



CEO Endorsement (CEO) entry - Medium sized Project Child ? GEF - 7

**PROMOTING THE TRANSITION TO A CIRCULAR ECONOMY IN URUGUAY THROUGH CLEANTECH INNOVATIONS**

**Part I: Project Information**

**Name of Parent Program**

[Global Cleantech Innovation Programme \(GCIP\) to accelerate the uptake and investments in innovative cleantech solutions](#)

**GEF ID**

10453

**Project Type**

MSP

**Type of Trust Fund**

GET

**CBIT/NGI**

CBIT No

NGI No

**Project Title**

Promoting the transition to a circular economy in Uruguay through cleantech innovations

**Countries**

Uruguay

**Agency(ies)**

UNIDO

**Other Executing Partner(s)**

Laboratorio Tecnol?gico del Uruguay (LATU)

**Executing Partner Type**

Government

**GEF Focal Area**

Climate Change

**Taxonomy**

Focal Areas, Sustainable Development Goals, Climate Change, United Nations Framework Convention on Climate Change, Nationally Determined Contribution, Climate Change Mitigation, Financing, Energy Efficiency, Sustainable Urban Systems and Transport, Technology Transfer, Renewable Energy, Influencing models, Demonstrate innovative approaches, Strengthen institutional capacity and decision-making, Convene multi-stakeholder alliances, Transform policy and regulatory environments, Stakeholders, Civil Society, Academia, Non-Governmental Organization, Community Based Organization, Private Sector, Financial intermediaries and market facilitators, Individuals/Entrepreneurs, Large corporations, SMEs, Participation, Type of Engagement, Information Dissemination, Partnership, Consultation, Beneficiaries, Local Communities, Communications, Behavior change, Education, Strategic Communications, Awareness Raising, Gender Equality, Gender Mainstreaming, Gender-sensitive indicators, Sex-disaggregated indicators, Women groups, Gender results areas, Access to benefits and services, Knowledge Generation and Exchange, Access and control over natural resources, Participation and leadership, Capacity Development, Capacity, Knowledge and Research, Learning, Theory of change, Indicators to measure change, Knowledge Exchange, Peer-to-Peer, Innovation, Knowledge Generation, Professional Development, Training, Workshop, Targeted Research

**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(\$)**

117,284.00

**A. FOCAL/NON-FOCAL AREA ELEMENTS**

<b>Objectives/Programs</b>	<b>Focal Area Outcomes</b>	<b>Trust Fund</b>	<b>GEF Amount(\$)</b>	<b>Co-Fin Amount(\$)</b>
CCM-1-4	Promote innovation and technology transfer for sustainable energy breakthroughs for cleantech innovation	GET	1,303,162.00	9,827,100.00
<b>Total Project Cost(\$)</b>			<b>1,303,162.00</b>	<b>9,827,100.00</b>

## B. Project description summary

### Project Objective

To accelerate the uptake of innovative, affordable, and scalable cleantech solutions for climate action and sustainable and inclusive green value chains, in selected sectors, through a Circular Economy perspective

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
1: Policy and regulatory framework strengthened	Technical Assistance	Outcome 1.1 Policy framework to promote cleantech solutions for low GHG emissions and circular economy in priority sectors (food systems, energy) strengthened	1.1.1 Assessment framework (1) including indicators developed and baseline values quantified to evaluate performance of circular and low GHG emission technologies	GET	30,000.00	100,000.00
1: Policy and regulatory framework strengthened	Technical Assistance	Outcome 1.1 Policy framework to promote cleantech solutions for low GHG emissions and circular economy in priority sectors (food systems, energy) strengthened	1.1.2 Three evidence-based policy instruments developed and compiled as a policy recommendation report (3 instruments developed)	GET	45,000.00	144,000.00

<b>Project Component</b>	<b>Financing Type</b>	<b>Expected Outcomes</b>	<b>Expected Outputs</b>	<b>Trust Fund</b>	<b>GEF Project Financing(\$)</b>	<b>Confirmed Co-Financing(\$)</b>
1: Policy and regulatory framework strengthened	Technical Assistance	Outcome 1.1 Policy framework to promote cleantech solutions for low GHG emissions and circular economy in priority sectors (food systems, energy) strengthened	1.1.3 Draft policy (1) for financial and non-financial incentives developed including guidelines (1) for establishment of a non-grant instrument	GET	17,000.00	150,000.00
1: Policy and regulatory framework strengthened	Technical Assistance	Outcome 1.1 Policy framework to promote cleantech solutions for low GHG emissions and circular economy in priority sectors (food systems, energy) strengthened	1.1.4 Financial mechanism (1) designed to promote investments in circular economy and low GHG emission technologies	GET	30,000.00	200,000.00

<b>Project Component</b>	<b>Financing Type</b>	<b>Expected Outcomes</b>	<b>Expected Outputs</b>	<b>Trust Fund</b>	<b>GEF Project Financing(\$)</b>	<b>Confirmed Co-Financing(\$)</b>
2: Circular Economy through Cleantech innovation and commercialisation solutions are identified and implemented in Uruguay	Technical Assistance	Outcome 2.1: Business opportunities mainstreaming low GHG emission solutions identified and facilitated in priority sectors	2.1.1 Early-stage circular economy and cleantech innovations identified and accelerated into enterprises (at least 60) through GCIP or related processes, with at least 3-5 solutions receiving intensive support	GET	118,000.00	250,000.00
2: Circular Economy through Cleantech innovation and commercialisation solutions are identified and implemented in Uruguay	Technical Assistance	Outcome 2.1: Business opportunities mainstreaming low GHG emission solutions identified and facilitated in priority sectors	2.1.2 Capacity needs assessment to promote cleantech solutions conducted (1), and formal education programme on circular economy developed (1)	GET	30,000.00	300,000.00

<b>Project Component</b>	<b>Financing Type</b>	<b>Expected Outcomes</b>	<b>Expected Outputs</b>	<b>Trust Fund</b>	<b>GEF Project Financing(\$)</b>	<b>Confirmed Co-Financing(\$)</b>
2: Circular Economy through Cleantech innovation and commercialisation solutions are identified and implemented in Uruguay	Investment	Outcome 2.2 Innovative cleantech solutions for circular economy with low GHG emissions in priority sectors demonstrated in full-size scale	2.2.1. Feasibility studies (at least 5) conducted and financing mobilized resulting in at least two fully functional food system cleantech solutions demonstrated	GET	412,000.00	1,200,000.00
2: Circular Economy through Cleantech innovation and commercialisation solutions are identified and implemented in Uruguay	Investment	Outcome 2.2 Innovative cleantech solutions for circular economy with low GHG emissions in priority sectors demonstrated in full-size scale	2.2.2 Feasibility studies (at least 3) conducted and financing mobilized resulting in at least two fully functional Power-to-X plants commissioned	GET	400,000.00	5,500,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
3: Project monitoring, impact capturing and evaluation	Technical Assistance	Outcome 3.1: Skills and promotion of circular economy delivered at a national level, and efficiency and sustainability of the project ensured through coordination and coherence with other circular economy initiatives and GCIP country projects	3.1.1 The GCIP internal guidelines (1) for project management teams are analyzed and adapted by the project	GET	2,300.00	100,000.00



Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
3: Project monitoring, impact capturing and evaluation	Technical Assistance	Outcome 3.1: Skills and promotion of circular economy delivered at a national level, and efficiency and sustainability of the project ensured through coordination and coherence with other circular economy initiatives and GCIP country projects	3.1.2 Programme-level knowledge management, communication and advocacy strategy is adapted and implemented by the project	GET	6,000.00	630,000.00

<b>Project Component</b>	<b>Financing Type</b>	<b>Expected Outcomes</b>	<b>Expected Outputs</b>	<b>Trust Fund</b>	<b>GEF Project Financing(\$)</b>	<b>Confirmed Co-Financing(\$)</b>
3: Project monitoring, impact capturing and evaluation	Technical Assistance	Outcome 3.1: Skills and promotion of circular economy delivered at a national level, and efficiency and sustainability of the project ensured through coordination and coherence with other circular economy initiatives and GCIP country projects	3.1.3. Awareness raising campaign conducted for circular economy concepts and tools, including the promotion of new and smart cleantech solutions and business model opportunities	GET	32,393.00	300,000.00
3: Project monitoring, impact capturing and evaluation	Technical Assistance	Outcome 3.2. Project management, monitoring and evaluation	3.2.1. Project activities monitored and reported based on the M&E framework conducted, including a mid-term review	GET	32,000.00	153,100.00
3: Project monitoring, impact capturing and evaluation	Technical Assistance	Outcome 3.2. Project management, monitoring and evaluation	Output 3.2.2 Independent terminal evaluation conducted	GET	30,000.00	60,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
				<b>Sub Total (\$)</b>	<b>1,184,693.00</b>	<b>9,087,100.00</b>

**Project Management Cost (PMC)**

	GET		118,469.00		740,000.00	
		<b>Sub Total(\$)</b>	<b>118,469.00</b>		<b>740,000.00</b>	
		<b>Total Project Cost(\$)</b>	<b>1,303,162.00</b>		<b>9,827,100.00</b>	

**C. Sources of Co-financing for the Project by name and by type**

<b>Sources of Co-financing</b>	<b>Name of Co-financier</b>	<b>Type of Co-financing</b>	<b>Investment Mobilized</b>	<b>Amount(\$)</b>
GEF Agency	UNIDO	Grant	Investment mobilized	53,100.00
GEF Agency	UNIDO	In-kind	Recurrent expenditures	40,000.00
Recipient Country Government	Ministry of Industry, Energy and Mines (MIEM)	In-kind	Recurrent expenditures	72,000.00
Recipient Country Government	Ministry of Industry, Energy and Mines (MIEM)	Grant	Recurrent expenditures	100,000.00
Recipient Country Government	Ministry of Industry, Energy and Mines (MIEM)	Public Investment	Investment mobilized	678,000.00
Recipient Country Government	Ministry of Livestock, Agriculture and Fisheries (MGAP)	In-kind	Recurrent expenditures	50,000.00
Recipient Country Government	Ministry of Livestock, Agriculture and Fisheries (MGAP)	Public Investment	Investment mobilized	3,000,000.00
Recipient Country Government	National Administration of Power Plants and Electrical Transmission of Uruguay (UTE)	Public Investment	Investment mobilized	5,544,000.00
Recipient Country Government	National Development Agency (ANDE)	Public Investment	Investment mobilized	240,000.00
Recipient Country Government	Ministries of Environment (MoE)	In-kind	Recurrent expenditures	50,000.00
<b>Total Co-Financing(\$)</b>				<b>9,827,100.00</b>

**Describe how any "Investment Mobilized" was identified**

MIEM manages an Industrial Fund - a public policy instrument- in order to contribute to the development, diversification and innovation of Uruguay's industrial structure. In this sense, the ministry recognizes projects that focus on Circular Economy. Through the Industrial Fund, MIEM could mobilize public investment to promote technological solutions to achieve Circular Economy goals. The investment by the national electricity company, UTE, is aimed at the acquisition and installation of smart electricity meters in the industrial sector, in order to enable the incorporation of technological solutions in this sector. In particular to support activities and investments as part of the "Feasibility studies carried out and financing mobilized that resulted in at least two fully functional Power-to-X plants started up. The investment of the Ministry of Livestock, Agriculture and Fisheries, will be oriented to circular economy programs that promote the circularity of nutrients in the dairy sector. The planned investment by ANDE relates to testing of new circular business models and supporting of circular initiatives in companies. 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-risks 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 development, growth and scale-up of the start-ups. 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 umbrella project of GCIP, project 10461, a strategic partnership will be established between GCIP and the Private Financing Advisory Network - PFAN ([www.pfan.net](http://www.pfan.net)), 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 PFAN network of expertise and investors.

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

<b>Agency</b>	<b>Trust Fund</b>	<b>Country</b>	<b>Focal Area</b>	<b>Programming of Funds</b>	<b>Amount(\$)</b>	<b>Fee(\$)</b>
UNIDO	GET	Uruguay	Climate Change	CC STAR Allocation	1,303,162	117,284
<b>Total Grant Resources(\$)</b>					<b>1,303,162.00</b>	<b>117,284.00</b>

**E. Non Grant Instrument**

NON-GRANT INSTRUMENT at CEO Endorsement

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Includes Non grant instruments? **No**

Includes reflow to GEF? **No**

**F. Project Preparation Grant (PPG)**

PPG Required **false**

**PPG Amount (\$)**

50,000

**PPG Agency Fee (\$)**

4,500

<b>Agency</b>	<b>Trust Fund</b>	<b>Country</b>	<b>Focal Area</b>	<b>Programmin g of Funds</b>	<b>Amount(\$)</b>	<b>Fee(\$)</b>
UNIDO	GET	Uruguay	Climate Change	CC STAR Allocation	50,000	4,500
<b>Total Project Costs(\$)</b>					<b>50,000.00</b>	<b>4,500.00</b>



## 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 <sub>2</sub> e (direct)	0	86000	0	0
Expected metric tons of CO <sub>2</sub> e (indirect)	0	430000	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 <sub>2</sub> e (direct)				
Expected metric tons of CO <sub>2</sub> 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 <sub>2</sub> e (direct)		86,000		
Expected metric tons of CO <sub>2</sub> e (indirect)		430,000		
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)		914,400,000		

### 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)
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**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)
<b>Female</b>		152		
<b>Male</b>		228		
<b>Total</b>	0	380	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

#### A. Changes in alignment of the project design with the child project concept

1. From a substantive point of view, there are no changes between the Child Project Concept and the project design proposed in this Request for CEO Approval). The project is also fully consistent with what is presented in the GCIP Programme Framework Document (PFD, GEF ID 10408) and related child project concepts, which were approved by the GEF CEO in December 2019. Minor changes to the project terminology and activity descriptions have been made following stakeholder consultations, and in line with an updated understanding of the GCIP Framework during the PPG phase. Editorial changes have been made to the terminologies and wording used in the project description summary (TABLE B), and accordingly in the project description, to better reflect the focus of the project in circular economy and cleantech solutions in the two prioritized sectors: food system and power to X. Additionally, changes were made in the ordering of the components and outcomes, to better align this project with the GCIP Framework structure. An overview of the changes is depicted in Table 1 below.

2. As a child project under the GCIP Framework, this project's duration is set to 60 months. In discussion with the national counterparts, it was agreed that the scope of the project activities and the budget available will be best suited for execution over 42 months. Therefore the project work plan including the budget is revised to reflect the commitment of the government and national counterparts to achieve the project's objectives over 42 months. For coherence at the programmatic level, the expected start and end dates of the project remain at 60 months.

3. In accordance with the changes to the project components, budget allocation was moderately adjusted. Amount of co-financing decreased compared to the estimate made at child project concept stage, and the attribution of co-financing was revised based on confirmed co-finance during the PPG phase.

TABLE 1  
COMPARISON OF THE PROJECT DESCRIPTION SUMMARY (TABLE B)  
BETWEEN THE CHILD PROJECT CONCEPT AND THE REQUEST FOR CEO APPROVAL

Original child project concept	Request for CEO Approval	Description of change
<b>Component 1</b>		
Output 1.1.1. Indicators to evaluate performance of circular and low GHG emission technologies are defined	Output 1.1.1. Assessment framework (1) including indicators developed and baseline values quantified to evaluate the performance of circular and low GHG emission technologies	Output 1.1.1 adds additional activity to emphasize creating the specific information for Uruguay

Output 1.1.2 Evidence based policy instruments developed on: (i) regulation to promote circular economy schemes (including business models) and low GHG emission technology implementation in prioritized sectors; (ii) promotion of social and environmental responsibility within the target sectors; and (iii) the development of market opportunities	Output 1.1.2 Three evidence-based policy instruments developed and compiled as a policy recommendation report (3 instruments developed)	1.1.2 Adds specific (minimum) target for the output. Output remains the same, but more emphasis is now placed on the expected results.
Output 1.1.3 Policies for financial and no financial incentives developed and guidelines for non-grant instruments established	Output 1.1.3 Draft policy (1) for financial and non-financial incentives developed including guidelines (1) for establishment of a non-grant instrument	1.1.3 Adds specific (minimum) target for the output. Output remains the same, but more emphasis is now placed on the expected results
Output 1.1.4 Financial mechanisms designed to promote investments in circular economy and low GHG emission technologies	Output 1.1.4 Financial mechanism (1) designed to promote investments in circular economy and low GHG emission technologies	1.1.4 Adds specific (minimum) target for the output. Output remains the same, but more emphasis is now placed on the expected results
<b>Component 2</b>		
Component 2: Cleantech innovation and commercialization capacities strengthened  Component 3: Financing and demonstration of cleantech solutions for circular economy	Component 2: Circular economy solutions are identified and implemented in Uruguay through acceleration and commercialization of cleantech innovations	Component 2 Now combines component 2 and 3. Non-substantial change in the outputs and activities, but now the structure of the project is better aligned with the GCIP.
Outcome 2.1 Investment and scale-up of innovative cleantech solutions and projects facilitated in priority sectors	Outcome 2.1: Business opportunities mainstreaming low GHG emissions identified and facilitated in priority sectors	The language has been modified to include a broader approach to identify opportunities beyond investment in technology
Output 2.1.1 Innovative technology solutions for circular economy identified through GCIP Accelerator (priority sectors: food systems, agro-industrial waste, renewable energy, industry 4.0)	Output 2.1.1 Early-stage circular economy and cleantech innovations identified and accelerated into enterprises (at least 60) through GCIP or related processes, with at least 3-5 solutions receiving intensive support	The language has been modified to include a broader approach to identify opportunities beyond investment in technology. Adds specific (minimum) target for the output

<p>Output 2.1.2 Capacity needs assessment conducted for systematic promotion and acceleration of cleantech commercialization, including training and certification of cleantech experts</p>	<p>Output 2.1.2 Capacity needs assessment to promote cleantech solutions conducted (1), and formal education program on circular economy developed (1)</p>	<p>New Output 2.1.2 transformed into a framework, that includes as specific activities all the outputs and activities related (output 2.1.2 in child project as activity), in order to reflect internal coherence of the project. Emphasis is placed on generating capacities through formal education; activity added following stakeholder consultation. The substance of outputs under Outcome 2.1 remains closely aligned with the child project concept.</p>
<p>Output 2.1.3 Business plans for innovative cleantech solutions for circular economy developed/refined</p>	<p>Outcome 2.1: Business opportunities mainstreaming low GHG emission solutions identified and facilitated in priority sectors</p>	<p>Outcome 2.1 encompass the output originally foreseen in Output 2.1.3, with additional emphasis on generating capacities through formal education. Thus, the development of business plans is now integrated within the entirety of Outcome 2.1. The change reflects inputs from the stakeholder consultations. The substance of outputs under Outcome 2.1 remains aligned with the child project concept.</p>
<p>Outcome 3.1 Innovative cleantech solutions for circular economy demonstrated in full-size scale in food system sector</p>	<p>Outcome 2.2 Innovative cleantech solutions for circular economy with</p>	<p>Outcome 2.2 joins the demonstration full size projects outcomes</p>

Outcome 3.2 Innovative cleantech solutions for circular economy demonstrated in the renewable energy sector in full-size scale	low GHG emissions in priority sectors demonstrated in full-size scale	and activities of each prioritized sector (food system and energy) in one outcome, to improve the internal coherence and simplicity of the project. Outcome 2.2 joins the demonstration full size projects outcomes and activities of each prioritized sector (food system and energy) in one outcome, to improve the internal coherence and simplicity of the project.
Output 3.1.1 Technical and financial feasibility studies conducted and business cases validated for piloting at least five cleantech solutions	Output 2.2.1. Feasibility studies (at least 5) conducted and financing mobilized resulting in at least two fully functional food system cleantech solutions demonstrated	Output 2.2.1 joins both outputs: feasibility studies and financing of demonstrative projects to improve the internal coherence and simplicity of the project.
Output 3.1.2 Financing mobilized and at least two fully functional cleantech solutions implemented /commissioned		
3.2.1 Technical and financial feasibility studies conducted and business cases validated for piloting at least three cleantech solutions	Output 2.2.2 Feasibility studies (at least 3) conducted and financing mobilized resulting in at least two fully functional Power-to-X plants commissioned	See Above. Also, provides more detail about the specific type of energy project that will be supported (Power-to-X).
3.2.2 Financing mobilized and at least two fully functional Power-to-X plants commissioned		
<b>Component 3</b>		
Component 4: Project monitoring, impact capturing and evaluation	Component 3: Project monitoring, impact capturing and evaluation	Numeration of component changed, due to merge of components 2 and 3 in the Request for CEO Approval
4.1 Project results and impacts captured and communicated	Outcome 3.1: Skills and promotion of circular economy delivered at a national level, and efficiency and sustainability of the project is ensured through GCIP programme coordination and coherence with other GCIP country projects	The substance of this outcome remains closely aligned to the child project concept, but it has been further elaborated to include more detail on how coherence with other GCIP country projects will be achieved.

<p>4.1.1 Awareness raising campaign conducted for circular economy concepts and tools, including the promotion of new and smart cleantech solutions and business models opportunities.</p> <p>4.1.2 A web-based knowledge management platform created for the exchange of know-how and expertise on cleantech solutions for circular economy</p>	<p>Outcome 3.2. Project management, monitoring and evaluation</p> <p>Output 3.2.1. Project activities monitored and reported based on the M&amp;E framework, including a mid-term review</p> <p>Output 3.2.2 Independent terminal evaluation is conducted</p>	<p>The substance of outputs under 3.1 (4.1 in child project concept) remains closely aligned with the child project concept, but more emphasis is now placed on creating linkages with the Global GCIP network:</p> <p>-Output 3.1.1 and 3.1.2 adds additional activities on guidelines, knowledge management and learning, to add coherence and alignment with other GCIP projects.</p> <p>-Output 3.1.3 in the Request for CEO Approval now joins output 4.1.1. and 4.1.2. The substance remains the same, but an additional activity was added: Activity 3.1.1.3. Global Forums of the GCIP</p>
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TABLE 2  
COMPARISON OF THE BUDGET ALLOCATION (USD) TO PROJECT COMPONENTS  
BETWEEN THE CHILD PROJECT CONCEPT AND THE REQUEST FOR CEO APPROVAL

<b>Original child project concept</b>	<b>Request for CEO Approval</b>	<b>Description of change</b>
<p><b>Component 1</b> GEF project financing: \$75,288 Co-financing: \$1,000,000</p>	<p><b>Component 1</b> GEF project financing: \$122,000 Co-financing: \$594,000</p>	<p>GEF allocation budget increased slightly to enable more funds to be allocated support the policy framework strengthening</p>
<p><b>Component 2</b> GEF project financing: \$1,000,000 Co-financing: \$13,150,000</p>	<p><b>Component 2</b> GEF project financing: \$960,000 Co-financing: \$7,250,000</p>	<p>GEF allocation budget has decreased slightly due to rearranged and adjustment of allocation in favor to financing cleantech projects: decrease in budget allocated for business opportunities facilitated (- \$90.000) and increase in the budget allocated to finance full- size projects (+\$ 50.000)</p>

<b>Component 3</b> GEF project financing: \$109,405 Co-financing: \$1,000,000	<b>Component 3</b> GEF project financing: \$100,693 Co-financing: \$1,243,100	Overall GEF allocation budget slightly decreased, due to adjustments in budget allocated to awareness raising campaign and monitoring
<b>PMC</b> GEF project financing: \$118,469 Co-financing: \$100,000	<b>PMC</b> GEF project financing: \$118,469 Co-financing: \$740,000	There is no change in the GEF project financing. PMC co-financing has increased to cover additional management costs.
<b>Total</b> GEF project financing: \$1,303,162 Total co-financing: \$15,250,000	<b>Total</b> GEF project financing: \$ 1,303,162 Total co-financing: \$ 9,827,100	There is no change in total GEF allocation. Co-financing has decreased due to confirmed co-finance committed through letters of support.

