 35% women)		
	share of cleantech financing and investment experts that completed the ?I know-gender? training and the gender-lens investment online-training modules	0	100%		
Output 1.1.3 Advanced acceleration services are provided to at least 15 SMEs/start-ups (at least 35% women-led)	number of SMEs/start-ups participating in the GCIP 2 Ukraine Advanced Accelerator	0	15 (at least 35% women-led)		
	number of SMEs/start-ups with international market expansion (i.e. technology collaboration, product co-development, joint venture etc.)	0	5 (at least 35% women-led)		

	number of GCIP 2 Ukraine alumni with access to the i3 database	0	30 (at least 35% women-led)		
	number of GCIP 2 Ukraine alumni nominated for support by the GCIP Global Accelerator	0	2 (at least 35% women-led)		
	number of global engagement strategies	0	1		
	number of global engagement workshops	0	2		
	share of women among the workshop participants	0	35%		
Output 1.1.4 At least 40 SMEs/start-ups with innovative cleantech solutions receive post-acceleration and investment facilitation support (at least 35% women-led)	number of cycles of GCIP 2 Ukraine Post-Accelerator		4		
	number of SMEs/start-ups participating in the GCIP 2 Ukraine Post-Accelerator	0	40 (at least 35% women-led)		
	number of GCIP 2 Ukraine Post-Accelerator enterprises provided with needs-based support	0	15 (at least 35% women-led)		
	number of enterprises provided with technology verification, product development and testing facility support	0	15 (at least 35% women-led)		
	number of targeted support activities for products/services that promote gender equality and empowerment of women (GEEW)	0	3-5		
	number of targeted support activities for women entrepreneurs	0	3-5		
	number of Investor Connect events organized	0	5		

	number of financial institutions and funds with which contacts established	0	10		
	number of gender-responsive awareness raising events for investor community	0	3-5		
	number of investors (representatives of commercial banks, investment funds, public/private companies, as well as individuals, etc.) participating in the awareness raising events	0	10-15 (at least 35% women)		
	number of trainings for local financial experts	0	3-5		
	share of women financial experts participating in the trainings	0	35%		
	number of events organized/attended to encourage seed funding providers to participate in the GCIP 2 Ukraine	0	3-5		
	number of trainings on gender-lens investment or gender sensitization for investors	0	3-5		
Outcome 1.2 Investment is mobilized to deploy innovative cleantech solutions across various sectors					
Output 1.2.1 Financing mechanism tailored for investments in innovative cleantech solutions is designed, validated and operationalized (up to 30 SMEs/start-ups receive seed funding and at least 35% women-led)	number of relevant stakeholders engaged in the design process of the financing mechanism	0	10 (at least 35% women)	Project progress reports	Continuous support from the Government of Ukraine and national partner institutions
	number of stakeholders engaged in the design process of the financing mechanism that promote GEEW	0	at least 1		
	number of SMEs/start-ups that receive seed-funding through financing mechanism	0	20-30 (at least 35% women-led)		

	USD mln disbursed per year	0	0,4		
	number of stakeholders making financial contributions to the mechanism	0	6		
	number of mechanisms designed, validated and operationalized	0	1 (including eligibility criteria, thematic focus, etc.)		
Component 2 Cleantech innovation and entrepreneurship ecosystem (CIEE) strengthening and connectivity					
Outcome 2.1 Policy and regulatory framework is strengthened to stimulate investments in innovative cleantech solutions					
Output 2.1.1 Recommendations for enhancement of the policy and regulatory framework and a roadmap for their implementation are developed and validated	number of gender-responsive policy recommendations to close the financing gap for cleantech innovation and entrepreneurship	0	3-5	Meeting attendance records Meeting minutes	Continuous support from the Government of Ukraine and national partner institutions Commitment by CIEE stakeholders
	number of stakeholder engagement workshops	0	1		
	number of participants in the stakeholder engagement workshops	0	20 (at least 35% women)		
	number of gender-responsive roadmaps guiding implementation of the policy recommendations	0	1		
	number of stakeholders engaged in the development of policy recommendations and roadmaps that promote GEEW	0	at least 1		
Outcome 2.2 Institutional capacity building of the cleantech innovation and entrepreneurship ecosystem (CIEE) actors is conducted					
Output 2.2.1 2.2.1 Capacity of national institutions (at least 6) is strengthened to coordinate, streamline, and accelerate	number of capacity building events for selected stakeholders	0	5	Project progress reports Meeting attendance records Meeting	Continuous support from the Government of Ukraine and national partner institutions Commitment by CIEE
	number of participants in the stakeholder capacity building events	0	30-50 (at least 35% women)		