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

**National context**

4. In 2016, Uruguay approved the **National Climate Change Policy (PNCC)**, as an instrument which provides a long-term strategic framework to guide Uruguay's climate change mitigation strategy. This policy seeks to meet the national commitments to the Paris Agreement through its National Determined Contributions (NDCs). Additionally, Uruguay has joined the **2030 Agenda for Sustainable Development** for the General Assembly of the United Nations through the resolution of September 25, 2015, which proposes the 17 Sustainable Development Goals. The country periodically reports indicators, reflected transparently at: [www.ods.gub.uy](http://www.ods.gub.uy).

5. In the NDC context, Uruguay seeks to make greenhouse gas reductions of 29% in CO<sub>2</sub>, 59% in CH<sub>4</sub> and 52% in N<sub>2</sub>O emission intensity per GDP unit (base year 1990) by 2025, according to GWP 100 AR2. The sectors of implementation of these objectives include: Energy Sector (including transport), Agricultural Sector (including livestock), Waste Management Sector and Industrial Processes. Other objectives, and also conditionals on additional specific means of implementation, are to avoid CO<sub>2</sub> emissions from Soil Organic Carbon (SOC) in 30% of the grasslands and in 100% of the peatlands area.

6. Aligned with the PNCC, the **National Environmental Plan for Sustainable Development** was approved on December 20, 2018, and with a 2030 horizon, by the National Environmental Cabinet (composed of 6 ministries and the President of the Republic). It was created in a participatory manner throughout the territory and was proposed as a strategic and adaptive instrument, which identifies the



country's main environmental challenges in order to guide policies and actions in the coming years. The plan proposes to work in three dimensions:

- a) A healthy environment for a good quality of life: with a focus on environmental systems and the conservation of ecosystems
- b) Sustainable economic and productive activity: with a focus on productive processes and their link in the use and management of natural resources and their environmental impacts
- c) Environmental management and citizenship, with a focus on the generation of awareness and appreciation of the environment and nature, deepening educational and cultural transformations

7. One particular emphasis within the plan's framework, inspired by the 2030 Sustainable Development Agenda, is the promotion of an inclusive and sustainable economy for climate change mitigation. This principle will be achieved by promoting areas that align with the circular economy concept such as, clean energies, as well as preserving ecosystems and biodiversity, promoting sustainable use of land and resources, including the adoption of lifestyles in harmony with nature; and promoting sustainable production and consumption patterns.

8. This project identifies two strategic sectors, the food system and energy, considering its relevance to the country's economy and the existing challenges and barriers presented below.

#### **Food production system: Agricultural and agro-industrial sector**

9. Agroindustry, such as food and beverage (mainly beef processing and dairy products), together with cellulose, pharmaceuticals, and plastics, are the main industrial sectors of the country. All of these sectors also exhibit potential to further increase production. Currently, Uruguay produces food for 28 million people, and is expected to reach a productive capacity to feed 50 million people in the next few years<sup>[i]</sup>.

10. Agricultural production employs 148.190 people nationally, while food processing employs 47.138<sup>[ii]</sup>. Although women represent 52% of total population, the proportion of female workers in agriculture and livestock is only 37 %. On average, women earn an average income of 72% of male workers in comparable jobs, according to the last agricultural census (2011).

11. In Uruguay, several laws regulate the use of soil and water. The regulatory framework identifies the use and conservation of water and soil for agricultural purposes<sup>[iii]</sup> as issues of national interest<sup>[iv]</sup>. Dairy products showed significant dynamism in recent years, in a context of increased productivity, thanks to the continuous incorporation of technical advances in pasture management, cattle supplementation, machinery and equipment, health and genetic improvement.

12. In 2017, the total net GHG emissions for Uruguay, measured using the GWP (AR2) at 100 years, were 19,709 Gg CO<sub>2</sub> eq, which represented 0.04% of global anthropogenic GHG emissions. Uruguay's emissions levels are strongly related to food production: using the metric GWP100 AR2, 75% of the total emissions in 2017<sup>[v]</sup> corresponded to the agricultural sector. In this sense, the reduction of emissions from food and beef production are priorities. Specifically, the NDC targets the reduction of methane emissions in at least 75 % of dairy farms, through the utilization of technologies that eliminate

discharges to water flows, the applications of good effluent treatments and/or by the adoption of nutrient recuperation systems.

13. Considering that food production is and will be a main priority for the country, the contribution of Uruguay to ultimate objectives of the Convention and the Paris Agreement is centered on the country's ability for economic and social development while simultaneously reducing the intensity of GHG emissions, contributing to decarbonize the economy, reducing vulnerabilities, and increasing resilience without compromising food production. A relevant GHG emissions environment is associated with liquid and solid waste management, and from nutrient (nitrogen, phosphorus) discharge into water bodies. There is concern that environmental challenges increase as food production intensifies. In this sense, it is fundamental to study new ways to optimize resources and add value to by-products that currently are not valued and therefore, are ending up in landfill sites or treated in systems that result in higher GHG emissions.

14. For food systems, the proposed project will consider nationally prioritised activities such as the production of value-added products from food systems' waste (green chemistry), the adoption of nutrient circularity, and the redesign of processes and products that aim to reduce wastes generation.

### **Energy sector**

15. Uruguay has no proven reserves of fossil fuels. Fossil fuel demand is met by imports, representing one of the main vulnerabilities faced by the country. Until 2000, power generation came from fossil-fuel powered thermal power stations, as well as from 4 hydropower plants. The National Energy Policy, adopted in 2005, promoted an important focus with regards to renewable energy. The incorporation of installed capacity of wind, biomass and photovoltaic solar energy along with hydropower, has met almost all the national electrical power generation demand, leading to a reduction of the external dependence on fossil fuels, as well as generating a significant reduction in the GHG emissions of the sector. As a result, in the year 2019, 63 % of total energy supply and 98% of electricity generation came from renewable energy sources. This is expected to generate surpluses of approximately 2,000 GWh/year<sup>[vi]</sup> during the next 10 years. Therefore, there is an enormous opportunity to continue decarbonizing productive processes by using Uruguay's renewable energy surplus.

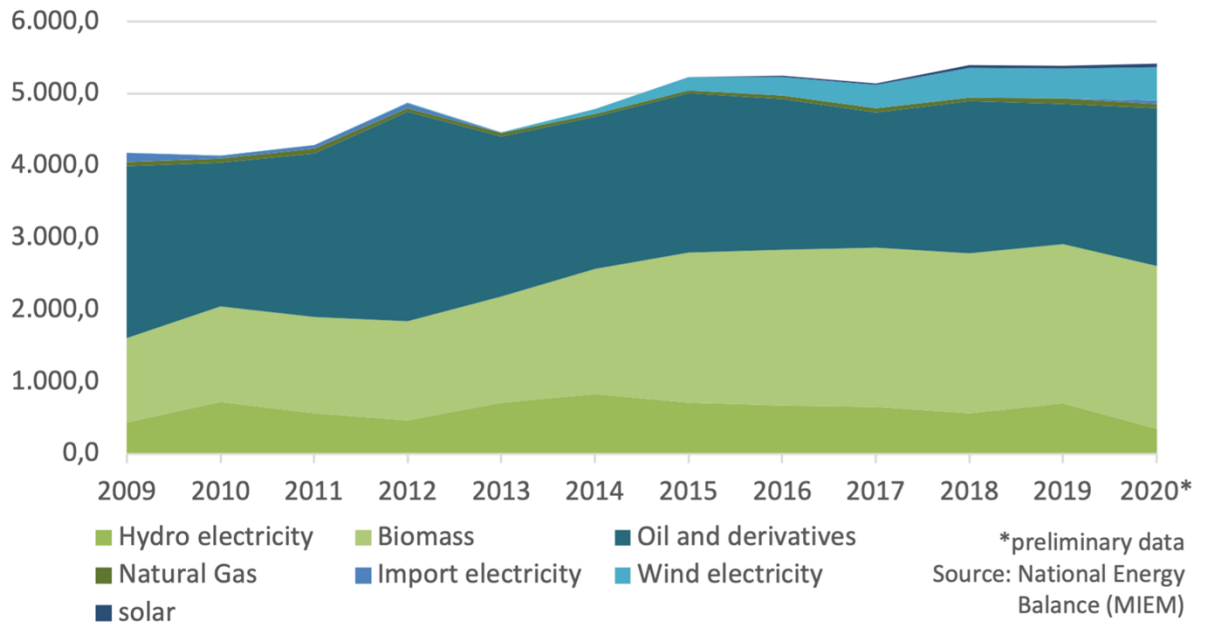
16. The Energy Sector represented 19.2% of national emissions in 2017. Energy and transport are also among the NDCs' main priorities. On conditional specific means of implementation, a reduction of 29% in CO<sub>2</sub> emissions intensity per GDP unit in the Energy sector, including transport, and industrial processes, has been proposed.

17. Special attention will be given when studying synergies between food systems and the renewable energy surplus mentioned, allowing to reduce the food system's fossil fuel consumption.

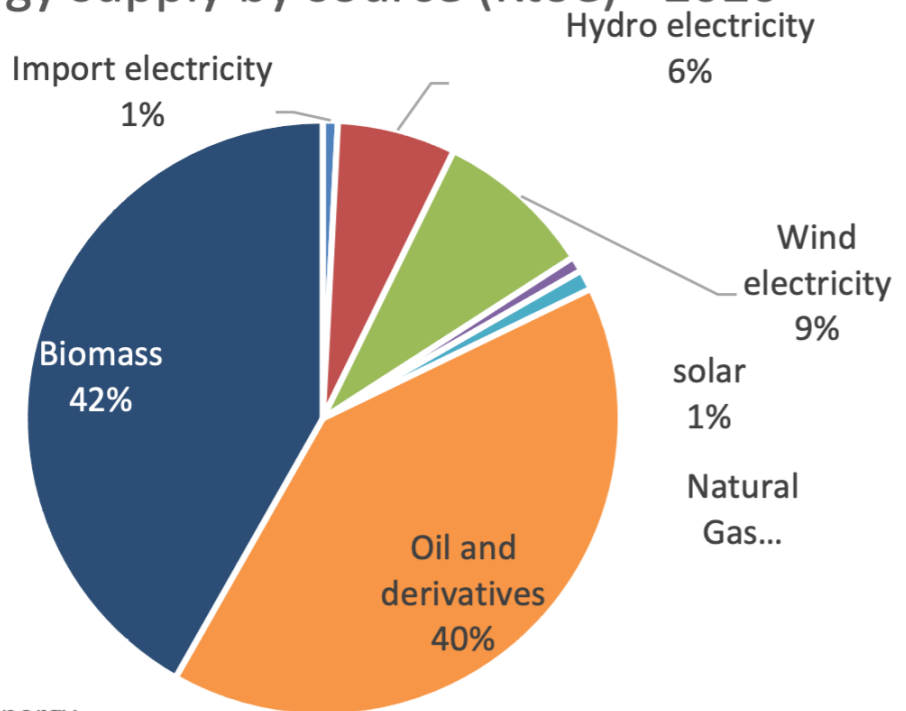
18. This project will consider the renewable energy surplus application, which could allow for the decarbonization of other industrial processes, in particular food systems, considering the impact that this productive value chain has in the country's GHG emissions.

FIGURE 1: ENERGY SUPPLY, SOURCE AND GENERATION SOURCE IN URUGUAY (MIEM, 2020)

### Accumulated Energy supply by source (Ktoe)

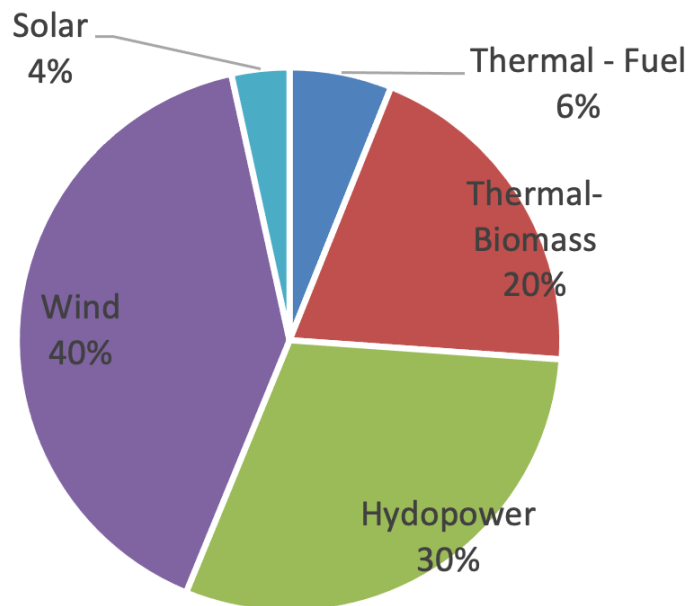


### Energy supply by source (Ktoe) - 2020\*



\*preliminary data  
Source: National Energy Balance (MIEM)

## Electricity generation by source - 2020\*



\*preliminary data  
Source: National Energy  
Balance (MIEM)

### Cleantech development in Uruguay

19. The country already has a knowledge base to address new opportunities using a circular economy (CE) approach. For example, the results achieved under the previous GEF funded project (Biovalor), and the implementation of specific programs such as Circular Opportunities Program demonstrate Uruguay's understanding of the CE approach. Thus, it is possible to provide more value to the economy by adopting new CE business models in an earlier stage of the productive value chains, enabling a bigger impact in the reduction of GHG emissions.

20. The Biovalor project resulted in the identification of a group of technologies for waste valorization with potential to be developed / adopted in Uruguay:

- a) Anaerobic digestion for producing biogas and fertilizers
- b) Wastewater treatment for using in irrigation (nutrient circularity)
- c) Waste valorization for soils improvements
- d) Energy / steam combustion

21. However, beyond the Biovalor project, there are no specific cleantech-oriented accelerators or programmes, which results in difficulties for start-ups and entrepreneurs to develop financially viable and technologically sound products and services. A major barrier to be overcome with regard to cleantech development in Uruguay is the lack of specific technical and financial instruments for the commercialization of cleantech business solutions.

22. There are other initiatives directly oriented to clean technologies, such as the Cleaner Production Center, implemented by the University of Montevideo since 2005. This Center offers training to professionals and companies focused on reducing environmental impact and seeks to generate knowledge about trends cleaner production.

### **Innovation in Uruguay**

23. According to the Global Competitiveness Index 2019, Uruguay shows its lowest relative performance in the capacity for innovation pillar, where it is ranked 67<sup>th</sup> place out of 141 countries.

24. Innovation activities in Uruguay are mainly characterized as incremental/ adaptive innovations. This partially explains the modest performance of the country regarding intellectual property rights indicators (such as patent applications), situated below Latin America average. However, better results are apparent when considering trademarks or product protection applications. In terms of publications, Uruguay exhibits strong performance in the region, which may indicate that research is nationally prioritised, whilst connecting knowledge to productive application is less well developed.

25. Both public and private investment are significantly low, compared to international standards. While R&D investment represents 0.43% of Uruguay's GDP in 2009, this indicator reached 2.5% for OECD countries. When looking at the volume of public resources channeled towards innovation, it can be observed that only 4 % of Uruguayan firms received public funding for innovations, compared with 8% in Chile and Brazil, and 15% in OECD countries<sup>[vii]</sup>.

26. The main challenges identified to develop a sustained and successful innovation system are:

- a) Human capital restrictions: shortage of technical and professional workforce, associated with medium level education deficiencies (secondary education level shows high rates of dropout)
- b) Infrastructure for business climate, including technological infrastructure, shows room for improvement regarding variables such as ICTs access and use, logistics, transaction, and contract cost
- c) Financial development: constrained access to financing options for innovation, due to lack of capacity for risk assessment for investment in innovation activities, lack of guarantee systems for loans, shortage of available seed capital and risk capital options
- d) Institutional system failures, showing high dependence of electoral cycles and scarce funding assigned to innovation activities
- e) According to innovation surveys (carried out by ANII), firms identify market size, low investment return, lack of qualified staff and financing constraints as main obstacles to innovate.

### **Uruguay SMEs profile**

27. Economic expansion in Uruguay was accompanied by a significant increase in the number of firms, showing an increase of 50% in the last decade. According to latest available date from National Institute of Statistics (2018), there are 186,281 micro, small and medium enterprises in

Uruguay<sup>viii</sup>, 83 % of which correspond to micro enterprise (4 or less employees). SMEs account for over 99% of total firms in the country. In terms of employment, SMEs generates 50% of total employment, of which 51% corresponds to micro-enterprises<sup>ix</sup>. From total SMEs, 40% belong to services, 33 % to commercial activities, 12 % to transport, 13,5 % belongs industrial activities (9% accounts for manufacture industry) and 1,2% to agriculture, livestock and mining activities.

28. In Uruguay, gender distribution in high management positions remains unbalanced, with 65% male and 35% female (SME Survey 2017). This distribution is related to age of the companies, since older firms tend to have less presence of women in leading positions. Higher than national average female presence in leading positions can be found in education, social services, health, and entertainment activities (53%). In terms of education, 33% of entrepreneurs have tertiary education. Compared to the national population, this percentage is high, since only 20% of population of 25 years or more in Uruguay has tertiary education.

29. Credit access is one of the main constraints faced by SMEs in Uruguay. According to the National SME survey data in 2016, over 80% of firms use their own capital as initial funding. Although banking services have high penetration in SMEs, only 17% obtained a banking credit during the three previous years, 7% accessed non-banking credits and 10% used personal credit for their firm's activities. Additionally, 39% of SMEs declared having difficulties in accessing credit.

30. Regarding innovation, 45% of firms had developed innovations to improve their firm's performance in the past two years. Some relevant characteristics for innovation show that when owners have higher education level, firms present higher level of innovation activities. As expected, innovation is positively related to credit access. Finally, firms that export (directly or through another firm) show more innovation than non-exporters.

31. The development of collective activities are potentially underdeveloped within Uruguayan SMEs, as only 25% of firms participate in collaborative networks, and those that do collaborate across the sector are mainly participating in information sharing networks.

32. Gaps and barriers present in the prioritized sectors are described below:

33. Technical barriers

- a) Technical barriers include a lack of specific technological options to consider innovative activities for creating value added products from waste or by-products within the agro-industrial chains. Traditionally, agro-industrial processes discard by-products and waste to landfill or treat them in a conventional effluent treatment system rather than transforming them into added-value products. As a consequence, the in-country knowledge and development capacities in sustainable technological alternatives for these materials are limited.
- b) The in-country development capacities in sustainable technological alternatives for using the renewable energy surplus are limited. Innovative solutions for the integration of renewable energy surplus are still being explored, but some technologies require a significant technological transfer. Therefore, specific pre-feasibility studies are needed to identify the best alternative.

34. Capacities barriers

- a) There is a need to identify a portfolio of recoverable products with high added value and to acquire the knowledge for adopting technologies for viable opportunities. There are only a few studies with respect to by-products valorization because of the lack of alternative viable uses, destinations and market opportunities identified. With respect to the renewable energy surplus usage (Power to X), there are also opportunities to develop further studies to assess the technology that best could be capitalized. The necessity to discover the missing link in the productive chains and the capacities/technologies to promote the adoption of upcycling processes and Power to X technology also exists.
- b) There is a need to strengthen the relationship with university research centers, entrepreneurs and private sector financing, and to build awareness of nutrient waste circularity, by-products valorization (green chemistry) and to promote new technology implementation related to Industry 4.0.

35. Policy and regulatory barriers

- a) There is a lack of adequate environmental indicators and regulations that favor alternative market destinations for by-products. The "Integral Waste Management Law", recently approved, establishes a new regulatory framework for waste management. This new law will push agro-industrial food waste reduction, seeking to minimize the generation of waste at source, through the search for the efficiency of production processes, the application of best available technologies and the criteria of sustainable production and consumption. In this context, the development of a specific regulatory framework that incentivizes waste valorization policies under the umbrella of this new legislation will be needed to ensure that synergies are identified.
- b) There is a need to develop new innovative economic incentives to promote related circular economic activities. Incentives for waste valorization (green chemistry), nutrient circularity systems or mechanisms that promote the substitution of renewable energy are not fully developed.

36. Financial barriers

- a) There is currently a lack of financial instruments to promote a circular economy in the private and the public sector. Funds that assist specifically the target sectors related to a circular economic approach are not developed.
- b) Poor competitiveness of Small and Medium Enterprises (SMEs), lack of access to global markets and need for successful role models: The engagement in technical/economic feasibility studies is key to develop new business model opportunities.

37. Barriers in cleantech innovation and entrepreneurship ecosystem (CIEE) structure

- a) Despite having an emerging entrepreneurship structure, with more than 100 institutions that provide assistance, training, mentoring and financing, and in particular the implementation of the "Circular Opportunities" program to support specific projects in the circular economy (technical / business validation, prototype, implementation), financing for the evaluation and implementation of clean technologies is still scarce.

- b) Collaboration between academia and industry remains weak. Furthermore, there is a weak link between innovators and other relevant parties globally.
- c) There are no incubators specialized in renewable energy, waste recovery and innovation in low GHG emissions technologies. Cleantech innovation ideas compete for funding with all types of projects, reducing opportunities to receive support / technical assistance / financing for validation and prototypes, and there is a lack of accelerators and angel investors to help scale specifically in cleantech.

## C. The baseline scenario and any associated baseline projects

### National policy framework

38. In order to increase productivity in a sustainable and inclusive manner, in 2016 Uruguay confirmed an institutional framework<sup>[x]</sup>, with the principal objective to promote economic, productive and innovative development, with sustainability, social equity, and environmental considerations. As a result of this effort, Uruguay also developed a National Plan for Productive Transformation and Competitiveness for the period 2017-2021.

39. The Plan has integrated the Circular Economy as a priority given its potential to generate new businesses and jobs by addressing climate change risks. Within the framework of this plan, and in line with the economic sectors prioritized by the Office of Planning and Budget (OPP), interdisciplinary work is carried out by the public, private and academic sectors, identifying early actions related to Circular Economy in the following areas: i) meat sector, ii) dairy sector, iii) forestry sector, iv) valorization of materials, v) product as a service and vi) food waste and packaging.

40. Additionally, the Circular Economy Action Plan<sup>[xi]</sup> has been developed, which focuses on seven main axes: 1) Public procurement of food and packaging with a sustainable perspective, 2) Industrial transition towards a Circular Economy, 3) Design development of the Bioeconomy Technology Center, 4) Electric vehicles for the public sector, 5) Dairy farms? nutrient circularity, 6) Strengthening of CE?s capacities, 7) Valorization of materials.

41. Another important milestone is that the National Development Strategy ?Uruguay 2050? was presented in 2019, led by the Office of Planning and Budget. The main objective is to establish the bases for Uruguay?s transition towards sustainable development, prioritizing resource optimization and waste valorization under circular economy schemes. Ten strategic productive value chains were identified: Bioeconomy, Digital Economy, Renewable Energy, Tourism, Hydrocarbons, Mining, Creative Industries, Forestry - Wood-Cellulose, Food and Global Export Services. <sup>[xii]</sup> Optimization of resources and valorization of wastes are topics specifically mentioned, promoting eco-design, environmental awareness, consumers patterns? changes, materials circularity and upcycling processes<sup>[xiii]</sup>. In addition, in 2018, an Inter-Institutional Working Group on Sustainable Bioeconomy of Uruguay was created, with the aim of elaborating a Bioeconomy Strategy.

42. The ?Bioeconomy Strategy: towards a circular and sustainable economy? proposal defines the strategic axes and action lines for the development of the bioeconomy in Uruguay with a time horizon of 2050, identifies the productive complexes that are key to this development, and proposes early actions for its implementation. The productive complexes that are considered key for the development of the bioeconomy in Uruguay are: food and beverages, forest resources, chemicals and pharmaceuticals, sustainable tourism, aquatic biological resources and recovery of waste and by-



products. Four strategic axes are proposed for the development and promotion of the bioeconomy: (1) sustainable and circular production and consumption; (2) international insertion based on environmental added value; (3) science, technology and innovation oriented to the bioeconomy; and (4) inclusive territorial development.

43. Similarly, the National Industry Directorate at the Ministry of Industry, Energy and Mining, promotes the transition to Circular Economy schemes. Through the creation of tools and policies, industries in the prioritized sectors are encouraged to invest in smart industrial technologies, such as the Internet of Things or Blockchain. The objective is to enable, prioritized industrial sectors, to start working with cutting edge technology to increase effectiveness. Industry 4.0 bears enormous opportunities to enable circular economy therefore, efforts to identify technological solutions should be undertaken.

### **National initiatives**

44. Since 2017, Uruguay has been a partner country of the "Partnership Action on Green Economy" (PAGE), a joint initiative of five UN agencies (ILO, UNDP, UNIDO, UN Environment, and UNITAR), that support countries wishing to embark on greener and more inclusive growth trajectories. Under PAGE framework, seven national ministries work together to achieve national goals on green economy. Among the UN agencies, UNIDO coordinates work at the field level and also leads the Circular Economy component. This project has created an understanding of Circular Economy approaches especially in the context of industrialisation, and therefore this project's policy related interventions will build on the awareness raised through PAGE in Uruguay.

45. In 2019, PAGE launched the "Uruguay Circular Award" with the aim of granting visibility and recognizing projects with a circular approach. This award, together with the "Circular Opportunities Program", mentioned below, constitute the "Uruguay Circular" instrument, which recognizes achievements made and looks to the future in identifying new opportunities. PAGE has established a good baseline for Uruguay's understanding of the Circular Economy, though more efforts are needed to ensure that circular economy potential is met in Uruguay. Leveraging on this baseline, the GCIP approach will seek to support Uruguay's private sector in identifying the business opportunities embedded in the transition to circular economy.

46. Moreover, BIOVALOR, a UNIDO GEF Project (<http://biovalor.gub.uy/>), has established a good baseline understanding about food and agro-industrial wastes, and on specific technologies to transform them into energy, compost and other products. The project has been implemented by three National Ministries: The Ministry of Industry, Energy and Mining; The Ministry of Housing, Land Use Regulation & Environment and the Ministry of Livestock, Agriculture & Fisheries. The project's overall objective was to transform different kinds of waste generated by agricultural and agro-industrial sectors into energy, compost and other by-products, aiming for the development of low carbon sustainable production models, supported by adequate technologies and based upon circular economy principles. The BIOVALOR project has demonstrated the potential of technology in tackling environmental challenges, and build on this to demonstrate the market potential and the business case for cleantech in the transition to circular economy. In addition to the substantive impact of the project, the collaboration among the ministries in executing Biovalor will benefit the Uruguay GCIP.

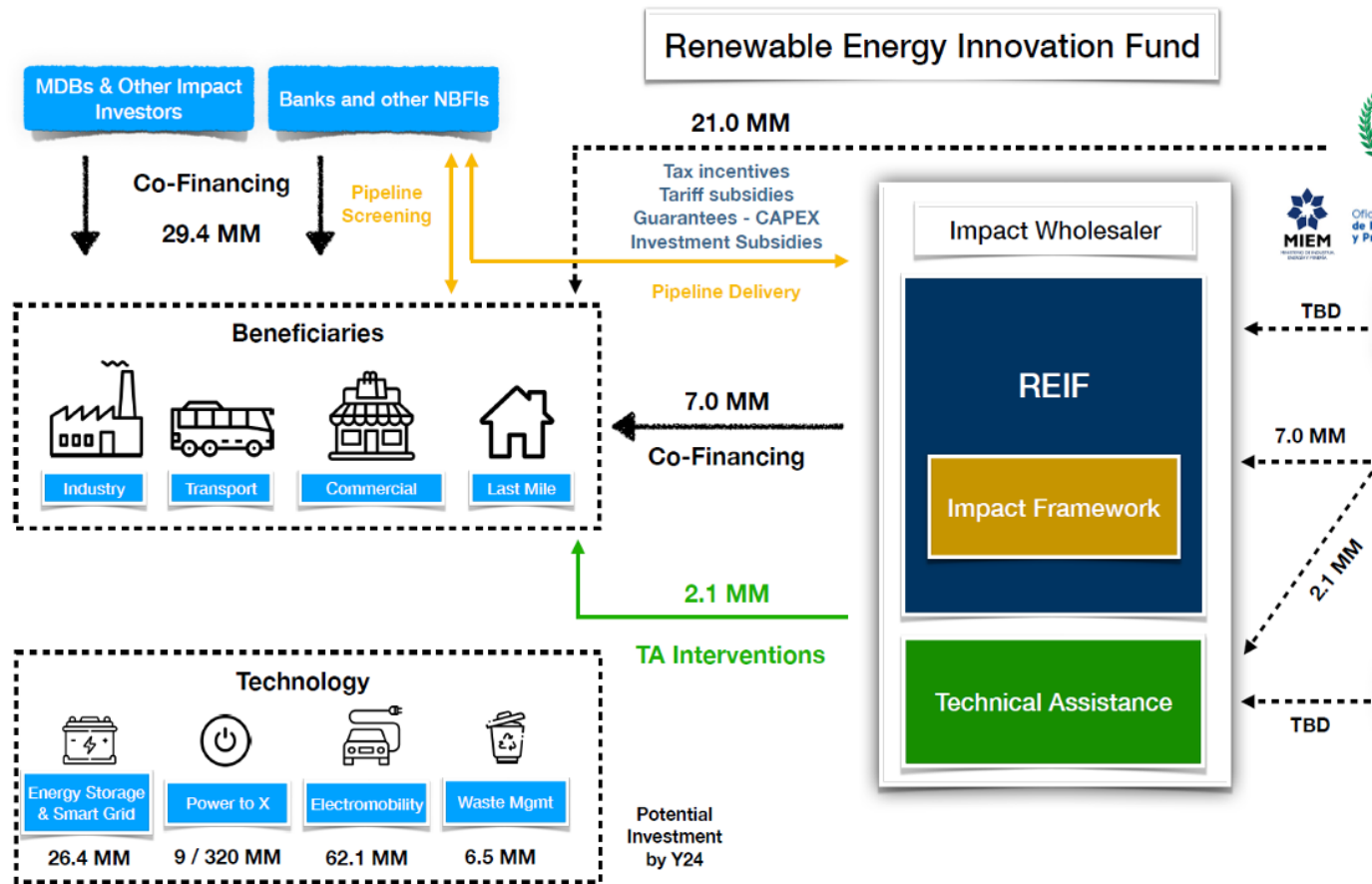
47. As a spinoff of Biovalor Project, the "Circular Economy Opportunities Program"<sup>[xiv]</sup> was launched in 2018. The Program helped to identify solid circular business prospects, by: i) supporting entrepreneurs in the elaboration of pre-feasibility studies which included technical and economic analysis to bring ventures to market; ii) an investment component where the program developed

detailed feasibility studies and provided co-financing to advanced stage (SMEs). The program was jointly led by the National Agency of Development in Uruguay (ANDE) and UNIDO. This agreement has represented a new partnership model for UNIDO's work in the region, which will facilitate the leveraging of national technical capacities and resources for this project.

48. Within the framework of the Investment Promotion Law (Law N 16.906), Uruguay recognizes and promotes investments that incorporate clean technologies and insert technology of high technological value, among other parameters. This law establishes relevant tax benefits, which have contributed to the development of this type of projects at the national level. This law serves as an important catalyst for creating private sector interest in circular economy and cleantech solutions, and the project's investment facilitation interventions are expected to benefit from this law.

49. The UNIDO-MIEM SDG Joint project "Innovative Finance for Clean Tech Solutions in Uruguay's Renewable Energy Sector: The Renewable Energy Innovation Fund (REIF)" approved by SDG UN Fund in 2021 is an innovative financial mechanism that supports actions to leverage public-private financing for a range of new and emerging renewable energy technologies, ventures and activities aligned with its funding scope. It aims to decarbonize the industry and transport sectors; secure universal access to renewable sources; and increase the innovation and competitiveness of the energy sector through decreased energy costs and increased participation of women in the clean energy economy. The REIF will receive its initial capital contributions from the SDG Joint Fund, in the form of a 7 million USD investment grant, supplemented by an additional grant of 2.1 million USD for technical assistance. The REIF will be open -and at a more advanced stage actively seek- additional capital contributions from Climate Funds, DFIs and potentially other investors. The REIF will provide co-financing along with other financial institutions, in the form of co-loans (in either senior or subordinated positions) or A/B loans. The co-financings will combine concessional/risk-tolerant capital from the REIF with commercially-termed finance from other financial institutions. Main expected co-lenders will be local commercial banks. The REIF is an important signal to the private sector that cleantech solutions are investible, and companies supported through this project are expected to form a pipeline of investment-ready solutions for financing from RE. Uruguay GCIP project aims at addressing existing barriers for cleantech solutions to fully commercialize and scale, leveraging untapped potential in reducing GHG emissions and strengthening partnerships with the private sector interested in investing in clean technologies. The SDG Fund REIF project offers a meaningful opportunity to build from or synergize with GEF-7 project, taking on the gaps identified, through both investment and TA support, providing financing for a range of new and emerging renewable energy technologies, ventures and activities aligned with its funding scope.

FIGURE 2: RENEWABLE ENERGY INNOVATION FUND



### Food Systems related baseline

50. Uruguay is a country that provides high quality food for the world. The agricultural sector exports to more than 140 markets worldwide, contributing to global food security, representing approximately 6% of the GDP, and 80 % of the external sales<sup>[xv]</sup><sup>xv</sup>. Specifically, in the meat sector, Uruguay is the 6<sup>th</sup> worldwide exporter of frozen beef meat, after Brazil, Australia, United States, India and New Zealand. Uruguay is the 7<sup>th</sup> worldwide exporter of dairy products, after New Zealand, European Union, USA, Australia, Argentina, and Belarus.<sup>[xvi]</sup><sup>xvi</sup>

51. The national plan for increasing food production places pressure on the entire food system, including primary production, industrial processes, commercialization, and consumption. For instance, beef meat and milk value chains are among the main priorities for the Uruguayan economy. In order to adhere to environmental principals, the Ministry of Livestock, Agriculture and Fisheries (MGAP) proposed the concept of "Smart-Agro Uruguay" (*Uruguay Agointeligente*). This is a strategy that seeks to produce more and better, identifying the opportunities related to the demand for food produced with quality, safety, environmental controls, and considering the conservation of natural resources in a resilient manner, adapted to climate change, supported by technological innovation and an inclusive economy.

52. In addition, The National Plan for Adaptation to Climate Variability and Climate Change for Agriculture incorporates regulatory and oversight measures for the strategies established in the

National Plan for Land Uses and Management and in the Sustainable Milk Sector National Plan, such as management tools to contribute to soil conservation and financial support to nutrient management in the milk sector production. Additionally, this plan focuses on a better utilization of biological resources (including wastes), production diversification, and the generation of new networks that contribute to adaptation and mitigation to climate change. There is also a project promoted by the Food and Agriculture Organization (FAO) and executed by the MGAP called "Climate-smart livestock production", that aims to reduce GHG emissions, minimise environmental impacts, and conserve biodiversity and water while increasing production [xvii]<sup>xvii</sup>.

53. BIOVALOR's survey on "Quantification of residues generated in Uruguayan agro-industrial sectors" [xviii]<sup>xviii</sup> provided information/data on the quantities generated from each of these wastes, as well as their destination. Because the type of industries involved, residues from food systems are a very significant fraction. A recent survey [xix]<sup>xix</sup> estimates that 120700 tons/y of solid wastes generated at the industrial step of "Food systems" are disposed in landfills, which represents 17,3 Gg CO<sub>2</sub> eq/year. [xx]<sup>xx</sup>

54. Secondary raw materials (by-products and waste) from agro-industrial value chains such as bones, horns, hooves, feathers, leathers and hairs are of special concern because they are not suitable for animal food purposes or they have poor market value. Some of them (horns, hooves) are processed as "bone meal," but with the negative consequence of a decrease in digestibility of the meal. Leathers are facing increasing challenges because of the decline of leather tanneries. Feathers and hairs are produced in significant amounts (about 7700 tons/y of feathers and 4700 tons/y of hairs) [xxi]<sup>xxi</sup>, and landfill is still their final destination, negatively affecting the environment and contributing to GHG emissions.

55. With respect to high organic load industrial effluents, the environmental technology adopted in Uruguay is mainly based on anaerobic digestion in open reservoirs or "lagoons". This system allows for a significant reduction in organic load of the wastewaters discharged to water bodies but implies the emission of GHG from anaerobic digestion produced in lagoons with high residence time. Moreover, this system fails to significantly reduce the Nitrogen (N) and Phosphorus (P) content of the effluents. Despite the alternatives that are already developed in the industrial sector, a special emphasis will be made on dairy farms where effluents, highly concentrated on N, P and organic matter, could be applied as biofertilizers while allowing soil carbon sequestration.

56. The "Development and Adaptation to Climate Change" project (Proyecto de Desarrollo y Adaptación al Cambio Climático "DACC"), led by the Uruguayan Government with a World Bank loan, aims to support rural farmers in developing a sustainable use of natural resources, while promoting adaptation to climate variability and change.

57. One specific objective of the project is to provide financial support to dairy farmers to install new waste management infrastructure, with the objective of reducing nutrient discharges into water bodies and promoting the new paradigm of "Nutrient Circularity". These new ponds for nutrient and waste management contribute to the reduction of GHG emission intensity, while avoiding the discharge of nutrients to freshwater rivers and streams, and restoration of ecosystems. The project has reached 110 dairy farms, reducing 9.4 GgCO<sub>2</sub> eq of GHG emission per year, through the installation of new effluent ponds (with lining to avoid underground water contamination) and irrigation systems to apply the effluent to grasslands and return nitrogen and phosphorus to the soil. This type of support creates awareness on the potential of technology options, and serves to increase demand for circular economy and cleantech products in the market. The innovations identified and supported through this project may offer cost-effective options for the rural farmers.

58. Furthermore, there is another project, coordinated by Biovalor, that engages academic stakeholders related to dairy production: University of the Republic ? Faculty of Agronomics (UDELAR - FAGRO); University of the Republic ? Faculty of Veterinary (UDELAR - FVET); Technological University / University of Labor of Uruguay (UTEC/UTU); National Institute of Agronomic and Livestock Research (INIA), and the National Institute of Milk (INALE). The project aims to install experimental demonstration dairy effluent management systems with research purposes. The project is expected to produce detailed information and data of nutrient cycling balances, evaluation of possible environmental impacts, and economic evaluation of investments and operational costs.

59. The Agri-food Metropolitan Unit, created in October 2011 with the objective to facilitate and develop the food market at a national level, will also foster circular economy related projects. Among the different line of works, is proposed the development of an Agri-food Park, located in Montevideo, that includes the Food and Vegetables Market and other complementary food sectors. This centralized installation will promote investment and growth opportunities, incorporating complementary activities to develop a more efficient and transparent food supply chain. An efficient logistic, wastes minimization, a national production promotion, food quality and safety, are within the main areas of interest.

### **Energy surpluses related baseline**

60. Uruguay's energy mix currently has a high percentage of Variable Renewable Energy (VRE). Through the National Energy Policy 2008-2030, Uruguay has achieved an important transformation of the energy mix in the last 10 years, diversifying its sources of supply and increasing the percentage of renewable sources, providing an environmental opportunity related to energy surpluses. It is noteworthy that 98% of the electricity produced was generated from renewable sources: 52% hydroelectric, 26% wind, 18% biomass, 2% solar photovoltaic, in addition to 2% fossil origin (diesel and fuel oil).<sup>[xxii]</sup><sup>xxii</sup>

61. A prospective study that covers the period 2019 -2047 conducted by the National Energy Directorate (DNE) from the Ministry of Industry, Energy and Mining (MIEM) of Uruguay<sup>[xxiii]</sup><sup>xxiii</sup> evaluated the electric energy generation capacity of the RE plants (taking into account both the installed capacity and the planning of the energetic expansion) in an average situation of the hydroelectric conditions, and compared it with the projected demand. The results indicate that in most years Uruguay will have surplus electricity from renewable sources. In the next 10 years, the expected value of surpluses will be approximately 2,000 GWh/year and additional increase is expected thereafter.

62. Therefore, in the particular case of Uruguay, surplus electricity can be considered as a structural part of the system. The country has almost 100% renewable electricity mix, with important hydroelectric participation and a high annual variability combined with a high and growing participation of wind and solar energy. However, as the surplus of energy generated varies throughout the year, there is a technological barrier that needs to be addressed in order to deal with this variability in such a way that allows for productive uses of energy surpluses. Considering the existence of energetic consumption still based on fossil fuels, none of the previous alternatives for renewable energy surpluses are environmentally appropriate or sustainable.

63. Present available alternatives for this challenge are:

- a) Export electric surpluses to neighboring countries. This option is not always possible nor convenient from an economic perspective and, when possible, usually does not cover the totality of surplus power.
- b) Curtailment. The term curtailment broadly refers to the use of less wind or solar power than is potentially available at a given time. System balancing issues can be a reason for curtailment. Wind energy, in particular, is often more available at night, when loads are low. In this situation, private generators are often requested to temporarily disconnect from the grid. But there can be other reasons for curtailment: transmission congestion or local network constraints that avoid high penetrations or back-feeding, in which a feeder produces more energy than it consumes; or limits that need to be placed on non-synchronous generation levels to maintain frequency requirements.

### **Global Cleantech Innovation Programme (GCIP)**

64. 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 implemented the 'Greening the COP17' project. One of the four components of the project focused on the design and implementation of the first South Africa Clean Technology 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.

65. This success of the 2011 SA Cleantech encouraged the project expansion into the Global Cleantech Innovation Programme (GCIP) for SMEs, simultaneously implemented 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 rounds, 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.

66. 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 entrepreneurs from the GCIP 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.

67. In 2015 Thailand joined GCIP and thereafter, about 10 countries, including Vietnam, Brazil, Ukraine, Nigeria, Uruguay and Kazakhstan had expressed interest in becoming part of it. In the period from 2014 to 2016, GCIP received almost 3000 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.

68. 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 the Republic of Uruguay as well as UNIDO's mandate to promote inclusive and sustainable industrial development (ISID).

#### **D. The proposed alternative scenario with a brief description of expected outcomes and components of the project**

69. In order to align Uruguay's national development and sectoral strategies with the economic realities of a climate-constrained world, the project is designed to aim at facilitating innovation and development of clean technologies. The proposed project focuses on cleantech innovation in the priority sectors of food systems and energy.

70. This project is also developed as a child project of the GCIP Framework, and could employ the approaches and tools of GCIP in advancing circular economy and cleantech solutions in Uruguay, considering needs, challenges and opportunities at the national level as outlined in the previous sections. GCIP is implemented by UNIDO with GEF support, and provides powerful tools to accelerate clean technology innovation and entrepreneurship in SMEs and the development of new start-ups. GCIP mechanisms have been designed to identify and drive innovation in the most promising clean technologies. Clean technology plays an important role in the transition path towards a circular economy.

#### **Circular food systems**

71. Valorization of the secondary raw materials will allow to develop innovative opportunities to apply circular economic concepts, such as those illustrated by the inner biological cycles of the Ellen MacArthur Circular Economy Diagram. A broad spectrum of possibilities opens, depending on the type of industry involved for instance: extraction of biochemical feedstock or production of bio-based materials. Examples include creating fibers for packaging material; manufacturing bioplastics; or recovering non-edible proteins like keratin from horns, hooves, hairs, or feathers, which can be used in biomedical fields, air filtering, cosmetics, or as a base for nanomaterials.