investments into cleantech solutions (at least 35% women participants)	number of stakeholders that completed the ?I know-gender? training and the gender-lens investment online training modules	0	35-45	minutes	stakeholders
	number of relevant institutions strengthened through capacity building activities on managing and promoting innovative cleantech investments	0	6		
Component 3 Knowledge management, project monitoring and evaluation, and programme coordination and coherence					
Outcome 3.1 Efficiency and sustainability of the GCIP 2 Ukraine is ensured through programme coordination and coherence with other GCIP country projects					
Output 3.1.1 The GCIP internal guidelines for project management teams are adapted and implemented by the GCIP 2 Ukraine	number of gender-responsive tools/books (with operational guidelines for the PMU)	0	1	Project progress reports Project evaluation reports Project impact reports	Continuous support from the Government of Ukraine and national partner institutions Commitment by CIEE stakeholders Interest by cleantech entrepreneurs and investors
	number of sustainability and exit strategies	0	1		
Output 3.1.2 Knowledge exchange is facilitated among CIEE actors at national and global levels implemented by the GCIP 2 Ukraine	number of GCIP 2 Ukraine gender-responsive knowledge management, communication, and advocacy strategies	0	1		
	number of policy briefs, impact reports, brochures, webinars, and other types of promotional materials disseminated through briefing sessions, press releases, social media presence and advertising, etc. (in line with the GCIP 2 Ukraine knowledge management, communication, and advocacy strategy)	0	200-300 (at least 40% featuring women entrepreneurs and/or the relevance of GEEW in cleantech)		

	number of memorandums of understanding (MoUs)/cooperation agreements	0	15-20		
	number of targeted outreach and promotion communications to women	0	3-5		
	number of GCIP 2 Ukraine web platforms	0	1		
	number of GCIP 2 Ukraine alumni networks	0	1		
	number of GCIP 2 Ukraine alumni women?s chapter in the networks	0	1		
	number of members in the GCIP 2 Ukraine alumni network	0	100-150 (at least 35% women)		
	number of f national forums/workshops that promote GCIP 2 Ukraine achievements and showcase its participants	0	2		
	% of knowledge products and promotion materials that is gender-responsive	0	100%		
Outcome 3.2 Impacts and progress of the GCIP 2 Ukraine are tracked and reported					
Output 3.2.1 The GCIP methodology for impact assessment is adapted and applied	number of trainings on the GCIP methodology for impact assessment	0	3	Project progress reports Project evaluation reports Project impact reports	Continuous support from the Government of Ukraine and national partner institutions Commitment by CIEE stakeholders Interest by cleantech entrepreneurs and investors
	number of participants in trainings on the GCIP methodology for impact assessment	0	30-90 (at least 35% women)		
	number of GCIP 2 Ukraine impact reports	0	5		
Output 3.2.2 Project activities are tracked and reported, as well	number of GCIP 2 Ukraine monitoring and evaluation (M&E) plans	0	1		

as the external mid-term review and independent terminal evaluation are conducted	number of project progress reports (including monitoring of ESMP, Gender Action Plan, risks & SEP)	0	10		
	number of external mid-term review reports	0	1		
	number of independent external terminal evaluation reports	0	1		

[1] Gender-disaggregated wherever possible.

[2] The targets will be set after the first cycle of the GCIP 2 Ukraine Advanced Accelerator/Post-Accelerator, based on the review of the number and quality of applications featuring renewable energy and energy efficiency technologies.

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).

The *Global Cleantech Innovation Programme (GCIP) to Accelerate the Uptake and Investments in Innovative Cleantech Solutions* (GEF ID: 10408) consists of 11 child projects as follows: Global, Cambodia, Indonesia, Kazakhstan, Moldova, Morocco, Nigeria, South Africa, Turkey, Ukraine, Uruguay. Therefore, UNIDO responses as presented below show how the comments from the GEF Council and the GEF Scientific and Technical Advisory Panel (STAP) were addressed across all the 11 child projects and, where feasible, country specific responses are provided.