72. Incorporation of these materials into Circular Economy cycles will contribute to the reduction of GHG emissions coming from landfills, and will contribute to a sustainable economic development of the country in a more sustainable way. Some examples of the sectors that could potentially be studied, but not limited to, are:

- a) Meat sector: In this sector bovine and sheep leather could potentially be used to produce collagen through an enzymatic hydrolysis for pharmaceutical and food industry purposes. There is an amount of 3188 tons per year of waste from leather cuttings<sup>[xxiv]</sup> and, for example, in the case of bovine leather, the tanning industry presents a decreasing trend. Therefore, it is expected that leather will become an

important environmental liability. Waste blood is also a concern in this sector. The problem with this material stems mainly from the Kosher method of meat production, which represents 40-50% of the bovine meat production. Currently, it is commercialized as a low value-added product: blood meal[xxv]<sup>xxv</sup>. Since approximately 43.750 tons of blood are generated yearly, and considering the high organic matter content, it is suitable to evaluate the capacity to produce new valuable materials from this source. [xxvi]<sup>xxvi</sup>

- b) Poultry production: With respect to this sector, the by-products that could potentially be studied as resources for added value products are blood and feathers. Currently, it produces 518 tons/year dry base and 2571 tons/year dry base, respectively[xxvii]<sup>xxvii</sup>. The feathers are a rich source of keratin and amino acids; therefore, their valorization could result in the production of materials and products of high value for the pharmaceutical and biomedical industry. Additionally, feathers are suitable to produce composite materials and textiles[xxviii]<sup>xxviii</sup>.
- c) Food consumption: It is estimated that 15% of the total 513.000 tons of fresh fruits destined to end consumers, are losses, indicating approximately 77.000 tons per year of waste.[xxix]<sup>xxix</sup> There is an opportunity to create bio-plastics, packaging and textiles from these sources[xxx]<sup>xxx</sup>. Additionally, the proposed Agri-food Park project, will provide opportunities to develop a more efficient and transparent food supply chain, optimizing resources and creating added value products under a circular economy approach.
- d) Dairy Industries: In this sector, whey represents a specific waste with difficult final disposition[xxxi]<sup>xxxi</sup>. An amount of approximately 698.700 cubic meters per year is generated on a national level. Some experiences in other countries show a viable production of bioplastics from this source.[xxxii]<sup>xxxii</sup> There also exists studies that shows viable uses of whey protein to produce functional foods. These foods, in addition to satisfy some nutritional needs, can actively contribute to improve cardiovascular health[xxxiii]<sup>xxxiii</sup>.
- e) Dairy farms: As a particular case under the food system component, the new paradigm of nutrient circularity in dairy farms needs to be disseminated, allowing to reach a broader scope of farms. Besides the reduction of nutrient discharged to rivers mentioned, it is noteworthy that the new approach will reduce GHG emissions. In fact, new ponds are not intended as anaerobic lagoons, but just as effluent reservoirs, smaller than previous ones. It is expected that this will disfavor the anaerobic digestion of the wastewaters, allowing the return of the effluent with more organic matter to the soils, reducing GHG emissions directly, because of the smaller lagoons' size and indirectly, by soil carbon sequestration. Another GHG emissions reduction comes from the substitution of inorganic fertilizers by the effluent acting as biofertilizer. This reduction comes from avoiding emissions during the production, delivery and usage of inorganic fertilizers.

73. The sectors mentioned above are examples. The initiative also considers the food manufacturing industrial sub sector. The pilots to be developed within the framework of this project could also be initiatives thought to support the food industrial processes and its waste management. The development of more circular and efficient industries through the strengthening and development of digitization and



industry 4.0 processes and also with the adaptation of technology that already exists in order to develop a cleaner production taking into account food production in general and its packaging.

### **Renewable energy surpluses**

74. There is an opportunity to incorporate surplus renewable electrical energy in uses that allow to increase environmental sustainability and reduce GHG emissions, applying the concept of 'Power-to-X'. This name refers to a set of methods and technologies that allow electrical energy surplus usage, usually during periods when the (variable) generation of renewable energy exceeds consumption or due to grid congestion. Uruguay's digital technologies capacities are well recognized among the region. This could represent an opportunity to tackle challenges regarding energy management, strengthening the country's sustainable development strategy with innovative processes led by local companies (basically SMEs).

75. In this sense, an initiative to promote the applications of Power ' to ' X is being studied by the MIEM and the Public Utility (UTE) and the National Oil Company (ANCAP). Some possible applications refer to the promotion of technologies already developed, and feasible to implement [MIEM ' DNE, op cit.]. One possibility is using the renewable energy surplus to power industries (Power-to-Industry). In this case could be promoted that an industry/company can 'activate' part of its process only when there are surpluses. The Public Utility Company (UTE) can offer the user company a certain amount of surplus energy hours during a certain number of years, without assuring a fixed amount per year. In this way, the company can consider this certain number of hours of surplus energy at a low price to help improve its return on investment.

76. The surplus of renewable electric power can be supplied to an industry at a special rate, to be used in water or air heating or steam generation (Power-to-Heat) in a dedicated industrial facility (electrical boiler or heat pump). Particularly interesting is the case of industries that use fossil fuels for heating: in Uruguay, 85% of fuel oil used for energy purposes is consumed by industry, with an annual total of 140 ktoe. In this Power-to-heat scheme, when there are surpluses, the industry uses electricity for its thermal process, decreasing the use of fossil fuel, and therefore, GHG emissions. Another possibility is to use the renewable energy surplus to power food production processes (Power-to-food). For example, in greenhouses with electric illumination, which are lit at night only when there is a surplus of renewable electrical energy, allows to increase the production of vegetables compared to the use of sunlight alone.

77. Another aspect of the 'Power-to-X' concept refers to conversion technologies that allow the decoupling of energy from the electric sector for use in other sectors (such as transport or chemical products). These technologies are in full development at a global level. Its eventual application in Uruguay requires the development of local capacities and execution of pilot tests, which must be promoted. In general, these technologies are based on the use of hydrogen as an intermediate, thus giving rise to the concept 'Power-to-H<sub>2</sub>-to-X'. The principle is that renewable electricity and water are used to generate hydrogen and oxygen neutral in carbon through an electrolysis process.<sup>[xxxiv]<sup>xxxiv</sup></sup>

78. The possible proposed destinations for 'Green Hydrogen' are:

- a) Power to Gas (P2G): Conversion of electrical energy to a gaseous chemical storage medium, such as gases rich in hydrogen (H<sub>2</sub>) and methane (CH<sub>4</sub>) energy. Hydrogen can be injected directly into the natural gas network. Biomethane is generated by the

methanisation of H<sub>2</sub> and carbon dioxide (CO<sub>2</sub>), coming for example from fermentative processes for the generation of biofuels.

- b) Power to liquid fuel (P2L): Hydrogen reacts with CO<sub>2</sub> (a by-product of the production of bioethanol) to convert it to bio methanol that can be used in the production of biodiesel, turning it 100% renewable.
- c) Power to Power (P2P): Hydrogen can be used to produce electricity in a fuel cell or in a conventional gas turbine. Hydrogen could be used to decarbonize the transport sector by promoting hydrogen fuel cells electric vehicles (HFCEV), specifically long-distance trucks and buses.
- d) Power-to-Chemicals (P2C): Hydrogen is an important industrial gas that can be used for the production of ammonia, in the petrochemical industry and / or in the food industry. Green hydrogen can be used here as a way to decarbonize the chemical sector and make the best use of the RE potential.

### **GCIP approach**

79. As a child project of the GEF-UNIDO Global Cleantech Innovation Programme (GCIP) for SMEs, this project is synchronized with the GCIP Framework and aims to support and nurture clean energy technology entrepreneurship and innovation for circular economy. GCIP provides support to promote regulatory policies that promote the circular economy and has the potential to work in collaboration with national development agencies, such as the National Development Agency of Uruguay (ANDE) and the National Research and Innovation Agency (ANII) to promote economic projects circular that involve civil society and SMEs.

80. The GCIP Framework consists of ten child projects (ten different countries), all of which are connected to the three driving pillars. More specifically, the three GCIP pillars are:

- a) Pillar 1. Transform innovative early-stage clean technology solutions into commercial enterprises
- b) Pillar 2. Strengthening and connectivity of innovation and entrepreneurship ecosystems in clean technologies
- c) Pillar 3. Coordination and coherence of the program

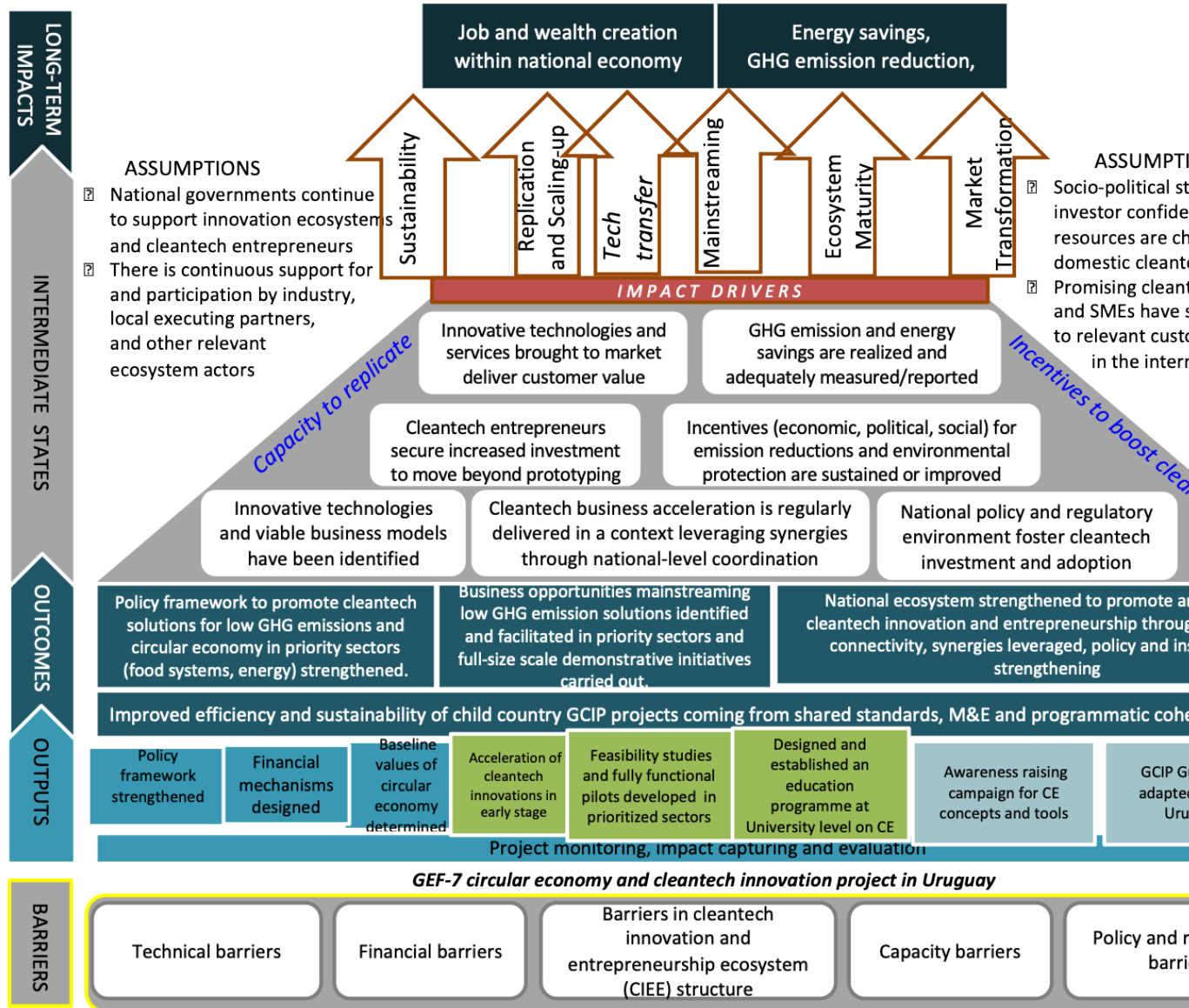
81. The GCIP Framework is derived from the achievements, key lessons learned from implementing a series of phase 1 GCIP projects under GEF-5 and GEF-6. In particular, it is based on the collective feedback of various stakeholders, including national counterparts, partner institutions and SMEs successfully participating in GEF-5 and GEF-6 GCIP projects, as well as strategic partners at the global level.

82. Uruguay will take into consideration the GCIP tools available, in line with the current needs and infrastructure of Uruguay. The project will link the cleantech innovation and entrepreneurship ecosystem (CIEE) of Uruguay to the global network of CIEEs in other GCIP partner countries. It will also receive support from the GCIP global coordination child project (hereinafter referred to as GCIP Global). More specifically, LATU, which has been selected as the national project executing entity (national PEE), may be supported by global project executing entities (global PEEs), including PFAN

(Private Financing Advisory Network), Network for Global Innovation (NGIN), and Cleantech Group (CTG).

**Theory of change (TOC)**

83. The project is based on the underlying theory of change which takes as its premise the need to support Uruguayan industries adopt cleantech solutions to be applied in circular economy settings.



**IF** the above listed outputs are successfully realized; **THEN**: innovative cleantech solutions for circular economy are 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**: cleantech solutions with high-impact potential are supported to reach commercialization, start-ups and SMEs are supported through advanced and gender-responsive business growth and investment facilitation services, the CIEE in Uruguay is strengthened and interconnected, and the efficiency and sustainability is ensured through coordination and coherence with other GCIP country projects, as well as impacts and progress 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.

FIGURE 3: THEORY OF CHANGE

## **Project description**

### **Component 1: Policy and regulatory framework strengthened**

#### **Outcome 1.1 Policy framework to promote cleantech solutions for low GHG emissions and circular economy in priority sectors (food systems and energy) strengthened**

84. The purpose of component 1 is to strengthen Uruguay's enabling environment for the development and commercialization of circular economy and cleantech solutions, through developing an appropriate legal framework and policy instruments for systematically promoting entrepreneurship innovation. The objective is to develop and establish evidence-based policies and regulatory frameworks to foster the development of circular economy and cleantech solutions. Outcome 1.1 of this project corresponds with Pillar 2 of the GCIP Framework: Cleantech innovation and entrepreneurship ecosystems strengthened at national levels and connected at the global level.

#### **Output 1.1.1 Assessment framework (1) including indicators developed and baseline values quantified to evaluate the performance of circular and low GHG emission technologies**

85. The development of Circular Economy and Climate Indicators measuring performance and contributions will allow evaluating of the progress and impact of Uruguay's activities and actions implemented as part of this project and beyond. Assessment and analysis gained from the indicators therefore will enable the design and implementation of evidence-based policy actions and regulations to promote cleantech innovations and circular economy solutions.

86. Uruguay has taken steps towards the development of Circular Economy indicators based on international experience, but the development of a consistent framework appropriate for Uruguayan value chains is needed. Additionally, the country is building an Environmental-Economic National Accounting System, based on UN framework, that will contribute to support the indicators data requirements.

87. To that end, a Technical Team will be assembled at the start of the project, consisting of 5 experts (at least 40% women). The Technical Team will analyze and propose appropriate indicators considering data availability and requirements. The selected indicators will be presented to the Project Steering Committee (PSC) for validation. The Technical Team will also undertake consultations as

relevant with key national authorities and stakeholders (at least 15 entities) especially in selecting the indicators to be included in the framework. Once the framework and the related indicators would have been validated by the PSC and key stakeholders, the Technical Team will conduct a baseline study, and also define a methodology to update the baseline, as well as the recommended reporting and dissemination channels. The Technical Team will also conduct at least 3 workshops for explaining the methodology and potential use of the indicators for decision making to at least 60 stakeholders including policy makers, national authorities, private sector representatives and financial institutions (with at least 40% women participants).

**Output 1.1.2** Three evidence-based policy instruments developed and compiled as a policy recommendation report (3 instruments developed)

88. Under this output, three evidence-based policy instruments will be developed in the below areas:

- a) regulatory environment to promote circular economy schemes (including business models) and low GHG emission technology implementation in priority sectors
- b) promotion of social and environmental responsibility within the target sectors
- c) increase in market opportunities contributing to circular economy

89. The three policy instruments will be compiled into a policy recommendation report, which will also present international and national best practices, case studies and specific sectors analysis. The policy recommendation report will provide a factual basis for identifying and designing instruments for promoting circular economy and cleantech solutions in Uruguay, and will benefit from findings and analyses gained through output 1.1.1. The policy recommendation report should also address international and national best practices on at least these areas:

- a) Regulations and enabling normative frameworks for promoting the circular economy and cleantech innovation in Uruguay, in particular for application to food system and energy sectors
- b) How to enhance the environmental responsibility approach of business and productive activities, to incorporate sustainable practices as part of their core business models, promoting efforts beyond strict compliance with norms and standards.

90. The policy recommendation report will also include a roadmap, to guide the implementation of recommended actions and the three policy instruments. At least 4 workshops will be conducted to present main findings and recommendations to key stakeholders (at least 20 entities, with 40% women participation). These workshops will also serve as a stakeholder consultation and validation opportunities, and feedback received through these workshops will be reflected in the finalization of the policy instruments and the roadmap. At least one workshop for each of priority sector will be carried out, to exchange ideas on the policy actions recommended, and to collect the opinions of private and public actors directly involved. Stakeholders should include private associations linked to food system (chamber of industry, agriculture cattle associations, technological centers working on food systems). For energy sector, the focus of the report will be placed in using energy surpluses to decarbonize other sectors, such as industry and agriculture.

91. Additionally, research on market opportunities derived from recent trade agreements and other trade regulations (particularly European Union ? MERCOSUR agreement), will be carried out, to strengthen the international business and investment opportunities for Uruguayan cleantech companies and solutions, as well as to incentivize their compliance with stringent environmental standards.

92. Based on the recommendations from the policy report, the key stakeholders' workshops, market opportunity research results, and other relevant inputs, new policy and/ or regulation drafts (or revision of existing policy and regulations) will be developed and efforts will be conducted to ensure its approval.

**Output 1.1.3** Draft policy (1) for financial and non-financial incentives developed including guidelines (1) for establishment of a non-grant instrument

93. One crucial aspect for an enabling policy framework to address is lowering barriers faced by entrepreneurs and firms to raise financing for cleantech and circular economy solutions. Financial barriers arise, among other factors, from uncertainty about the profitability of innovative solutions, lack of tailored tools for assessing business models risks and other market failures associated with cleantech products and solutions.

94. Therefore, this output will explore and identify non-grant financial mechanism to support early stage cleantech and circular economy solutions best suited for Uruguay, in close collaboration with banks and other financial institutions. Innovative tools for Uruguay such as green bonds, crowdfunding and other strategies to leverage finance will be considered.

95. Additionally, non-financial incentives to catalyze private sector engagement as cleantech solutions providers or customers of cleantech solutions will be explored. Initiatives such as awards for firm performance in energy efficiency, circular economy practices and alignment to sustainable development goals, as well as certifications for recycling in plastic and green certification in tourism sector could act as starting point for generating incentives for firms and institutions to develop and uptake cleantech and circular economy solutions.

96. Based on the above research and consultations, a draft policy for financial and non-financial incentives will be developed, including specific recommendations for Uruguay and a set of guidelines for the establishment of a non-grant instrument. The draft policy will be disseminated to at least 20 entities, and presented to at least 10 key policy makers and senior officials in key ministries for review and consideration as part of the ongoing policy making processes.

**Output 1.1.4** Financial mechanism (1) designed and business plan for the financial mechanism developed to promote investments in circular economy and low GHG emissions technologies

97. Based on the results of output 1.1.3, especially the set of guidelines for the establishment of a non-grant instrument, this output will design a financial mechanism to promote investments in circular economy and low GHG emissions technologies. A key dimension of this output is the focused consultation and coordination efforts with financial institutions and other partners, to operationalize one non-grant based financial mechanism to promote investments in circular economy and low carbon technologies that is accessible by start-ups and SMEs. At least 10 national and sub-national financial institutions, as well as key private sector entities, will be consulted and engaged in the validation of the business plan of the financial mechanism.

98. A financial expert will be recruited to design the financial mechanism and to develop its business plan. The specifics of the financial mechanism, including its funding size and scope, selection and disbursement criteria etc. will be determined based on findings of preceding outputs under component 1. The business plan of the financial mechanism will include, among others:

- a) resource mobilization strategy
- b) operationalization plan
- c) partnership strategy
- d) sustainability strategy

<b>Output</b>	<b>Activity</b>	<b>Responsibility</b>	<b>Budget</b>
1.1.1	1.1.1.1. Convene a Technical Team to analyze and propose appropriate indicators, and elaborate the baseline	LATU	\$20,000
	1.1.1.2. Presentation and proposal to the Project Steering Committee, relevant national authorities, and stakeholders of nationally appropriate indicators to evaluate performance of circular economy and climate change to support and strengthen policy framework	LATU	\$10,000
1.1.2	1.1.2.1. Development of policy recommendation report on best practices within the circular economy and cleantech solutions into priority sectoral frameworks and associated roadmap, to be promote in Uruguay	LATU	\$20,000
	1.1.2.2. Workshop with key stakeholders to share policy findings and to promote social and environmental responsibility within the food system and energy sector	LATU	\$5,000
	1.1.2.3. Market research and policy-relevant recommendations identified for developing market opportunities within the circular economy	LATU	\$10,000
	1.1.2.4. Development of new policy / regulation draft or revision of existing policy / regulation based on the identified areas.	LATU	\$10,000
1.1.3	1.1.3.1. Identify areas of cooperation between local banks to establish a financial mechanism that utilises green bonds and other strategies to leverage finance for circular economy.	LATU	\$10,000
	1.1.3.2. Identify non-financial incentives based on best practices and lessons learned from national and international experiences	LATU	\$5,000
	1.1.3.3. Development of financial and non-financial incentives report, including recommendations and guidelines for implementation	LATU	\$2,000
1.1.4	1.1.4.1. Design a financial mechanism (1) that utilises green bonds and other strategies to leverage finance for RE power generation and the circular economy in collaboration with local banks and financial institutions.	LATU	\$30,000
<b>TOTAL</b>			<b>\$122,000</b>

**Component 2: Circular economy solutions are identified and implemented in Uruguay through acceleration and commercialization of cleantech innovations**

99. The purpose of component 2 is to enhance Uruguay's capacities to develop and implement cleantech and circular economy innovations with market potential. To that end, support will be provided to early-stage innovations to become profitable businesses, through business validation and acceleration tools, and facilitation of investment and partnerships for technology demonstration and pilots. Additionally, activities will be carried out to ensure a systematic approach to identifying and supporting cleantech and circular economy innovations, allowing for continuity after finalizing the project. This component corresponds to Pillar 1 of the GCIP Framework: Transforming early-stage cleantech innovations into market ready enterprises.

100. Priority of innovations supported under component 2 will include initiatives such as biochemical or high value-added products from secondary materials generated mainly from food systems, such as meat, milk, poultry, wool and rice sectors. The project also aims to identify circular technological solutions for the opportunities detected, by creating new materials from agro-industrial secondary materials and conduct further research to identify the scalability potential and the market value that the production of high added value products could generate. The project will promote that the opportunities detected considering the renewable energy surplus to power new industrial processes and technological solutions to use renewable energy surplus should be identified. A previous analysis and process identification will be a primary input for pre-feasibility studies (including social, economic and environmental dimensions) that this project will carry out.

101. Digitalization and new technologies can play a major role in the contribution towards a Circular Economy. The identification of sectoral challenges and the evaluation of challenges that could be tackled with new technologies will represent an important item to pursue, understanding the benefits that Industry 4.0 offers. Special interest will be placed on the development of projects that bring together Industry 4.0 technologies and Circular Economy among the prioritized sectors.

### **Outcome 2.1: Business opportunities mainstreaming low GHG emission solutions identified and facilitated in priority sectors**

**Output 2.1.1** Early-stage circular economy and cleantech innovations identified and accelerated into enterprises (at least 60, 40% women-led) through GCIP or related processes, with at least 3-5 solutions receiving intensive support

102. Developing a pool of experts in circular economy and cleantech innovations is critical to providing a systematic and wholistic support to early-stage innovations. These experts will provide guidance to potential innovators and entrepreneurs to identify business opportunities and innovative solutions in priority sectors. To this end, a pool of experts will be trained and certified (at least 20, 40% women) to accompany and support entrepreneurs throughout the ideation and business development processes, and also provide mentoring, coaching, and judging support. The GCIP guidebooks and methodologies will serve as a reference. The training and certification of the experts could take in reference the GCIP methodologies, tools and resources. This activity will be conducted with consideration for geographical coverage to ensure nation-wide capacity building across all regions of Uruguay.

103. In addition, the pool of circular economy and cleantech innovation experts are expected to positively influence the circular economy and cleantech innovation and entrepreneurship initiatives in Uruguay at large, thereby contributing to the long-term sustainability of the project's contribution to Uruguay's transition to circular economy.



104. It will be possible to identify aspects needed to develop an environmental seal that will foster businesses? incentives in adopting circular economy schemes. Strengthening the links among universities, research centers, entrepreneurs, financing sectors, and private sector will be key to foster a multidisciplinary approach. Additionally, favoring symbiosis between industries and start-ups will be fundamental to contribute to the transition of the current linear production processes towards circular business models.

105. Three rounds of competition-based GCIP Accelerators, or existing similar local processes, will be conducted, focusing on the priority sectors and technologies mentioned above. The GCIP Accelerators or related processes could be organized in two phases, first aimed at raising awareness of business opportunities in the development of clean technologies, described later as ?Pre-Accelerator?, and the second ?Accelerator? stage with a curriculum designed for early-stage solutions in their business development.

106. The Pre-Accelerator? supports ideas in the nascent stages to develop as initial concepts (improving concept formation and proof of concept) as well as improving the ability of innovators and entrepreneurs to communicate and initially validate their concept. through workshops, hackathons, start-up camps or mini-competitions. The Pre-Accelerator support will be provided to all interested innovators and entrepreneurs (at least 20 participants per round, with at least 40% women participants). The Pre-Accelerators could be designed as a 10-day (7 days virtual/3 days in-person) programme held 6-8 weeks prior to the Uruguay Accelerator application deadline, , intended to lead to increase in the applicant pool and to higher-quality of solutions applying to the Accelerator.

107. As part of the accelerator rounds, business challenges may be explored, to promote development of demand driven solutions, and to engage the private sector in the uptake of solutions developed. The Accelerators will be conducted through alliances and partnerships with other institutions working in the innovation and entrepreneurship in Uruguay. The Accelerator will build on other existing processes seeking to foster innovation for circular economy and cleantech in Uruguay, such as competitive calls from development and innovation agencies. Such partnerships will also be beneficial for the Accelerator participants and alumni in identifying business and market opportunities and they will have higher visibility and potential to be identified and selected to receive further support through mentorship, acceleration and other available national instruments. Therefore, instruments corresponding to the acceleration process will be articulated and coordinated with the research, innovation and development agencies established in Uruguay, such as ANII and ANDE.

108. Some of the tools available through the GCIP are the methodologies and approaches for pre-acceleration, acceleration, advanced acceleration and post-acceleration. These tools, and others already implemented in Uruguay, will be taken into account to design the acceleration rounds. Below are the tools of the GCIP Program.

109. The GCIP Accelerator is a four- to six- month curriculum designed specifically to support cleantech innovations stemming from developing and emerging countries, to develop viable business models and grow cleantech enterprises. Through the GCIP Accelerator, a cohort of cleantech innovations with high-impact potential are identified and invited to receive intensive business and entrepreneurship mentoring and coaching to accelerate their growth as businesses. Support is provided to improve their business skills and investor pitch and in connecting them to potential business partners, financiers, or investors. The goal is for participating enterprises to validate, among others, their market, product, and technology leading to their first investment and customer. The tailored mentoring programme combines international expertise through an ongoing training programme with carefully chosen mentors to support the entrepreneur teams. Specific guidance can be provided to help

the enterprises to maximize their potential climate benefits and to minimize any negative environmental or social impacts identified, particularly relating to local climate risks.

110. The GCIP approach also provides Advanced Acceleration and Post Acceleration services to a select number of innovative solutions and businesses with high-impact and commercialization potential. Advanced Acceleration is focused on building individual businesses in a manner that is tailored to their needs, in contrast to a focus on a whole cohort of the GCIP accelerator. The interventions under the Advanced Acceleration support would still be time-bound, but the level of support would be specific to the needs of those start-ups and will be underpinned by a few key webinars. The objectives and milestones would also be very precise and outcome focused per each participating team, such as: entering the first overseas market, closing a partnership, investment agreement or raising venture capital and corporate investment. Unlike a mentor-mentee relationship under the annual accelerator with defined coaching roles (e.g., specialist and general mentors) advanced acceleration requires hands-on tailored support and direct operational input. This would typically take the form of an Executive in Residence (EIR) who would be a senior executive or serial entrepreneur with experience of growing cleantech ventures. They work intimately with a start-up on tackling operational, financial and strategic issues relating to a very specific targets outcome.

111. The GCIP Post Acceleration support requirements are much deeper and broader and highlight customized to the business stage of each enterprise and solution. Effective support requires an ability to respond quickly and authoritatively to urgent questions from alumni ventures. This could include guidance/facilitation on investment (e.g. close a VC investment or an IPO), team development (e.g. filling team gaps, recruitment etc.) and entry into new markets (e.g. market intelligence, connection.

112. This project could also be informed by GCIP's approaches and methodologies for Advanced- and Post- Acceleration services, to select at least 3 to 5 innovative solutions for circular economy and cleantech, and provide tailored and focused support towards their commercialisation.

113. Throughout all rounds of the GCIP Accelerator or related services developed in Uruguay, special attention will be paid to gender mainstreaming activities, as outlined in the Draft Gender Mainstreaming Action Plan (Annex I). These include: (i) recruitment of women trainers, mentors, judges; (ii) efforts to ensure that women and men are given equal opportunity to access, participate in and benefit from the project; and (iii) awareness raising. The project will also seek to ensure women empowerment through (i) specific training and mentoring to promote women innovators, entrepreneurs, start-ups; and (ii) design of specific prizes and follow-up support programmes for innovative start-ups that will have a significant impact on women's entrepreneurial development and gender responsive employment creation. In addition, the UNIDO Environmental and Social Safeguards Policies and Procedures (ESSPP) will be strictly followed.

114. In support of this output, the following support will be provided by GCIP Framework to PMU at no additional cost:

- a) GCIP guidebooks for Accelerator, Advanced Accelerator, and Post-Accelerator, including e.g., proposed schedules; eligibility requirements and selection criteria for the participants; competition rules; training curricula and handbooks for applicants, experts (mentors, trainers, judges), and EIRs ? from NGIN
- b) tools for 1) assessment of needs of GCIP Uruguay entrepreneurs (applicants, participants, and alumni), 2) planning and monitoring of key GCIP Uruguay events ? from NGIN

- c) cross-border networking and matchmaking opportunities and for start-ups/SMEs with internationally recognized mentors, GCIP alumni enterprises, corporations, investors, and governments ? from NGIN
- d) platform for GCIP Uruguay alumni enterprises to showcase their cleantech innovations at high-level national and international events (including GCIP Global Forum and other major international events) ? from NGIN
- e) a series of trainings/webinars 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 ? from NGIN

**Output 2.1.2** Capacity needs assessment to promote cleantech solutions conducted (1), and formal education program on circular economy developed (1)

115. Under this output, activities will be carried out to build national capacity for a systematic approach to identify and support cleantech and circular economy innovations targeting working professionals and as part of university education. The objective is to contribute to building of an enabling environment that identifies and facilitates innovations and business solutions for circular economy and climate action, beyond the scope of the project.

116. To that end, a capacity needs assessment will be conducted, to identify capacity needs and requirements to promote cleantech solutions, and assess the gaps, weaknesses and strengths for systematic production and acceleration of cleantech solutions, and enhancing competitiveness in local and global markets. This activity will have a nation-wide coverage, putting particular attention to different needs at local level.

117. The findings of the capacity needs assessment will inform the development and implementation of a comprehensive training programme for to enhance capacity of professionals in the theory and practice for the circular economy, will foster the adoption of circularity in business models. Additionally, the program could catalyse networking and collaboration among university research centres, technological institutions, entrepreneurs and private sector.

118. A formal education programme on circular economy at the university level will be developed. Currently, most universities have short courses on different topics related to circular economy. Generally, these courses are part of undergraduate or graduate programs, where the focus is not the circular economy to facilitate multi-disciplinary approach and mainstreaming of circular economy concerns in all disciplines and studies. Examples include:

- a) Catholic University of Uruguay
  - o Environmental Engineering Degree ? School of Engineering
  - o Circular Economy Course ? Master in Public Policy

b) University of the Republic:

- o Green Chemistry and Biorefineries ? School of Chemistry
- o Circular Economy Business Models ? Master in Business Administration
  - c) University of Montevideo:
- o Circular Economy Course ? Centre for cleaner production
  - d) ORT University:
- o Sustainability and creativity methodologies

Output	Activity	Responsibility	Budget
2.1.1	2.1.1.1. Conduct training and certification of at least 20 experts (mentors, teachers, business coaches and judges) with at least 40% women through at least 2 trainings	LATU	\$20,000
	2.1.1.2. Conduct 3 GCIP Accelerator rounds or related process focusing on the priority sectors (food systems, power to X) with at least 20 semi-finalists and 5 finalists per round selected from a pool of at least 50 applicants	LATU	\$30,000
	2.1.1.3. Support business validation of at least 3 to 5 innovations in food systems, power to X with high impact and commercialization potential	LATU	\$68,000
2.1.2	Activity 2.1.2.1. Conduct capacity needs assessment (1) for systematic production and acceleration of cleantech commercialisation	LATU	\$10,000
	Activity 2.1.2.2. Design and establish a comprehensive training and education programme (1) at university levels in Circular Economy	LATU	\$20,000
<b>TOTAL</b>			<b>\$148,000</b>

**Outcome 2.2 Innovative cleantech solutions for circular economy with low GHG emissions in priority sectors demonstrated in full-size scale**

119. Outcome 2.2. focuses on the piloting and demonstration of innovative solutions, and some funding is reserved as pre-seed or seed funding for demonstration of at least 4 fully functional solutions.

**Output 2.2.1.** Feasibility studies (at least 5) conducted and financing mobilized resulting in at least two fully functional food system cleantech solutions demonstrated

120. A series of pre-feasibility studies will be carried out to assess the viability of most promising cleantech/circular economy solutions and processes for food systems? secondary materials (including effluent nutrient circularity) and technologies for renewable electrical energy surplus usage (Power-to-X technologies). These studies will include technical as well as business models analysis.

121. As stated before, nutrient circularity processes, which allows use of Nitrogen and Phosphorus from effluents as biofertilizers and to apply the organic matter for soil carbon sequestration purposes, will require pre-feasibility studies. There already exists an ongoing research for dairy farms that aims to assess the potential that dairy effluents have for the previous objectives. Therefore, the pre-feasibility studies will be mainly conducted in others productive sectors that currently lack technical assessments.

To define the technologies on which these pre-feasibility studies will be carried out, it is essential to identify those markets that will be able to recognize and integrate the value of the potential products offered and drive their demand.

122. Based on the information gathered and the opportunities identified through the pre-feasibility studies, as well as the project's activities and other mechanisms, most promising cleantech solutions will be selected to conduct more in-depth analysis. At least five feasibility and technical design studies of pilot plants and pilot projects will be conducted, to identify solutions for the production of new high-added value products from food systems secondary materials (green chemistry) and nutrient circularity projects. Pilot plants will be considered as those that aim to prove technology in small scale, and pilot projects, as those that are aimed to prove full-scale replicability and economic sustainability.

123. Based on the result of the feasibility studies, the project will co-finance, together with public or private entities, at least two cleantech innovation pilots, contributing towards cutting-edge technologies and capabilities development. As previously stated there will be opportunities in a wide range of Uruguayan sectors: e.g. meat sector, poultry production, food consumption, dairy production, where the focus will be the secondary materials upcycling processes, where more sophistication and added-value are integrated.

**Output 2.2.2** Feasibility studies (at least 3) conducted and financing mobilized result in at least two fully functional Power-to-X plants commissioned

124. A series of pre-feasibility studies will be carried out to assess the viability of most promising cleantech/circular economy solutions and processes for food systems' secondary materials (including effluent nutrient circularity) and technologies for renewable electrical energy surplus usage (Power-to-X technologies). These studies will include technical as well as business models analysis.

125. Technological solutions to use renewable energy surplus will be identified. Regarding Power to X, these studies will cover different technologies and users (public and private sectors). Information already available about viable opportunities will act as a baseline for the pre-feasibilities studies that this project will cover. The National Directorate of Energy has studied a viable option to substitute fuel oil for electricity, and, therefore, tangible opportunities appear in the development of projects in this sector. Currently, the dairy industry is one that still consumes fossil fuels in the food sector, and, as an example, there are viable opportunities of Power-to-Heat by using electric boilers. Other viable options could be related to using the energy surplus for milk-powder dryers, where electrical energy would be a complementary source of energy of fossil fuel boilers. Even though some studies are already developed, the GEF project will facilitate further research to identify other Power-to-X opportunities.

126. At a national level there exists a potential to decarbonize the industry of around 1TWh/year, substituting fossil fuels (fuel oil, LPG, NG) by renewable energy surplus. Specifically, for SMEs there exists an opportunity of 290 GWh to use the surplus for heating purposes.

127. At least three feasibility and technical design studies will be carried out for those projects that have been identified as a potential viable opportunity in the preliminary pre-feasibility studies and other analysis carried out for power-to-x solutions. As a result of the feasibility studies, the GEF project will co-finance, together with public or private entities, at least two cleantech innovation pilots, contributing towards cutting-edge technologies and capabilities development.

128. To promote the energy surplus usage, some mechanisms will be explored. Dairy, meat and baking industries offer interesting opportunities for the renewable energy surplus usage. This mechanism will

intend to engage the public and private sector to continue decarbonizing their processes. This could be made by offering an attractive energy price, ensuring a certain amount of energy during a fixed time framework. The mechanism could contribute up to 20 MW of new installations that use renewable energy surplus.

129. Additionally, since 2018, MIEM, ANCAP (national oil company) and UTE (state owner utility) have been generating inputs that today allow us to launch the "Uruguay H2" project. This project seeks to generate the conditions for the development of public-private investment in Green Hydrogen in Uruguay, seeking to promote, in the first instance, the decarbonization of heavy and long-distance transport.

130. Simultaneously, by making green hydrogen available in Uruguay, it will be possible to move towards obtaining chemical products with a low carbon footprint (Methanol, Ammonia, e-fuels, Green Fertilizers, Green Fine Chemical Products, Green Steel, etc.). The GEF project also aims to facilitate investigation for Power-to-Chemicals.

<b>Output</b>	<b>Activity</b>	<b>Responsibility</b>	<b>Budget</b>
2.2.1	Activity 2.2.1.1. Conduct series of technical pre-feasibility and business model analysis for innovative solutions for circular economy	LATU	\$12,000
	Activity 2.2.1.2. Conducts at least five feasibility studies and technical designs evaluations for validation by the PSC (drawing from the accelerator rounds and advanced accelerator services and other selection process in place) to support a circular economy.	LATU	\$60,000
	Activity 2.2.1.3 Pilot two food system solutions with co-financing from other public or private entities	LATU	\$340,000
2.2.2	Activity 2.2.2.1. Conduct at least three feasibility studies for Power-to-X plants for validation by the PSC	LATU	\$60,000
	Activity 2.2.2.2. Commission two fully functional Power-to-X plants with co-financing from other public or private entities	LATU	\$340,000
<b>TOTAL</b>			<b>\$812,000</b>

### **Component 3: Project monitoring, impact capturing and evaluation**

131. Component 3 is designed to correspond to Pillar 3 of the GCIP Framework, and will incorporate GCIP-2 programmatic coherence and coordination activities in order to provide support national project executing entities (PEEs) and national project management units (PMUs) of other GCIP child projects, and share guidelines and internal standards as well as promote interaction between GCIP PEEs and PMUs.

132. The purpose of component 3 is to ensure that learning is promoted and disseminated throughout Uruguay and abroad, and that the results of the programme are efficiently monitored, evaluated, captured and shares. The overall objective is to generate understanding and awareness of the GCIP Uruguay's impacts, and in that way to support awareness and engagement of private sector, research institutes, financial institutions and civil society on cleantech and circular economy opportunities,

fostering the uptake and promoting new developments. It corresponds with Pillar 3 in the Global Programme: Programme coordination and coherence.

**Outcome 3.1: Skills and promotion of circular economy delivered at a national level, and efficiency and sustainability of the project ensured through \ coordination and coherence with other circular economy initiatives and GCIP country projects**

**Output 3.1.1** The GCIP internal guidelines for project management teams are reviewed and adapted by the project

133. 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

- a) operational guidelines for the Project Management Unit (PMU) to be established within MIEM
- b) a sustainability and exit strategy for the project

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 Uruguay 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 principles to be applied by the PMU in the course of project management.

134. The PMU will review the guidelines provided by UNIDO and adapt it for operationalization under this project, in consideration of the national priorities and context of Uruguay. The results of the review and adaptation of the guidelines will be fully reflected in the project's annual work plan to be validated by the PSC. In addition, annual meetings for national PEE representatives will be organized across all ten GCIP partner countries to offer a platform for training and exchange of experiences/insights related to the implementation of the GCIP internal guidelines. The PMU will participate in the annual meetings for knowledge exchange and sharing of best practices at international levels.

**Output 3.1.2:** Programme-level knowledge management, communication and advocacy strategy is adapted and implemented by the project

135. A lesson learned during the first set of GCIP projects implemented by UNIDO in 2013-2019 was that an exchange of learnings and experiences across the national PEEs and PMUs is key for their successful operation. To facilitate this exchange, a knowledge management, communication, and advocacy strategy framework will be provided from GCIP Framework 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.

136. The global GCIP knowledge management, communication, and advocacy strategy framework will be shared with the institution nominated by the PSC for review and adaptation to the Uruguay

GCIP approach. In order to facilitate this work, the project will be invited to utilize a global GCIP web platform as the vehicle for internal and external communication at the programmatic level with UNIDO, the global PEEs, and other GCIP countries, and in particular it could serve four key functions:

- a) to support project management by the PMU and UNIDO (as a platform for dissemination of relevant documents, e.g. guidelines, guidebooks, frameworks)
- b) to enable execution of the Accelerator (as a platform for calls for application and their receipt, as well as for submission of assignments and delivery of trainings/webinars during the Accelerator)
- 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).

137. The PMU will review and adapt the GCIP knowledge management, communication, and advocacy strategy framework provide by UNIDO, and develop knowledge management, communication, and advocacy strategies for the project. The strategies will be operationalized by incorporating them as tasks with specific deliverables into the annual work plans.

138. For systematic gender mainstreaming of the project in accordance with the gender action plan (Annex I), the PSC will nominate and/or recruit a gender focal point who will coordinate the execution of gender action plan for all aspects of the project in partnership with all key stakeholders and ministries and partners.

139. GCIP Uruguay will be assigned a section of the global GCIP web platform (i.e. a GCIP Uruguay web platform). The GCIP Uruguay web platform could be used from the pre-accelerator round (call for applications and receipt of applications), during the accelerator round (e.g. for webinars/trainings, submission of assignments), as well as after it (e.g. by alumni companies and potential investors for the purpose of matching, progress tracking). In addition, there will be a special section on the GCIP Uruguay web platform for alumni to share experiences and continuously foster their network.

**Output 3.1.3** Awareness raising campaign conducted and knowledge products (at least 25) published for circular economy concepts and tools, including the promotion of new and smart cleantech solutions and business model opportunities.

140. Promotional materials and events such as policy briefs, impact reports, brochures, webinars, briefing sessions, press releases, social media presence and advertising, etc. will be produced/conducted. The PMU will target to deliver at least 50 knowledge products in total. All promotional activities will be gender mainstreamed, and where relevant seek to raise awareness on gender biases and gender dimensions of circular economy. The awareness raising and knowledge management efforts will be implemented to promote the use of Circular Economy concepts and tools, which includes the promotion of new and smart technologies to improve efficiency and new business model opportunities. The efforts will also share the outcomes of the pre-feasibility, feasibility and business models studies conducted under the projects, and the opportunities and challenges that arise from them. Digitalization, the implementation of new technologies, such as blockchain and IoT will be promoted as tools to strength Circular Economy schemes Additionally, the synergies between the



industrial sector and IT centres/academia will be promoted to help industries to improve processes and increase efficiency. Mechanisms such as hackathons, or challenges where researchers should find innovative solutions for a specific private/public sector's problem will be explored.

141. The Uruguay local web platform will also serve as a national hub for exchange of know-how and expertise on Circular Economy schemes in Uruguay, in particular to gather and provide analysis about green chemistry and biochemical product recovery from secondary materials, nutrient circularity, bio-energy production, and other sustainable waste management. This information will be fundamental for researchers, public and private entities, consultants, and international experts. This local platform should be designed and implemented considering the existing platforms functioning in Uruguay, aiming at knowledge exchange and synergies development, such as the industrial platform for commercialization and by-products and waste, developed by the Chamber of Industries of Uruguay.