Comments		UNIDO Responses
Germany		
1	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:	n/a

2	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. However, 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 child 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 minimize the negative impacts and, in the event that mitigation measures are not sufficiently addressed, then that technology will not be supported by GCIP.
3	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 the ?Climate Expert? as one of the tools available to entrepreneurs and GCIP mentors, judges and trainers across the 10 countries.

4	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 they are cleantech and in line with GEF 7 CCM focal area programming directions[1] (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 GCIP Global child project, an appropriate footnote was added to Output 1.1.1. For the 10 country child projects, the technology selection criteria for the 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 tackles some of these weaknesses by building capacity and supporting policy development that will strengthen the local ecosystem.
5	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.

6	Germany further invites consideration of potential additional synergies with research institutes (e.g. by leveraging the partners 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 a 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 (Climate-KIC and GCIP) as well as on application of common methodologies and tools, and on organization 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 a meeting the GEF 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 projects/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[2] 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. 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.
GEF Scientific and Technical Advisory Panel (*STAP*)		
1	Good discussion is provided on barriers and lesson-drawing from past experiences. Transferability will need to be monitored closely for the new countries added (that were not in earlier GEF 5 and 6 Cleantech programs)	The coordinated approach through the GCIP Global child project allows for the development of common tools and methodologies that are adapted to local contexts. Regular meetings and trainings on methodologies and operationalization of the in-country projects with all countries ensures knowledge transfer from the GCIP Global but also between countries to the benefit of the new countries especially. In particular, Component 3 is primarily focused on programmatic and coherence efforts across the countries to ensure transferability.
2	Adequate presentation of stakeholder engagement is provided throughout the proposal. However, engagement with particular businesses that have experience with Clean-Tech development through organizations such as the World Business Council on Sustainable Development may be appropriate	UNIDO totally agrees with this. In the RCE several private sector stakeholder engagements have been included in the stakeholder engagement plan. This comment was also cascaded across the 10 country child projects where greater engagement with local private sector associations was prioritised.
3	The Global Environmental Benefits from this program are linked to a range of other efforts including the Sustainable Cities program. Hence the project will require coordination between this project and these other efforts. A good review article that can guide on planning and assessing potential benefits of CleanTech is recommended: Thomassen, G. et al. 2019. How to assess the potential of emerging green technologies? Towards a prospective environmental and techno-economic assessment framework. Green Chemistry, 21(18), 4868?4886. https://doi.org/10.1039/C9GC02223F	The project will be systematically coordinated with the Sustainable Cities, E-mobility and Africa Mini-grids Programmes for scaling the pipeline of technologies nurtured by the programme. The principles from the article mentioned will be applied in addition to the impact methodologies developed under the GCIP Global child project.

4	There is considerable emphasis on scaling based on prior experiences. In this regard, the differential experience between the countries will need to be carefully monitored, particularly with regard to the effective implementation of co-financing arrangements.	Each country project is designed and developed with its unique context in mind while still ensuring that coherence exists in the programmatic approach, i.e. through common tools and methodologies. The co-financing is country-specific and will be captured through the regular monitoring and tracking activities, such as the PIRs.
STAP Comments ? January 2020		
1	Good discussion is provided on barriers and lesson-drawing from past experiences. Transferability will need to be monitored closely for the new countries added (that were not in earlier GEF 5 and 6 Cleantech programs)	The coordinated approach through the global child project allows for the development of common tools and methodologies that are adapted to local contexts. Regular meetings and trainings on methodologies and operationalization of the in-country projects with all countries ensures knowledge transfer from the Global coordination team but also between countries to the benefit of the new countries especially. In particular, component 3 is primarily focused on programmatic and coherence efforts across the countries to ensure transferability.
2	Adequate presentation of stakeholders engagement is provided throughout the proposal. However, engagement with particular businesses that have experience with Clean-Tech development through organizations such as the World Business Council on Sustainable Development may be appropriate	UNIDO totally agrees with this. In the RCE several private sector stakeholder engagements have been included in the stakeholder engagement plan. This comment was also cascaded across the 10 country child projects where greater engagement with local private sector associations was prioritised.
3	The Global Environmental Benefits from this program are linked to a range of other efforts including the Sustainable Cities program. Hence the project will require coordination between this project and these other efforts. A good review article that can guide on planning and assessing potential benefits of CleanTech is recommended: Thomassen, G. et al. 2019. How to assess the potential of emerging green technologies? Towards a prospective environmental and techno-economic assessment framework. Green Chemistry, 21(18), 4868?4886. https://doi.org/10.1039/C9GC02223F	The project will be systematically coordinated with the Sustainable Cities, E-mobility and Africa Mini-grids Programmes for scaling the pipeline of technologies nurtured by the programme. The principles from the article mentioned will be applied in addition to the impact methodologies developed under the global child project.
4	There is considerable emphasis on scaling based on prior experiences. In this regard, the differential experience between the countries will need to be carefully monitored, particularly with regard to the effective implementation of co-financing arrangements.	Each country project is designed and developed with its unique context in mind while still ensuring that coherence exists in the programmatic approach i.e. common tools and methodologies. Co-financing is country-specific and will be monitored through the regular monitoring and tracking activities, such as the PIRs.

[1] https://www.thegef.org/council-meeting-documents/gef-7-programming-directions.

[2] https://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF.ME_C.55.inf_.03_GEF-UNIDO_Cleantech_program_evaluation_2018.pdf.

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

The committed funds will be spent in the project start-up phase, i.e. they will be used 1) Predominantly to strengthen the capacity of and provide training to the national project executing entities (PEEs), i.e. Greencubator and National Research Foundation of Ukraine (NRFU) on the project execution arrangements with due consideration of the updated GEF guidelines on the project and programme cycle policy. The training of the national PEEs is directly related to project/country preparation and as such its cost is eligible to be financed from the PPG; 2) As well as to fund additional relevant start-up phase activities, such as for example translation of documents into the local language, etc.

Project Preparation Activities Implemented	*GETF Amount ($)*		
	Budgeted Amount	*Amount Spent To date*	*Amount Committed*
Description of the project implementation/execution modalities and agencies, incl. - Draft TOR for contractual arrangements - HACT assessment of the proposed executing agency	18,000.00	13,706.49	4,293.51
Finalization of the project document, as well as of internal review and approval processes incl.: - Analysis of baseline and ongoing/planned initiatives - Gender Analysis Report - Preparation of environmental and social management plan (ESMP) (for Category B projects) - Acquisition of co-financing letters - Stakeholder engagement activities	32,000.00	31,878.42	121.58
Total	50,000	45,239.17	4,415.09

ANNEX D: Project Map(s) and Coordinates

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

he project will be implemented over the entire territory of Ukraine. While the project is targeted at beneficiaries (entrepreneurs and all relevant CIEE stakeholders, such as universities, policy makers, financiers, and R&D institutions) from all over the country, the main project events will be conducted in the capital city, Kiev.

ANNEX E: Project Budget Table

Please attach a project budget table.