142. Additionally, selected circular economy solutions of the accelerator rounds as well as key stakeholders from Uruguay and PMU will participate of the GCIP global forum, where clean technology innovators and entrepreneurs from all countries participating in the GCIP are awarded based on their achievements and successes of clean technology innovation in addressing global environmental and sustainability challenges.

Output	Activity	Responsibility	Budget
3.1.1	3.1.1.1. Review, adapt and operationalize the Global GCIP methodologies, tools and standards for GCIP Uruguay	LATU	\$2,300
3.1.2	3.1.2.1. Review, adapt and implement the Global GCIP knowledge management, communication, and advocacy strategies for GCIP Uruguay	LATU	\$2,000
	3.1.2.2 Identify and train gender focal points within the PEE as well as engaged ministries and partners for coordinated implementation of gender action plan	LATU	\$4,000
3.1.3	3.1.3.1. National outreach and awareness raising campaign targeting cleantech entrepreneurs and SMEs, universities and research centres, financing entities and industry associations (at least 25 awareness raising initiatives/knowledge products)	LATU	\$12,000
	3.1.3.2. Launch and maintain a local Uruguay web platform to share lessons learned and to enable networking between national entrepreneurs and regional networks	LATU	\$12,950
	3.1.3.3. Participate in the Global Forums of GCIP (at least 1 per year)	LATU	\$7,443
<b>TOTAL</b>			<b>\$40,693</b>

### **Outcome 3.2: Project management, monitoring and evaluation**

**Output 3.2.1.** Project activities monitored and reported based on the M&E framework, including a mid-term review

143. A detailed monitoring plan for tracking and reporting on project time-bound milestones will be provided by UNIDO, to be reviewed and adapted by the PMU in collaboration with key project partners at the beginning of project implementation and then periodically updated. The results of the periodic monitoring/impact reports will provide input for period revision to the project's Theory of Change and subsequent implementation strategies. While the theory of change and workplans will be

responsive to the results of the project reports, the overarching framework for the M&E approach will be designed in compliance with UNIDO's standard M&E approach for GEF funded projects. This will include guidelines for preparation of annual progress reports, mid-term review and terminal evaluation reports, as well as preparation and reporting through PIRs, MTRs and TEs as per GEF requirements. In addition, financial audits will be prepared on an annual basis.

144. The GCIP methodology for impact assessment developed by GCIP Global will be shared with the PMU for review, adaption and operationalization to 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), job creation, gender mainstreaming, and investment leveraged. The data will be sex-disaggregated and gender-sensitive, and youth participation will also be recorded.

145. The PMU (and potentially other institutions designated by the PSC) will receive an online training on the GCIP methodology for impact assessment from UNIDO, and subsequently this organization will train (online or in person) all GCIP Uruguay Accelerator semi-finalists (as part of output 2.1.1). After that, further support to provide a training on the GCIP methodology for impact assessment also to other enterprises supported by the GCIP Uruguay could be requested.

146. The GCIP Uruguay enterprises will be expected to periodically provide relevant impact data to PMU for validation and consolidation. The enterprise-level impact data will then be used to develop and publish a GCIP Uruguay 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 Uruguay enterprises by providing increased credibility and visibility. The impact data will also be shared with the GCIP Global for consolidation on the programme level.

147. The PMU also prepare progress review reports every six months, based on the annual work plan, for validation by the PSC and submission to UNIDO. The progress reports will include monitoring of the Gender Mainstreaming Action Plan, the Environmental and Social Management Plan, and the Stakeholder Engagement Plan. In addition, an external mid-term review of the project will be conducted halfway through project implementation. The PMU will be responsible for facilitating the mid-term review and submitting its results to the PSC and UNIDO for validation.

148. The ESSPP considerations, as well as gender dimensions and baseline for gender related targets (as outlined in the Gender Mainstreaming Action Plan, Annex I) will be appropriately captured in the GCIP Uruguay M&E plan, in the progress review reports including inputs to the GEF Project Implementation Reports (PIRs), the external mid-term review report, as well as in the collection and assessment of relevant data.

#### **Output 3.2.2** Independent terminal evaluation conducted

149. An independent, external final technical review will be started six months prior to the expected completion date of the project. The final technical review will focus on the assessment of project progress and impact, as well as its long-term sustainability, with due consideration of the ESSPP and gender mainstreaming aspects. There will be a final technical review report prepared that will also include recommendations for follow-up activities. UNIDO will be responsible for conducting the final technical review.

<b>Output</b>	<b>Activity</b>	<b>Responsibility</b>	<b>Budget</b>
3.2.1	3.2.1.1. Prepare Annual Progress Reports every six months (6 in total) for validation by the PSC	LATU	\$6,000
	3.2.1.2. Track and report project results based on the GCIP monitoring and evaluation (M&E) framework	LATU	\$8,000
	3.2.1.3. Conduct an external mid-term review	UNIDO	\$12,000
	3.2.1.4. Conduct technical and financial audit reports each year	LATU	\$6,000
3.2.2	3.2.2.1 Conduct an external, independent terminal evaluation	UNIDO	\$30,000
<b>TOTAL</b>			<b>\$62,000</b>

**D. Alignment with GEF focal area and/or impact program strategies**

150. This project is designed in consistency with the first objective of the GEF-7 Climate Change Focal Area Strategy, i.e. to promote innovation and technology transfer for sustainable energy breakthroughs, as indicated in the Report of the 54th GEF Council Meeting, Summary of Negotiations of the Seventh Replenishment of the GEF Trust Fund (Document GEF/C.54/19/Rev.03), from 24-26 June 2018 (p.49)".

151. The proposed project will promote innovation in clean technologies to build sustainable innovation ecosystems for small and medium-scale enterprises and start-ups. This will foster commercially viable clean energy technology innovations in Uruguay that will have lasting positive effects on the global environment, as well as on development of a dynamic and vibrant local market for clean technologies. The project prioritizes circular economy and cleantech innovations in the domains that are fully aligned with GEF-7 priorities and programming directions, including electric mobility, accelerating energy efficiency, decentralized renewable energy power (mini-grids) with energy storage, and also innovations related sustainable cities and sustainable food systems.

152. More specifically, this project will help cleantech enterprises (SMEs and start-ups) in Uruguay 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.

**E. Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing**

153. Uruguay requires further incremental technical and financial assistance from GEF in strengthening of its institutional capacities and promoting clean energy technology innovations for long lasting positive effects on environment and socio-economic benefits by enhancing economic green growth. This assistance is essential to encourage and ensure the required stable co-financing particularly by attracting foreign and domestic investments for employing advanced technologies with all related benefits.

154. 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. However, due to existing barriers before mentioned, GEF funding is crucial. This will enable to address the barriers and stimulate development of a dynamic local market for a long-term shift in SMEs and innovation towards clean energy technologies and achieve long lasting positive effects on the global environment. As a result, this will allow a balance between growing economic activity and its global environmental impact.

155. Uruguay 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. Update for Uruguay: In total, at least 86,000 tCO<sub>2e</sub> of direct GHG emission savings and 430,000 tCO<sub>2e</sub> of indirect tCO<sub>2e</sub> emissions should be mitigated thanks to this Uruguay project, expecting to translate into cost effectiveness of 10 USD/tCO<sub>2e</sub>.

156. Furthermore, in case that the GEF funding will not be provided to assist Uruguay in these areas, it is very likely that clean technology innovations will not be adequately developed at the market (or at very low level distributed at the national level). There will be still 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, strengthening partnerships with the private sector interested in investing in clean energy technologies, and providing support to entrepreneurs and innovators seeking to establish commercial ventures in clean energy technologies.

#### **F. Global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF)**

157. The long-term lifetime of 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 acceleration services and technology piloting and demonstration provided under outcomes 2.1 and 2.2 of this project will therefore 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. Below section describes this approach in detail.

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

158. 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/tCO<sub>2e</sub> avoided is targeted (corresponding to an overall cost per tonne at programme level of USD38-76/tCO<sub>2e</sub>). 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 CO<sub>2e</sub> 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 tCO<sub>2e</sub> by 2030.

159. 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

160. Firstly, a survey carried out by UNIDO of 14 of its GCIP alumni showed that these companies had already generated 600,000 tCO<sub>2</sub>e savings by 2017 and projected to generate over 4.8 million tonnes of GHG emission savings by 2020 (or 340,000 tCO<sub>2</sub>e/year per company). Secondly, the Independent Evaluation Office (IEO) report of eight GCIP projects included a sample of alumni in its annex with projected avoided emissions between zero (either they had not been estimated yet or the cleantech was not related to CCM) and 5 million tCO<sub>2</sub>e 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 tCO<sub>2</sub> per year. If alumni with estimated reduction are included (34) in the calculations, then the median increases to 12,200 tCO<sub>2</sub>/year with the interquartile range from 350 tCO<sub>2</sub> to 81,000 tCO<sub>2</sub>/year. Thirdly, the Mission Innovation Framework for Assessing Avoided Emissions, in which a number of GCIP alumni (selected as part of Mission Innovation's 100 innovative clean energy solutions in 2019) were included, shows for example that Atomberg Technologies (which manufactures an energy efficient fan) is estimated to avoid 5 million tCO<sub>2</sub>e/year by 2030. In turn BEAD, an energy management AI optimization enterprise, is estimated to avoid 319 million tCO<sub>2</sub>e/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 tCO<sub>2</sub>e/year.

161. 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 process acceleration. 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 CO<sub>2</sub>e in Turkey to 29.77 USD/tonne CO<sub>2</sub>e 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.

162. The target of between 5 to 10 USD/tCO<sub>2</sub>e avoided, that is set for the GCIP Framework, translates into avoided GHG emissions per enterprise of between 1,800 to 3,600 tCO<sub>2</sub>e. The provided target range will enable the GCIP country child projects to support a mix of technologies with different CO<sub>2</sub> emission reduction potentials, and in particular allow innovations into the GCIP Accelerators that a) have a relatively low CO<sub>2</sub> 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.).

163. 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.

164. This target-based approach for the estimation of GHG emission reductions will be applied across all 10 child projects under the GCIP Framework (GEF ID: 10408). A GCIP methodology for the calculation and monitoring of GHG reduction potential will be developed by the GCIP Global (GEF ID: 10461) 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.

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Estimation of Global Environmental Benefits of this project (GEF ID: 10453)

165. Some potential high impact areas for GHG emissions reduction identified under this project include:

- a) Low-carbon energy systems which seek to introduce and disseminate energy efficient technologies and clean energy sources to lower the energy demand while maximizing the use of available and sustainable energy resources.
- b) Circular economy systems which target to support the appropriate management tools and technologies for resilient, inclusive and resource-efficient cities and peri-urban that contribute to local liveability and global public goods.

166. This project sets the target of 10USD per 1tCO<sub>2e</sub>. This target references the overall GCIP target of 5 to 10 USD/tCO<sub>2e</sub>, and also the value established from the GEF-5 Biovalor project of approx. 10 USD/tCO<sub>2e</sub>. Of the total project amount, the funds allocated to the following activities considered in calculating the GHG reduction potential target.

2.2.1.2 Pilots projects USD 680.000

2.2.1.1 Feasibility and technical studies USD 100.000

2.1.2.3 Pre-feasibility studies USD 12.000

2.1.1.3 Bussiness Validation Ideas USD 68.000

TOTAL USD 860.000

Therefore, the solutions and technologies supported under the project are expected to result in an estimated avoided direct GHG emissions over a ten-year horizon between of at least 86,000 tCO<sub>2e</sub> of direct GHG emission savings and 430,000 tCO<sub>2e</sub> of indirect savings (based on an estimated factor of 5). Please note that this calculation takes a conservative approach and only includes potential reduction from enterprises receiving acceleration support. In other words, potential savings stemming from beneficiary enterprises of pre-Accelerator nor potential indirect savings under outcomes 1 or 3 are not considered for the purposes of GEB calculations.

167. Most of the GHG emissions are expected from the substitution of fossil fuels for the use of electrical energy available. Considering the fuel oil consumed by the industry (which is expected to be

replaced), the characteristics of this project's energy component and the target commitment, it is proposed to assign 75% of the emission reduction commitment to the energy component. The following values are considered to perform the calculation:

Fuel oil emission factor = 279 ton CO<sub>2</sub>e / GWh

Calorific value of fuel oil = 10,200 kcal / kg

Electric power emission factor in Uruguay = 25 ton CO<sub>2</sub>e / GWh (average of the last 5 years).

Delta Emission Factor (Fuel Oil - electricity) = 254 ton CO<sub>2</sub>e / GWh

Amount of energy that must be replaced (10 years) to reduce 75% of 86,000 tonnes CO<sub>2</sub>e =  
(86,000\*0.75 / 254) = 254 GWh

Therefore it is projected that 254 GWh, or 914,400,000 MJ of energy savings will be achieved through this project. Please note that these assumptions and estimates are employed with a large degree of uncertainty for the purpose of providing at target before project start, and the actual results achieved through the project will be fully dependent on the types of technologies selected to receive support by the project.

Considering the calorific value of fuel oil, approximately 21,447 tons of fuel oil would be replaced in a 10-year horizon, representing approximately 1.5% of the fuel oil consumed in 10 years in Uruguay.

168. To facilitate the achievement of GEBs, there will be awareness raising and promotional activities during the call for applications to the GCIP Uruguay Accelerator, and also the applicants will be supported in calculating GHG emission reduction potential of their innovations. Additional training on GHG monitoring and calculation will be provided to all semi-finalists. In addition to the substantial mitigation of CO<sub>2</sub> emissions, it is expected that other environmental co-benefits will result from this project. In particular, the circular economy focus of the project is expected to yield GEBs from circular production and consumption such as improved material use, product design, industrial process change, waste management, and material recovery and recycling. Therefore reduction in natural resource extraction, reduced emissions of hazardous chemicals and air pollutants (e.g. NO<sub>x</sub>, SO<sub>x</sub>, PM and CO), reduction in waste (plastics in particular), and improved water quality, are some of the co-benefits expected.

## **G. Innovativeness, sustainability, and potential for scaling up**

### **Innovation**

169. Technology and innovation are the key enablers of low-carbon development, and in the last years, innovation and entrepreneurship as well as low-carbon development have become a high priority for the government of Uruguay, as today's clean technology innovations will shape tomorrow's economy and job market. Several accelerators and incubators ? financed through public and private sources? have been created in silos. The GCIP is unique in its approach of fostering the expansion of SMEs and start-ups into cleantech products and markets. From the assessment of the current policy framework and the identification of innovative technologies to their development and commercialization, the GCIP supports entrepreneurs across the whole innovation value chain to develop demand-driven and investment-ready climate solutions that will have a real impact in Uruguay and global markets. In

contrast to other accelerators and incubator programmes, GCIP not only promotes innovation per se but also uses an innovative approach that is cross-sectoral and multi-tiered to strengthen the national innovation and entrepreneurship ecosystem by building capacity in national institutions, creating strong linkages between the most relevant ecosystem players and by raising awareness among them.

170. Importantly, the GCIP Uruguay 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 enables achievement of not only environmental, but also socio-economic benefits, in that it for example promotes gender equality and women's empowerment. Additionally, the GCIP Uruguay 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 Uruguay does not only focuses on enterprises, but also on strengthening the entire CIEE by building capacity in national institutions, involving and creating strong linkages between the most relevant ecosystem players and by raising awareness of the society at large.

### **Sustainability**

171. The sustainability of this project is ensured by involving representatives from public and private sector institutions and by effectively building local capacity to make sure that the activities under the different components can be carried out by them after project closure. Besides, the comprehensive trainings conducted for participants, judges and mentors will create a critical mass of experts with sound business skills in different regions of the country. This knowledge can be easily transferred to create a virtuous cycle. Finally, the project will support the creation of strong networks and the effective communication channels to maintain them even after project closure. The project will use a strong national partner as executing agency for GCIP Uruguay and strengthen its institutional capacity in order to effectively absorb the knowledge and technical capacity created by GCIP. The policy framework and institutional sustainability 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 sustained after project closure.

172. The objective is for the target enterprises to be commercially viable, and for the accelerator efforts to be embedded in national institutions for post-project continuation of the initiative. The project will aim to build capacity in the lead executing agency and other government departments that can take action to support the CIEE ecosystem and infrastructure, especially in support of circular economy solutions, to incorporate the project's learnings into Uruguay's institutional frameworks at all levels (e.g. policy framework, knowledge, access to finance).

173. Additionally, the GCIP Uruguay will link 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 Uruguay. The GCIP Uruguay will create and provide several tools that can be referred to and used by different CIEE stakeholders beyond the lifetime of project, such as guidebooks, systems, tools, guidelines, website, etc.

174. The creation of the GCIP Uruguay section of the global GCIP web platform to be used also after the project lifetime (as a marketplace, 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 catalyze connectivity between different stakeholders in a long term.

175. A GCIP Uruguay sustainability and exit strategy will be developed based on a framework delivered by the GCIP Global, and it will among other 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 Uruguay).

### **Scalability**

176. The GCIP Uruguay fosters long-term project scalability through multiple strategies. First, the project is closely aligned with national priorities and actively coordinates its activities with ongoing initiatives from government-supported programmes.

177. Second, the GCIP project directly addresses the need for early-stage development support for cleantech and works with existing funds and financial experts within Uruguay to identify financial support leveraged by GEF technical assistance. The commercialization services aim at complementing the training provided during the acceleration process to maximize the ability of each supported alumni to reach the commercialization stage and hence increase the contribution of GCIP to the NDC of Uruguay. By providing support to alumni and other eligible cleantech innovators, GCIP is expected to effectively contribute to job creation, competitiveness, wealth generation and reduce GHG emissions. It is also expected that the project will serve as a catalytic force to advance the innovation and entrepreneurship ecosystem in Uruguay as well as to coordinate and maximize the synergies with national and international relevant players.

178. Thirdly, the ecosystem approach of the project has been conceptualized to support project sustainability. It involves public and private sector institutions throughout and builds capacity in both sectors through components 1 and 2 to make sure that the activities under the different components can continue after project closure. The comprehensive trainings conducted for participants, judges and mentors will create a critical mass of technicians with sound business skills in different regions of the country, creating a virtuous cycle wherein in-country expertise enables others in-country to gain more expertise beyond the project's lifetime.

179. Finally, the project is designed to capitalize upon demonstration effects. Activities under components 1 and 2 will provide a platform for disseminating and demonstrating lessons learned within Uruguay and find new opportunities for the development and commercialization of these solutions and products in the region and internationally.

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[ii] Uruguay XXI based on data from BPS for December 2018

[iii] Law No. 15.239

[iv] Law No. 16.858

[v] Inventario Nacional de Gases de Efecto Invernadero 2014

[vi] Estimated value by DNE-MIEM

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- [viii] Considering number of employees: firms with 99 or less employees are classified as SME.
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- [x] National System of Productive Transformation and Competitiveness, created in December 2016, Law 19,472
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### 1b. Project Map and Coordinates

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

While the project is targeted at beneficiaries (entrepreneurs and all relevant CIEE stakeholders, such as universities, policy makers, financiers, project implementers and R&D institutions) from all over the country, the main project events and activities will be conducted in the city of Montevideo. This is due to the 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. The activities to be developed within the framework of this project must have a territorial focus, considering the development of capacities for the entire territory and identifying opportunities for specific initiatives at the local or regional level.

The coordinates of Montevideo are: 34.9011° S, 56.1645° W

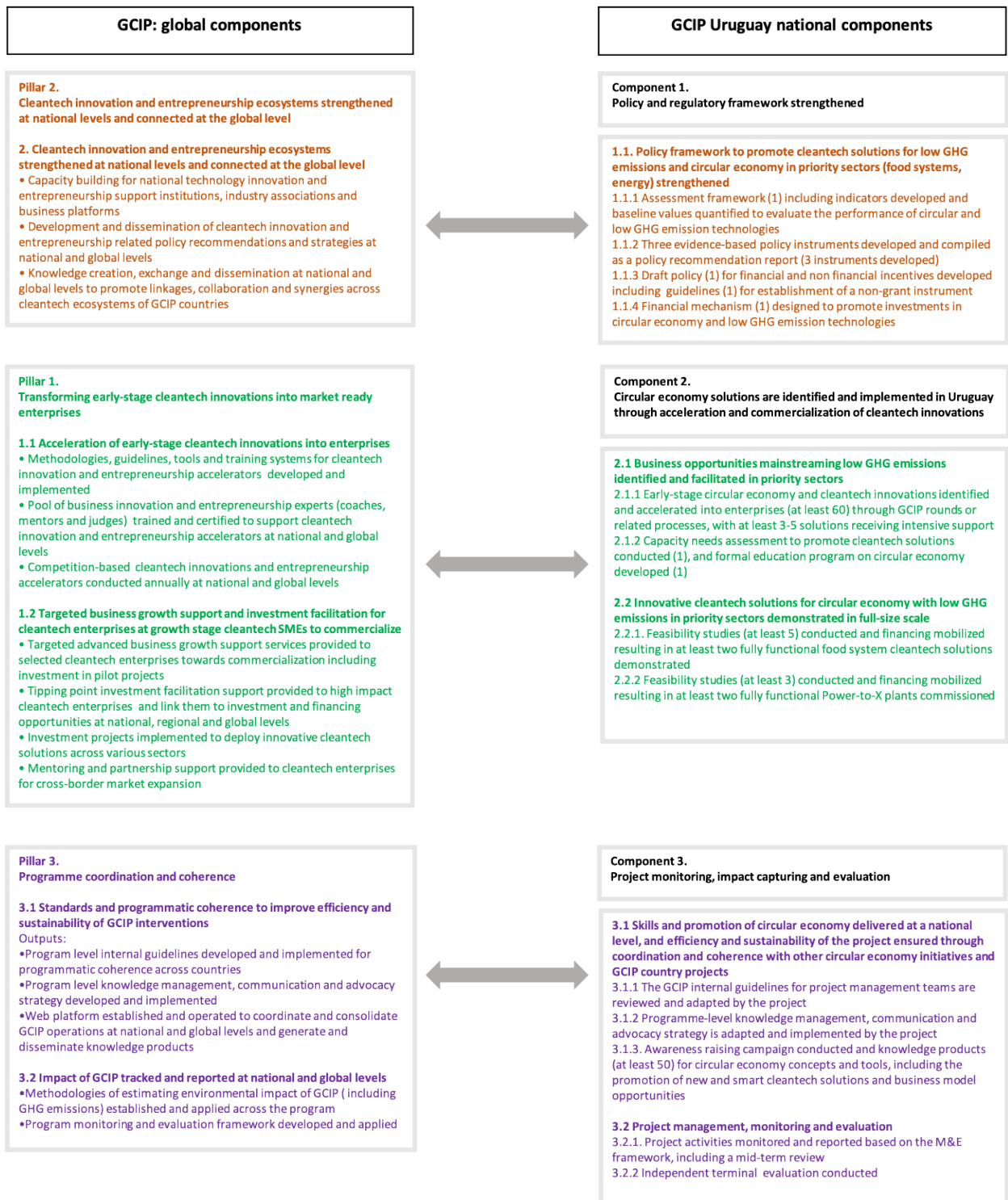


### 1c. Child Project?

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

1. This project is a child project under the GCIP Framework, and where relevant will engage with the GCIP Framework and the GCIP Global to ensure synergies, knowledge sharing, learning, consistency, and efficiency as well as additional support to enable national SMEs to scale globally. The outputs and outcomes from this project will contribute to the overall impact through the number of cleantech innovations, entrepreneurs and SMEs supported, finance mobilized and the resulting green growth, jobs created and GHG emission reductions.
2. The following figure shows how the GCIP Framework and this project are interlinked:

FIGURE 4:  
URUGUAY CHILD PROJECT AND CONTRIBUTIONS FROM/TO  
GCIP GLOBAL COORDINATION PROJECT



3. Where appropriate, the project may also collaborate with and benefit from interactions with the Network for Global Innovation (NGIN) and the Cleantech Group (CTG), which are official partners of the GCIP Framework. It is also expected that this project will collaborate with UNFCCC Climate Technology Centre and Network (CTCN) and the Private Financing Advisory Network (PFAN), which are UNIDO hosted initiatives with expertise in supporting the technology innovation value chain.

Engagement with the GCIP framework is integrated into relevant components of this project and may be applicable to the following main activities:

- a) Methodologies, guidelines, tools for acceleration, and training systems: These will be developed and harmonized at the global level and the national project will focus on adapting these to the national circumstances. Experiences in applying the tools and systems across child project will be used to improve the tools. The global accelerators and global forums will help national enterprises to bring their innovations to the global stage and link with entrepreneurs and from other countries to explore opportunities for joint co-innovation, joint ventures and mobilizing investments.
- b) Enterprise's growth support, investment facilitation and cross border growth support: Through global project, national cleantech SMEs will be supported to expand their businesses to other countries. In addition, the global framework will provide investment facilitation services to national enterprises so that they can be linked to investors (impact, venture, angels, and commercial) at regional and global levels. Furthermore, the global framework will provide support to the national child project in establishing market enabling frameworks to promote investments in cleantech.
- c) Targeted training, innovation policy support, knowledge management, and peer-to-peer networking and learning: The global framework will provide methodologies for training national institutions, development of policies on cleantech innovation and entrepreneurship, and document best-practices. By linking policy makers, institutions, financiers and entrepreneurs across countries, the global framework will facilitate knowledge exchange and documentation of best-practices and peer-to-peer networking and learning.
- d) Programme standards, communication and advocacy, and monitoring and evaluation: to promote coherence and coordination across all GCIP countries, the global framework will develop program guidelines that will be applied by the countries. Through the global web platform that will be developed by the global framework, communications and advocacy will be promoted across countries. In addition, the global framework will develop methodologies for impact tracking, monitoring, and evaluation that will then be applied across countries.

## **2. Stakeholders**

**Please provide the Stakeholder Engagement Plan or equivalent assessment.**

1. Inclusive stakeholder consultations took place during the project design period, which 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 this project. A Stakeholder Engagement Plan (SEP) was developed (Annex H) to outline the strategy for engaging 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. ?

2. The Stakeholder Engagement Plan (SEP) is designed to ensure effective engagement between various stakeholders throughout the lifecycle of the project "Promoting the transition to a circular economy in Uruguay through cleantech innovations". In alignment with the GEF Public Involvement Policy and the GEF Guidelines for the Implementation of the Policy on Stakeholder Engagement, the Stakeholder Engagement Plan seeks to ensure that this project:

- a) Effectively involves the public to enhance the social, environmental, and financial sustainability of projects.
- b) Takes responsibility for assuring that public involvement rests within the country, normally with the government, project executing agency or agencies and with the support of GEF Partner Agencies.
- c) Designs and implements public involvement activities in a flexible manner, adapting and responding to recipient countries' national and local conditions and to project requirements.
- d) Delivers effective, public involvement activities that are broad-based and sustainable.
- e) Includes the appropriate allocation of resources, throughout the identification, design, implementation, monitoring and evaluation of GEF-Financed Activities, to ensure sustained commitments and actions related to public involvement activities.
- f) Carries out public involvement activities in a transparent and open manner.
- g) Has full monitoring and documentation of public involvement.

3. The key stakeholders involved in the proposed child project execution are presented in a stakeholder's analysis matrix further below in this section. The stakeholders include the Government representative bodies, the private sector, universities, multilateral development bodies, local development organisations, and civil society organisations that may be affected by the project activities. All relevant stakeholders were consulted during the project design phase, and will be engaged and consulted as appropriate during the project implementation phase in accordance with the SEP.

4. All relevant stakeholders were consulted on-site to discuss needs, barriers and opportunities for effective project design which would accelerate development of the SME's sector in the cleantech domain. The project management team will be in charge of conducting a coordination with various relevant stakeholders. The SEP and its indicative work plan will also be incorporated into the project's annual work plan to ensure effective and coordinated execution and monitoring across all project activities.

5. The project will involve start-ups and individuals as beneficiaries, that will receive advanced acceleration and post-acceleration support. Technical assistance and funding will be provided. This assistance will be provided by experts consistent of many stakeholder's groups including national and international cleantech experts, universities, private sector representatives etc. The goal will be to attract the private sector's seed funding and to establish operating and designated financing mechanism. The project will work closely with national and international green growth and innovation initiatives such as Partnership for Action for a Green Economy (PAGE), ANII, ANDE and other stakeholders as applicable.

6. Stakeholders will form a comprehensive integrated structure to enhance a synergy among the project partners and serve as the knowledge source of new clean technologies, emerging entrepreneurs, knowledge network, applied research collaboration and additional team members. The table below outlines the key stakeholders of the project and their roles as devised during the project preparation.

TABLE 3: STAKEHOLDER ENGAGEMENT MATRIX

Organisation	Description of stakeholder / nature and extent of influence	Potential Role
Ministry of Industry, Energy and Mining (MIEM)	MIEM is responsible for designing and implementing policies related to the industrial, energy, mining, telecommunications, industrial property and micro, small and medium enterprises. MIEM has an important role in coordinating actions with stated - owned Energy companies. The project supports the mandate of the ministry.	Project support on: ? Connecting with Public institutions and Agencies ? Stated- owned Energy company (UTE) ? Chair of the PSC  Providing: ? Support for strengthening the regulatory and policy framework ? Technical Support ? SME data
Ministry of Environment (MoE)	The MoE oversees the execution of the national environmental policy, of environmental regulation, of sustainable development and of conservation and use of natural resources. MoE has an important role in defining normative, and incentivising technology development and information to support firms? capacities to comply with that normative. The project supports the mandate of the ministry	Project support on: ? Identifying potential technologies to address private sector requirements ? Generating incentives to enhance the up-take of clean technologies ? Member of the PSC  Providing: ? Support for strengthening the regulatory and policy framework ? Technical Support ? Environmental data
Ministry of Livestock, Agriculture and Fishery (MGAP)	MGAP has an important role in defining and implementing public policies and prioritize value-chains, for promoting sustainable agriculture, livestock, and agroindustry in Uruguay.	Project support on: ? Identifying potential technologies to address producers requirements ? Generating incentives to enhance the up-take of clean technologies ? Member of the PSC  Providing ? Support for strengthening the regulatory and policy framework ? Technical Support ? Production data



<p>Ministry of Economy and Finance (MER)</p>	<p>MEF is responsible for leading the national economic, financial and commercial policy, coordinating, planning and executing the fiscal policy, as well as the administration of public resources, promoting the economic and social development of the country.</p>	<p>Project support on:</p> <ul style="list-style-type: none"> <li>? Generating adequate normative framework for promoting sustainable economic and social development</li> <li>? Generating economic incentives to enhance the up-take of clean technologies</li> </ul> <p>Providing:</p> <ul style="list-style-type: none"> <li>? Technical Support</li> <li>? Economic data</li> </ul>
<p>Planning and Budget Office (OPP)</p>	<p>OPP is responsible for the formulation of national and departmental plans, programs and policies, as well as the definition of the government's economic and social strategy.</p>	<p>Project support on:</p> <ul style="list-style-type: none"> <li>? Addressing territorial strategy</li> <li>? Regulatory and normative</li> </ul> <p>Providing:</p> <ul style="list-style-type: none"> <li>? technical support</li> <li>? national and local data</li> </ul>
<p>National Development Agency (ANDE)</p>	<p>The ANDE supports SMEs in Uruguay, to foster their competitiveness, through non-refundable assistance and credits</p>	<p>Project support on:</p> <ul style="list-style-type: none"> <li>? Designing and Implementing the process of postulation and selection of beneficiaries in the acceleration rounds</li> <li>? Supporting capacity building activities for strengthening the innovation ecosystem</li> <li>? Instruments for promoting circular economy</li> </ul>
<p>National Innovation and Research Agency (ANII)</p>	<p>The ANII supports SMEs in Uruguay, to foster their competitiveness, through non-refundable assistance</p>	<p>Project support on:</p> <ul style="list-style-type: none"> <li>? Promoting innovative cleantech and power to x solutions</li> <li>? Implementing acceleration rounds</li> <li>? Supporting capacity building activities for strengthening the innovation ecosystem</li> </ul>
<p>Technology Laboratory of Uruguay (LATU)</p>	<p>LATU provides services to private sector to support innovation, technology transfer and high value solutions.</p>	<p>Project support on:</p> <ul style="list-style-type: none"> <li>? Identifying and promoting innovative cleantech and power to x solutions demanded by firms</li> <li>? Supporting the development of indicators for circular economy</li> <li>? Supporting capacity building activities</li> <li>? As the executing entity of the project, LATU will respond in all cases as indicated by the Project Steering Committee,</li> </ul>

<p>UTE ? Electric Company</p>	<p>UTE is a state-owned company that owns the monopoly in distribution and commercialization of electric energy in Uruguay, and is responsible for the production of most of electricity generated in Uruguay. UTE played a central role in the process of transforming the Uruguay electric matrix, to increase renewable energy participation, and reduce external dependence.</p>	<p>Project support on:</p> <ul style="list-style-type: none"> <li>? strengthening the regulatory and policy framework</li> <li>? Designing incentives for developing and implementing power to x solutions</li> </ul> <p>Providing:</p> <ul style="list-style-type: none"> <li>? Technical support</li> <li>? Data</li> </ul>
<p>Chamber of Industries of Uruguay (CIU)</p>	<p>The CIU is the institution representing the industrial sector of Uruguay in the interaction with government institutions. Aims at promoting industrial development, competitiveness and growth opportunities.</p>	<p>Project support on:</p> <ul style="list-style-type: none"> <li>? Capacity building activities</li> <li>? Training experts and consultants for participating in acceleration rounds</li> <li>? Supporting SME to postulate to acceleration rounds</li> <li>? Identifying cleantech and circular economy innovative solutions for food system</li> <li>? Connecting with SMEs</li> <li>? Awareness raising and information dissemination</li> </ul> <p>Providing:</p> <ul style="list-style-type: none"> <li>? Technical Support</li> <li>? Data</li> <li>? Coordination support between the project (PSC and PMU) and the private sector (industry association members)</li> </ul>

<p>Uruguayan Association of Renewable Energy. (AUDER)</p>	<p>The AUDER is the institution representing the private generators of renewable energies in Uruguay in the interaction with government institutions. Aims at promoting development, competitiveness, and growth opportunities for the sector</p>	<p>Project support on:</p> <ul style="list-style-type: none"> <li>? Strengthening the regulatory and policy framework to promote power ? to ? X solutions</li> <li>? Training experts and consultants for participating in acceleration rounds</li> <li>? Supporting SME to postulate to acceleration rounds</li> <li>? Identifying cleantech and circular economy innovative solutions related to power-to-X</li> <li>? Connecting with energy sector SMEs</li> <li>? Awareness raising and information dissemination</li> </ul> <p>Providing:</p> <ul style="list-style-type: none"> <li>? Technical Support</li> <li>? Data</li> <li>? Coordination support between the project (PSC and PMU) and the private sector (industry association members)</li> </ul>
<p>University of the Republic ? School of Engineering</p>	<p>Research on: Waste valorisation and Circular Economy Climate change</p>	<p>Project support on:</p> <ul style="list-style-type: none"> <li>? Data and indicators for circular economy</li> <li>? Technical knowledge and training for SMEs</li> <li>? Technical viability analysis of clean technologies</li> <li>? Pilot plant for waste valorization</li> <li>? Education program on circular economy</li> </ul>
<p>University of the Republic ? School of Chemistry</p>	<p>Research on: Green Chemistry</p>	<p>? Project Support on:</p> <ul style="list-style-type: none"> <li>? Data and indicators for circular economy</li> <li>? Technical knowledge and training for SMEs</li> <li>? Technical viability analysis of clean technologies</li> </ul>
<p>University of the Republic ? School of Agronomy</p>	<p>Research on: Waste valorisation</p>	<p>? Project Support on:</p> <ul style="list-style-type: none"> <li>? Data and indicators for circular economy</li> <li>? Technical knowledge and training for SMEs</li> <li>? Technical viability analysis of clean technologies</li> <li>? Education program on circular economy</li> </ul>

University ORT ? Centre for innovation and Entrepreneurship	Research and support for entrepreneurs on: Biotechnology Data science Innovation	Project Support on: ? Data and indicators for circular economy ? Technical knowledge and training for SMEs ? Technical viability analysis of clean technologies ? Incubation/ acceleration for cleantech innovators
University of Montevideo ? Centre for Cleaner Production	Research and training on: Cleaner production and circular Economy	Project Support on: ? Data and indicators for circular economy ? Technical knowledge and training for SMEs ? Technical viability analysis of clean technologies ? Education program on circular economy
Catholic University of Uruguay - School of Engineering	Research and training on: Environmental Engineering Circular Economy	Project Support on: ? Data and indicators for circular economy ? Technical knowledge and training for SMEs ? Technical viability analysis of clean technologies ? Pilot plan for food system ? Education program on circular economy
Technological University of Uruguay - Renewable Energies Engineering	Education and project development in Renewable energies	Project Support on: ? Data and indicators for circular economy ? Technical knowledge and training for SMEs ? Technical viability analysis of clean technologies ? Education program on circular economy
Cooperatives	For example: Federated Agricultural Cooperatives (CAF), National Institute of Cooperativism (INACOOB), etc.	Project Support on: ? Proposes, advises, and executes the national cooperative policy ? Knowledge in local development.
National Institute for Agriculture Research	Research on agriculture and Livestock	Project Support on: ? Data and indicators for circular economy ? Technical knowledge and training for SMEs ? Technical viability analysis of clean technologies

7. Potential impacts of Covid-19 on stakeholder engagement:

The ongoing impacts of COVID-19 pandemic (as of March 2021) pose a low threat to stakeholder engagement. Possible re-instatement of COVID-19 containment measures may limit travel and/or

group meetings, reduce available capacity or effectiveness of project execution/ implementation. In order to mitigate these risks, the project will focus on strengthening the capacity of stakeholders, and especially the beneficiaries, for remote work and online interactions 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 rounds or the pilot projects.

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.

Below is a summary of the stakeholder consultation engagement plan. For further details, please refer to Annex H.

Stakeholder group	Purpose	Engagement method	Materials to be used /Reporting	Location	Responsible	Frequency
Direct Beneficiaries	Relevant feedback and level of interest on project activities, training, recruitment of participants and trainers Consultation, grievance on procedure	Project website, training, webinars, workshops, contact with mentors/coaches, project reports and flyers, e-newsletter.	Website posting, emails, on-the-job interaction, presentations, training materials, meeting minutes, project reports, e-newsletters, briefings, press releases, social media,	Electronic, Project office, at beneficiary sites, training/workshop venues	LATU (PMU)	Continuous

Government ministries	Informing, capacity building, developing new policy, governance, impact, and benefits of project implementation	Meetings, training, workshops, official letters, email, website, reporting, e-newsletter	Website posting, emails, presentations, training material, meeting minutes, project reports, e-newsletters, briefings, press releases, social media,	Electronic, Project office, Government offices, training/ workshop venues	LATU (PMU)	As required
Civil society	Feedback on project and policy formulation, adjustment on social and environmental mitigation measures, comments, and suggestions on updating activities, effectiveness of mitigation measures and on impact and benefits of project implementation	Project website, stakeholder consultation workshops, e-newsletters, direct meetings, reporting	Website posting, project reports, e-newsletters, briefings, press releases, social media, presentations, meeting minutes	Electronic, Project office, workshop venues	LATU (PMU)	At least six monthly
PMU/PEE employees	Feedback on project activities, Consultation, grievance on procedure	Meetings, emails, phone calls, exchange of minutes, memos and official letters, website	Emails, face-to-face meetings, website, training material (including on-the-job training), meeting minutes	Project office, electronic, training venues	LATU (PMU)	Continuous

Private sector (SMEs, associations, social enterprises, judges, mentors)	Comments and suggestions on impacts; public opinions; interest in partnerships collaborations; recruit further participants; interest in training;	Direct meetings, training, supervision, official letters, email, website, reporting, e-newsletter, fora, workshops	Website posting, emails, presentations, training material, meeting minutes, project reports, e-newsletters, briefings, press releases, social media,	Electronic, Project office, training/workshop venues	LATU (PMU)	As required
Finance institutions, angel investors, venture capitalists	Comments and suggestions on impacts; interest in partnerships collaborations; interest in training; consultation	Training, investor connect for a, direct meetings and mail regarding investment, website, ecosystem network	Website posting, emails, presentations, training material, meeting minutes, project reports, e-newsletters, briefings, press releases, social media,	Electronic, Project office, training/workshop venues	LATU (PMU)	As required
International /Multi and bi-lateral agencies	Comments and suggestions on impacts; interest in partnerships collaborations;	Direct meetings, Official letters, email, website, reporting, e-newsletter, fora, workshops	Website posting, presentations, project reports, meeting minutes, e-newsletters, briefings, press releases, social media,	Electronic, Project office, at agencies?? offices, workshop venues	LATU (PMU)	Six monthly

Select what role civil society will play in the project:

**Consulted only; Yes**

**Member of Advisory Body; Contractor;**

**Co-financier;**

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

**Executor or co-executor;**

**Other (Please explain)**

### **3. Gender Equality and Women's Empowerment**

**Provide the gender analysis or equivalent socio-economic assesment.**

1. Uruguay has been developing an institutional framework on gender in recent years. Through Law No. 18.104 of March 2017, the National Women' Institute was created as the governing body for gender policies in Uruguay, and the National Gender Council as a space for defining the strategic lines of public gender policies, integrating the State, the Academy and civil society.

2. Likewise, gender mechanisms have been created and strengthened at different levels of government. Commissions, divisions, gender secretariats or similar mechanisms have been created in Ministries, Public Entities and departmental governments. Some examples are the National Plan to Combat Gender-Based Violence and the Equity Quality Program as well as specific laws (Domestic Work Law, the Sexual Harassment Law, the Law of Parental Licenses and subsidies for care).

#### **Gender analysis**

3. Gender equality and the empowerment of women have a significant positive impact on sustained economic growth and inclusive development, which are key drivers of poverty alleviation and social progress. The commitment of UNIDO towards gender equality and women's empowerment is demonstrated in its policy on Gender Equality and the Empowerment of Women (UNIDO Gender Policy 2019), which provides overall guidelines for establishing a gender mainstreaming strategy. Moreover, UNIDO has developed an operational energy-gender guide to support gender mainstreaming of its sustainable energy initiatives. UNIDO recognizes that energy interventions are expected to have an impact on people and are, therefore, not gender-neutral. In fact, due to diverging needs and rights on energy consumption and production women and men are expected to be affected differently by the project.

4. Women entrepreneurship is considered a key tool in enabling women's empowerment. It is often seen as crucial for increasing the quality of life of women in the developing world, a way of triggering changes of the status-quo of women and re-addressing the balance of power within the family. A guiding principle of the programme will be to ensure that both women and men are provided equal opportunities to access participate in and benefit from the project.

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

- a) Gender-sensitive recruitment at all levels where possible, especially in selection of project staff. Gender responsive TORs will be used to mainstream gender in the activities of consultants and experts. In cases where the project does not have direct



influence, gender-sensitive recruitment will be encouraged. Furthermore, whenever possible existing staff will be trained and their awareness raised regarding gender issues.

- b) Considering gender dimensions in all decision-making processes (this will consider but will not be limited to efforts to achieve gender balance/ representation in such processes), including Project Steering Committee meetings.
- c) Collection of gender-disaggregated data.
- d) Consultations with and involvement of stakeholders focusing on gender equality and women's empowerment issues, such as gender experts and organizations, CSOs and NGOs promoting GEEW (providing them with equal voice), e.g. for outreach purposes.

6. The below table summarizes the indicative gender mainstreaming and women's empowerment efforts of the project. Further details are provided in Annex I. During the project inception phase, the PMU will review and validate the Gender Action Plan in collaboration with key stakeholders, and submit for approval by the PSC.

**TABLE 4: GENDER MAINSTREAMING ACTION PLAN**

<b>Stage/Activity</b>	<b>Gender equality measure</b>
Project execution	Gender sensitization workshops will be conducted for all stakeholders involved in GCIP Uruguay; A gender training package (material for national capacity building on gender awareness) will be adapted for Uruguay from the training package developed by the GCIP Global; Gender focal point will be nominated within the PEE. Gender related targets are to be included in the Terms of Reference for the PEE and subcontractors.
Training of GCIP Uruguay consultants and experts	Consultants/experts will be required to complete the 'I know gender?' UN course and the UNIDO gender lens investing e-training; Mentors and judges 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 Uruguay guidebooks	Guidebooks will highlight the need to make special effort to encourage women to apply for the GCIP acceleration 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 material developed for experts.
Application stage for GCIP Uruguay Accelerator	Gender-disaggregated data will be collected in application forms; There will be targeted and gender responsive outreach; As part of the outreach efforts, it will be considered to organize events specifically targeted at connecting women technicians and engineers with businesswomen; A target of 40% women-led enterprise is set for applications to the acceleration services.