Expenditure Category		Detailed Description (Activity)	Years 1-5									Total (USDeq.)	Responsible Entity (*UNIDO's subcontract to executing entities)
			Outcome 1.1	Outcome 1.2	Outcome 2.1	Outcome 2.2	Outcome 3.1	Outcome 3.2	Sub-Total	M&E	PMC		
Contractual services		1.1.1.a to review the GCIP guidebooks for Advanced Accelerator and Post-Accelerator; to share suggestions for improvement of the GCIP guidebooks with NGIN (feedback	8,000						8,000			8,000	Greencubator
		1.1.1b to adapt the GCIP guidebooks to reflect the context of Ukraine's CIEE, including market conditions, policy environment, development priorities, technology focus, local examples, etc. (i.e. to develop the GCIP 2 Ukraine guidebooks);	1,500						1,500			1,500	Greencubator
		1.1.1.b to organize information and consultation sessions with relevant CIEE stakeholders; to disseminate the GCIP 2 Ukraine guidebooks among relevant CIEE stakeholders	4,025						4,025			4,025	NGIN
		1.1.2.a to get acquainted with the GCIP cleantech innovation and entrepreneurship expert training and certification system; to share suggestions for its improvement with NGIN (feedback loop	3,432						3,432			3,432	Greencubator
		1.1.2.b to adapt the GCIP cleantech innovation and entrepreneurship expert training and certification system to national circumstances, including translation where relevant (i.e. to develop the GCIP 2 Ukraine cleantech innovation and entrepreneurship expert training and certification system), and to operationalize the training and certification system	4,513						4,513			4,513	Greencubator, NGIN
		1.1.2.c to provide training and certification for experts (trainers and mentors) as well as to conduct the evaluation of experts (based on the NGIN assessment framework) and to support their accreditation	3,000						3,000			3,000	Greencubator
		1.1.3.a to provide time-bound and outcome-focused Advanced Accelerator support	16,000						16,000			16,000	Greencubator
		1.1.3c to prepare a global engagement strategy and to provide related workshops to relevant stakeholders	59,000						59,000			59,000	Greencubator
		1.1.4a to conduct 3 cycles of the GCIP 2 Ukraine Post-Accelerator focused on advanced business growth and commercialization support, investment readiness, market readiness, and technology readiness (based on the GCIP 2 Ukraine guidebooks developed under Output 1.1.1)	25,045						25,045			25,045	Greencubator, NGIN
		1.1.4b to provide technology verification, product development and testing facility support to enterprises with high impact potential	12,000						12,000			12,000	Greencubator
		1.1.4c to organize national investment facilitation events (Investor Connect) for the GCIP 2 Ukraine start-ups/SMEs	15,500						15,500			15,500	Greencubator
		1.2.1a to conduct consultations with relevant stakeholders with the aim of conceptualizing and validating the design of the financing mechanism (i.e. an early stage development fund)		3,000					3,000			3,000	Greencubator
		1.2.1b to define operating procedures for the financing mechanism and to establish/institutionalize it		5,000					5,000			5,000	Greencubator
		1.2.1c to disburse funds to selected innovative cleantech enterprises supported by GCIP 2 Ukraine		504,962					504,962			504,962	Greencubator
		2.1.1.a to conduct an analysis of the current policy/regulatory framework with focus on its role in mobilization of finance/facilitation of investment in innovative cleantech start-ups/SMEs, and to develop resulting recommendations for the enhancement of this framework; to develop a roadmap guiding the implementation of recommendations			35,000				35,000			35,000	Greencubator, CTG
		2.1.1b to conduct a stakeholder engagement workshop (with GCIP alumni and relevant national CIEE stakeholders) to discuss and validate the policy recommendations and the			20,000				20,000			20,000	Greencubator
		2.2.1a to provide capacity building activities (on-the-job training and round-table meetings) to the representatives of relevant national institutions with focus on managing and promoting innovative cleantech investments				25,000			25,000			25,000	NRFU
		3.1.1a to review and adopt GCIP internal guidelines for project management teams, and to participate in the annual meetings for national PEE					20,000		20,000			20,000	Greencubator, NRFU
		3.1.1b to develop the GCIP 2 Ukraine sustainability and exit strategy					10,000		10,000			10,000	Greencubator
		3.1.2a to review and adapt the knowledge management, communication, and advocacy strategy framework, i.e. to develop a GCIP 2 Ukraine knowledge management, communication, and advocacy strategy					14,000		14,000			14,000	Greencubator, NRFU
		3.1.2.b to create and maintain a section for the GCIP 2 Ukraine on the global GCIP web platform					9,000		9,000			9,000	Greencubator
		3.1.2c to capture knowledge gathered by the GCIP 2 Ukraine through 200-300 policy briefs, impact reports, brochures, webinars, and other types of promotional materials, and to disseminate this knowledge through briefing sessions, press releases, social media presence and advertising, etc. (in line with the GCIP 2 Ukraine knowledge management, communication, and advocacy strategy)					8,000		8,000			8,000	Greencubator
		3.1.2d to organise national forums/workshops that promote GCIP 2 Ukraine achievements and showcase its participants					30,000		30,000			30,000	Greencubator
		3.2.1a to review the GCIP methodology for impact assessment (including the accompanying tools) and to participate in the training on its use provided by UNIDO						9,000	9,000			9,000	Greencubator, NRFU
		3.2.1b to provide trainings on the GCIP methodology for impact assessment to the GCIP 2 Ukraine Advanced Accelerator and Post-Accelerator participants						12,000	12,000			12,000	Greencubator
		3.2.2a to conduct a mid-term review							-	20,000		20,000	Greencubator
		3.2.2b to conduct the independent terminal evaluation							-	20,000		20,000	UNIDO
		to translate all materials into Ukrainian	5,000						5,000	2,000		7,000	Greencubator
		sub-total	157,015	512,962	55,000	25,000	91,000	21,000	861,977	42,000	-	903,977	Greencubator, NRFU, CTG, NGIN, UNIDO
International consultants		financial consultant(s) (Activities: 1.1.2c, 1.1.3a, 1.2.1a, 1.2.1b)	11,000	16,000					27,000			27,000	Greencubator
		technical/business consultant(s) (Activities: 1.1.2c, 1.1.3a, 1.1.3b, 1.2.1b)	13,500	5,000					18,500			18,500	Greencubator
		sub-total	24,500	21,000	-	-	-	-	45,500	42,000		87,500	Greencubator, NRFU, CTG, NGIN, UNIDO
National staff and consultants	Short-term consultants	technical/business consultant(s) (Activities: 1.1.1b, 1.1.2a, 1.1.2c, 1.1.3a, 1.1.3c, 1.2.1a, 1.2.1b, 2.1.1b, 2.2.1a, 3.1.1b,	26,000	4,000	1,000	25,000	5,000		61,000			61,000	Greencubator, NRFU
		financial consultant(s) (Activities: 1.1.2c, 1.1.3a, 1.2.1a, 1.2.1b, 1.2.1c)	12,000	6,000					18,000			18,000	Greencubator
		environmental and social consultant(s) (Activities: 1.1.1b, 1.1.2b, 1.1.3a, 1.2.1b, 3.1.1b, 3.2.1a)	10,000	2,000			2,000	2,000	16,000			16,000	Greencubator
		gender consultant (Activities: 1.1.1b, 1.1.2b, 1.1.3a, 1.2.1b, 3.1.1b)	18,000	3,000			2,000		23,000			23,000	Greencubator
		policy expert(s) (Activity 2.1.1b, 2.2.1a)			3,000	25,000			28,000			28,000	Greencubator, NRFU
	PMU staff	Project Coordinator	18,900	8,377			11,000	9,000	47,277	8,000	53,500	108,777	Greencubator
		Project Assistant	15,680	5,200			9,000	4,002	33,882	4,000	38,500	76,382	Greencubator
		sub-total	282,095	562,539	59,000	75,000	120,000	36,002	1,134,636	54,000	92,000	331,159	Greencubator, NRFU, CTG, NGIN, UNIDO
Travel to meetings, project sites, workshops, etc.													
Office (supplies, rent, equipment, etc.)											26,864	26,864	Greencubator

YEARS 1-5 TOTAL	Outcome 1.1	Outcome 1.2	Outcome 2.1	Outcome 2.2	Outcome 3.1	Outcome 3.2	Sub-total	M&E	PMC	TOTAL
Outcomes	282,095	562,539	59,000	75,000	120,000	36,002				
Components		844,634		134,000		156,002	1,134,636	54,000	118,864	1,307,500

Entity	YEARS 1 - 5
Greencubator	1,143,917
NRFU	100,000
NGIN	13,583
CTG	30,000
UNIDO	20,000
TOTAL	1,307,500

ANNEX F: (For NGI only) Termsheet

Instructions. Please submit an finalized termsheet in this section. The NGI Program Call for Proposals provided a template in Annex A of the Call for Proposals that can be used by the Agency. Agencies can use their own termsheets but must add sections on Currency Risk, Co-financing Ratio and Financial Additionality as defined in the template provided in Annex A of the Call for proposals. Termsheets submitted at CEO endorsement stage should include final terms and conditions of the financing.

not applicable

ANNEX G: (For NGI only) Reflows

Instructions. Please submit a reflows table as provided in Annex B of the NGI Program Call for Proposals and the Trustee excel sheet for reflows (as provided by the Secretariat or the Trustee) in the Document Section of the CEO endorsement. The Agencys is required to quantify any expected financial return/gains/interests earned on non-grant instruments that will be transferred to the GEF Trust Fund as noted in the Guidelines on the Project and Program Cycle Policy. Partner Agencies will be required to comply with the reflows procedures established in their respective Financial Procedures Agreement with the GEF Trustee. Agencies are welcomed to provide assumptions that explain expected financial reflow schedules.

not applicable

ANNEX H: (For NGI only) Agency Capacity to generate reflows

Instructions. The GEF Agency submitting the CEO endorsement request is required to respond to any questions raised as part of the PIF review process that required clarifications on the Agency Capacity to manage reflows. This Annex seeks to demonstrate Agencies? capacity and eligibility to administer NGI resources as established in the Guidelines on the Project and Program Cycle Policy, GEF/C.52/Inf.06/Rev.01, June 9, 2017 (Annex 5).

not applicable