<p>Selection of GCIP Uruguay semi-finalists and recruitment of experts</p>	<p>Stringent selection criteria will be defined that provide equal opportunities for both women and men; Women will be involved in the mentoring/training and judging processes so that more role models are created; Efforts will be made to ensure gender balance of judges, coaches, and mentors; Special support will be provided to women to prepare for the competition, e.g. targeted training or mentoring, and women could receive possibility to select their slot, so it does not overlap with their household responsibilities or could be offered safe transport to the competition venue; Evaluation methodology for selection of semi-finalists may consider gender lens investing principles, gender balance within entrepreneur's management teams and beneficiaries, the impact of the product on women, as well as gender-responsive policies within their firms.</p>
<p>Special Awards</p>	<p>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%).</p>
<p>Provision of support to entrepreneurs participating in the GCIP Uruguay Accelerator and related services</p>	<p>Where considered necessary, GCIP will seek to remove barriers to ensure inclusion of women (e.g., segregated financial training might be offered); There is a specific training module foreseen as part of the GCIP Accelerator curriculum to address gender-related challenges and barriers, that will be delivered to both women and men participants; 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.</p>
<p>Forums/events</p>	<p>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 entrepreneurship and gender dimensions in circular economy; Participant data will be gender-disaggregated.</p>
<p>Investment facilitation</p>	<p>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. Awareness will be raised of all stakeholders on Gender lens investing principles through an online gender lens investing training.</p>
<p>Capacity building</p>	<p>Capacity building on gender equality will be mainstreamed throughout the project implementation and with regard to all stakeholders, making sure that PMU knows how to mainstreaming gender in all project activities; The existing National Women's Platform will be enhanced; A gender sensitization training for relevant stakeholders will be organized.</p>
<p>Policy support</p>	<p>Gender and youth dimensions will be considered in policy review and formulation; Gender and youth empowerment policy framework will be developed.</p>

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

Yes

**Closing gender gaps in access to and control over natural resources; Yes**

**Improving women's participation and decision making 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**

1. The private sector is key to the creation and expansion the market of cleantech products and services, achieving GEBs, generating jobs and supporting economic growth. Therefore, private sector is the core focus of the proposed project and its involvements is envisaged in every component of this proposed project. As already elaborated, the project will unlock market potential for innovative start-ups and SMEs in Uruguay. At the same time, the project will work directly with private investors in order to leverage on GEF funds as well as other public sources of funding to be included in the project in its activities related to pilot projects. The project also aims to engage with private sector through promotion and events related activities. The GCIP on a global level has a substantial and successful experience in engaging with the private sector.

2. The project will seek to attract potential start-ups and other SMEs to participate in advanced acceleration and post acceleration phases of the project. Therefore, the project will directly involve individuals and companies that will be accelerated and supported in helping them to secure investment, preferably, from private sector. Within the project, public and private finance support is expected in the concept and product development phases. It is expected that private funding would fully replace public support in the commercialisation phase.

3. Private sector associations such as the Chamber of Industries of Uruguay and the Uruguayan Association of Renewable Energy were consulted during the project design phase. The project will continue to include and engage with private sector associations, and also expand network of private sector stakeholders especially in food and energy sectors. Therefore the Project Steering Committee and the Project Management Unit will continue engagement with the private sector on a rolling basis through institutions and organizations that group companies by sector, such as the Uruguayan Association of Renewable Energy (AUDER) and the Chamber of Industries of Uruguay (CIU), Impulsa Alimentos (private sector engagement programme executed by the Chamber of Industries).

4. The project plans to engage in a coordinated manner with the Uruguayan financial sector, especially with private banks through the Sustainable Finance Roundtable set up within the framework of the Renewable Energy Innovation Fund (REIF). The Sustainable Finance Roundtable comprises of actors from the private financial sector and will work, among other aspects, on the homogenization and adoption of criteria by the financial sector for the recognition of green investments. The REIF will also create synergies with this project in the promotion and adoption of clean technologies, in particular

renewable energies and electric transportation, by leveraging private banking to finance the adoption of these technologies. The REIF has allocated 10 mil USD to promote financing in the aforementioned technologies and will allow the financial sector to generate more experience in this type of financing. Additionally, the project will seek to attract private sector in supporting cleantech innovations by leveraging it through various national and international initiatives. For example, it is expected that PFAN and NGIN will contribute to the project in terms of introducing Alumni with the private investment sector on the international level.

## 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):**

### General Risk Analysis

Risk identification	Level	Risk assessment
<p>Political environment: The national Government would withdraw political support for environmental control measures and for RE surplus usage.</p>	<p>Low</p>	<p>The Government of Uruguay is firmly committed to its objective to modernize the national economy and become a competitive player in the globalized market. Cleaner production methods and environmental control are key to long-term sustainability of the traditional agriculture, farming sectors and other food systems, which are the mainstays of the economy. Identifying and adopting new value-added processes are fundamental for the competitiveness of the sector. On the other hand, the renewable energy surplus topic fits into the efforts that MIEM is undertaking. Given the political stability in the country, it is highly unlikely that this context would change and affect the implementation of the Project. Moreover, the Nation Energy Policy is supported by all political parties in the Parliament.</p>
<p>Macroeconomic</p>	<p>Low</p>	<p>In macroeconomic terms, Uruguay showcases steady GDP growth rates (1.6% in 2018) although its fiscal deficit continues to rise constrained by a relatively inflexible spending structure. Rating agencies across the board have confirmed their ratings on Uruguay and hold a stable or positive outlook. Standard &amp; Poor's credit rating for Uruguay stands at BBB with stable outlook as of 2017. Moody's credit rating for Uruguay was last set in 2019 at BAA2 with stable outlook. DBRS's credit rating for Uruguay is BBB (low) with stable outlook.</p>

<p>Coordination: The variety of the actors/agencies interested could create an inadequate coordination between stakeholders.</p>	<p>Low</p>	<p>Uruguay has a cohesive group of Ministries offering the opportunity to implement joint strategies under the same national policy. Additionally, there is experience working in these types of projects. This GEF will be the third one where the three Ministries work coordinated. Moreover, the Ministries involved are working on specific lines associated with this project, ensuring the active engagement of all of them.</p> <p>Even though the previous generate a good environment of work, the project will centralize the management organization in a group with a coordination to:</p> <ol style="list-style-type: none"> <li>1- Ensure adequate information availability for decision making, and sharing information with all stakeholders for transparency.</li> <li>2- Adjusting capacity to needs, including staffing, awareness, skills, logistics, tools and infrastructure, in order to accomplish tasks and targets.</li> </ol>
<p>Legal and regulatory framework</p>	<p>Low</p>	<p>As it was stated, the Integral Solid Waste Management Law has elaborated aligned with the Sustainable Development Goals, which integrates into its objectives the minimization of solid waste generated in the origin, the promotion of the recovery, and added value processes as recycling. The law will create a framework of action bringing new business opportunities, and at the same time, it will minimize the environmental pollution and will reduce the pressure on the use of some raw materials.</p> <p>In this sense, the Law will contribute to boost the creation of Circular Economy schemes associated with the recovery and valorization of the materials. However, the benefits that could arise from the integral waste law, will depend upon the timeline that the regulatory framework will be developed. In addition, and because of the new elected parliament, it could be considered another source of risk if the law is reviewed, delaying even more its application and/or potentially changing its scope.</p>

<p>Private sector engagement: Private sector could be hesitant to promote and invest on circular economy projects.</p>	<p>Moderate</p>	<p>Investments in waste valorization are generally financially unrewarding for private companies, compared to alternative investments. Environmental control is still unfamiliar for many companies and presently not perceived as part of the business. Some large companies, however, take a proactive approach and recognize the added value of more sustainable, cleaner production chains.</p> <p>Other companies will need technical assistance to keep up with increasingly stringent residues control limits. In the short term, i.e. the timeframe of the Project, only proactive enterprises are expected to develop a particular technology once a viable opportunity is detected.</p> <p>The successful demonstration of a number of pilot facilities under this Project is expected to greatly reduce the perceived risks and create more confidence among end-users. In the medium- and long-term, policy measures, enforcement of regulation, technical assistance and financial incentives will be key for further market development. Even though the national framework is working on the line that is expected, the policy and regulatory framework is still under development, therefore, the associated risk related to private sector engagement is considered moderate.</p>
<p>Limited interest shown by the public, and industry, for the GCIP support leads to too few applications or applications of low quality</p>	<p>Low</p>	<p>The innovation and start-up ecosystem is already thriving in Uruguay, characterized by an important number of incubators and entrepreneur organizations, high political drive, and a strong SME base, which is the pillar of the national economy.</p> <p>However, the demand for a cleantech component has not been met, with few start-ups and entrepreneurs able to bring their technology and services to market, although there is wide awareness of the potential market opportunities that clean technology applications have to offer.</p> <p>For these reasons, it is very unlikely that SMEs and entrepreneurs show little or no interest in the proposed GCIP project, and in the accelerator rounds. Based on the existing extensive network of organizations involved in the start-up and innovation environment, it is rather highly likely that the GCIP project will be met with great enthusiasm and success.</p>
<p>Sustainability risk</p>	<p>Medium</p>	<p>The interest of the Uruguayan government to work on the issue (made explicit in the formulation of this project) and the involvement in the initiative of multiple local actors generates a reasonable basis on which to expect that the approach to the issue will transcend the duration of the project.</p> <p>Background information developed by the Uruguayan government in similar projects allows us to predict that the sustainability of the project will be adequately considered throughout the execution and an exit route from the project will be foreseen that will allow maintaining the generated capacities.</p> <p>Exit strategies will be developed for each project and it is envisaged that the management and financing of the PMU will be handed over to a national entity.</p>

<p>Incentive and financial support system are insufficient</p>	<p>Low</p>	<p>The capacity and interest of financial institutions to invest in cleantech and circular economy solutions are key elements in successfully supporting innovative solutions towards commercialization. Therefore, the project will seek linkages to other financing schemes for clean energy technology promotion from the onset, including Uruguay's Renewable Energy Innovation Fund (REIF) approved by SDG UN Fund. Through the GCIP network, the Uruguayan start-up/SME will benefit from exposure to national, regional and global investors and potential customers/partners. In addition, the project will design a financial mechanism to promote investments in circular economy and low GHG emission technologies (output 1.1.4).</p>
<p>Low success rate of new innovative cleantech businesses</p>	<p>Medium</p>	<p>The GCIP aims to strengthen the Uruguayan innovation and entrepreneur ecosystem by identifying and nurturing cleantech innovators and entrepreneurs with skills required to develop and commercialize their innovations. This project will focus on comprehensive post-competition acceleration, by linking Alumni with potential investors and by 'de-risking' them for financial institutions. This approach will support selected innovators and entrepreneurs to turn their innovative ideas into market-ready products and services ready for international commercialization.</p>

Climate Change Risks	Low	<p>In the past decade, Uruguay has experienced more intense and frequent floods and droughts due to climate change. The country's economy is tied to agro-industrial chains and service, and its geographic location in the continent and the R?o de la Plata basin exposes the population, infrastructures, and services to different climate related threats, making Uruguay particularly vulnerable to the adverse effects of climate change. However, the risk of these identified climate vulnerabilities negatively affecting this project is low. The extent to which climate risks affect the outputs and outcomes of the project will depend on the circular economy and cleantech innovations supported as part of the project.</p> <p>Possible impacts of climate risks could relate to cleantech innovation dependent on biomass or water supplies where their raw material sourcing is affected. There are also potential impacts that could affect any SME such as through logistic disturbances, disruptions to production, effects to working conditions or to the market, increased utility prices and costs for insurance, finance, or imports.</p> <p>To safeguard against climate risks the screening of technologies for selection for support from the project will include an assessment of the climate risks, over the next 30 years, and where a risk is identified it will be necessary for the SME/entrepreneur to propose suitable adaptation or management measures. Climate risk will be included in the E&amp;S criteria used in selecting solutions to be supported by the project. GIZ's Climate Expert Tool could be used as one tool available to the enterprises. Technologies that will receive support from the project will continue to be reviewed against local climate risks, as part of the support provided within the accelerator. Adaptation strategies will also be prepared if necessary and could again use the GIZ' Climate Expert Tool. For more details on the mitigation measures, please refer to the Environmental and Social Management Plan (Annex J). It is important to note that climate change also presents opportunities, particularly for cleantech innovation. For example, new building materials or insulation to protect against extreme temperatures, improved weather warning systems or energy storage solutions to provide flexibility.</p>
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**COVID-19 risk analysis**

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

### COVID-19 opportunity analysis

Opportunity	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 analysed at the national level and shared with the GCIP Uruguay entrepreneurs. Examples of former GCIP alumni responding to new business opportunities by providing innovative solutions during the pandemic are summarized here: <a href="https://www.unido.org/stories/cleantech-innovators-take-covid-19">https://www.unido.org/stories/cleantech-innovators-take-covid-19</a> .
New business opportunities to build back better for business continuity and economic recovery post-COVID-19	High	By design, the project engages private sector to promote and scale up cleantech products and services, and business models with resilience to climate change (e.g. circular business models). Information on relevant new business opportunities as well as policy/regulations will be added to the GCIP Uruguay 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.**

### Implementation

1. UNIDO as the GEF Agency will be responsible for the implementation of the GCIP Uruguay, 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**

2. GCIP Uruguay will be executed by a national PEE with support from three global PEE. Latu was nominated by the GEF OFP in Uruguay to be the national PEE. LATU was assessed using the HACT methodology. The outcome of the assessment as well as additional documents including updated policies and statements were evaluated by UNIDO and concluded that the necessary internal controls and functions as well as safeguards were in place to satisfy funding partner requirements. LATU, as the PEE, will act and respond in all cases as indicated by the Project Steering Committee (made up of three ministries, Ministry of the Environment, Ministry of Industry, Energy and Mines, and Ministry of Livestock, Agriculture and Fisheries), and UNIDO. LATU 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 GCIP Global PEEs to the PMU and LATU at no additional cost to the project.

3. MIEM will host the Project Management Unit, and designate internally or recruit externally project management personnel to form the project management unit (PMU). The PMU will consist of at least a National Project Coordinator (NPC) and a Project Assistant (PA). The PMU will be responsible for the day-to-day management, as well as monitoring and evaluation of project activities, as to be specified in the project work plan. PMU will ensure that the Stakeholder Engagement Plan, the Environmental and Social Management Plan, the Gender Action Plan are fully reflected in the project's annual work plans, the corresponding budgets (including PMC) and are tracked and monitored as part of project M&E.

### **Project Steering Committee (PSC)**

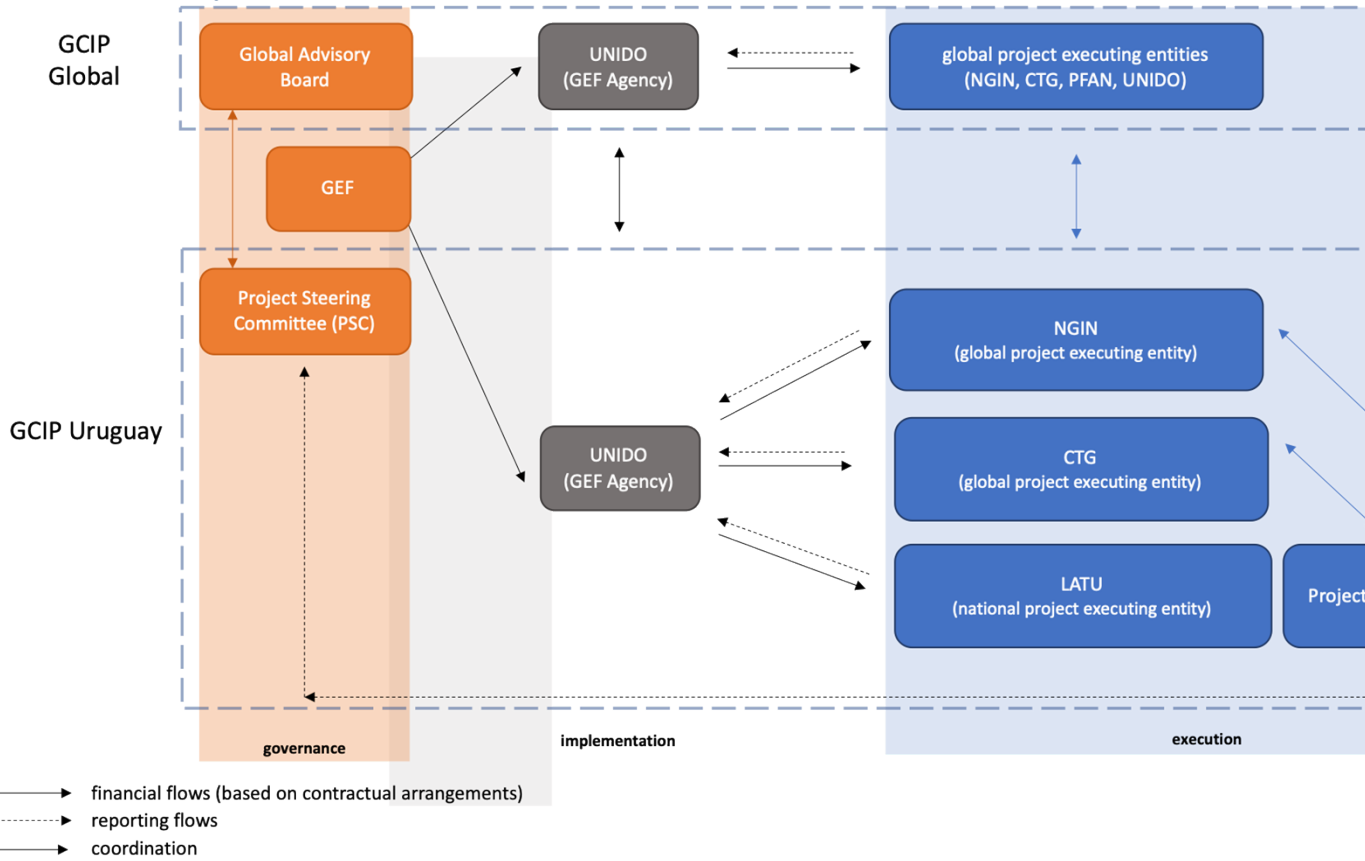
4. To ensure proper oversight and institutional ownership of the project, as well as to provide advisory inputs, an independent project steering committee (PSC) will be established. The PSC will comprise of representatives from three key project partners, namely Ministry of Industry and Energy (MIEM), Ministry of Livestock, Agriculture and Fisheries (MGAP), and Ministry of Environment (MoE). Each institution will appoint a representative the level of National Directors. The PSC will be chaired by MIEM. 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).

5. A Technical Committee will be nominated to advise the PSC of technical aspects of the project as required, and Project Management Unit (PMU) will act as the secretariat of the PSC and report to the PSC.

FIGURE 5: NATIONAL INSTITUTIONAL ARRANGEMENT



FIGURE 6: INSTITUTIONAL ARRANGEMENT OF THE GCIP FRAMEWORK



### Global Advisory Board

6. 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

7. This project will be conducted in coordination with ongoing GEF projects in Uruguay, 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.

### **Legal Context**

8. The Government of the Republic of Uruguay agrees to apply to the present project, *mutatis mutandis*, the provisions of the Standard Basic Assistance Agreement between the United Nations Development Programme and the Government, signed on 12 December 1985 and entered into force on 20 September 1988.

### **Transfer of assets**

9. 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.

### **Coordination with UNIDO initiatives**

10. It is also foreseen that the project is closely coordinated with other participating countries in *the Global Cleantech Innovation Programme for SMEs*, also implemented by UNIDO in neighbouring countries, and other similar ongoing country and regional initiatives to avoid overlap of activities. This could also create opportunities for Uruguay, e.g. through the participation of Uruguayan entrepreneurs at the Cleantech Global Forum or other shared training programmes for the project teams and other events. Additionally, the project will be executed with taking into account lessons learned and experience during implementation of other GEF/UNIDO Cleantech and international development projects.

### **7. Consistency with National Priorities**

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

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

1. The country has gone through a path of institutional strengthening and prioritization related to climate change in various areas and through the sensitization of numerous actors from the economic, social, and academic sectors of the country, from the public and private spheres. This interinstitutional process reached its consolidation during 2016, with the elaboration of the National Climate Change Policy (*Política Nacional de Cambio Climático*, PNCC) in a participatory and multi-sectoral manner, during which the First Nationally Determined Contribution (NDC) under the Paris Agreement was elaborated during 2017 and was submitted to the Conference of the Parties to the United Nations Framework Convention on Climate Change.

2. Uruguay's emissions levels are strongly related to food production: using the metric GWP100 AR2, 75% of the total emissions in 2017<sup>[i]</sup> corresponded to the agricultural sector. In this sense, the reduction of emissions from food and beef production are priorities. After ratification of the Paris Agreement on Climate Change (2015), Uruguay submitted the first National Determined Contributions in 2017. The country commitments for 2025, takes into account the fact that Uruguay is a developing country, with low

contribution to global GHG emissions coming mostly from food production. In this line, the objectives aim at decarbonize the economy and increase its resilience, without threatening food production. Based on the assumption of no significant changes in the production structure of the country, Uruguay committed to unconditional reductions for each of the following GHG emission: CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, as well to additional reductions, conditional on specific additional means for implementation, such as funding, technological transfer, and capacity building. The commitments are expressed in terms of intensity of emissions related to GDP, and in reference to the base year 1990. Specifically, the NDCs establish under conditional to additional means of implementation the reduction of methane emissions in at least 75 % of dairy farms, through the utilization of technologies that eliminate discharges to water flows, the applications of good effluent treatments and/or by the adoption of nutrient recuperation systems.

3. Energy and transport are also among the NDCs' main priorities. On conditional specific means of implementation, a reduction of 29% in CO<sub>2</sub> emissions intensity per GDP unit in the Energy sector, including transport, and industrial processes, has been proposed. The National Energy Policy, adopted in 2005, promoted an important focus with regards to renewable energy. The incorporation of installed capacity of wind, biomass and photovoltaic solar energy along with hydropower, has reached almost all the national electrical power generation. This is expected to generate surpluses of approximately 2,000 GWh/year[iii] during the next 10 years. Therefore, there is an enormous opportunity to continue decarbonizing productive processes by using the renewable energy surplus the country has. Special attention will be given when studying synergies between food systems and the renewable energy surplus mentioned, allowing to reduce food system's fossil fuel consumption.

4. In 2016, a **National Climate Change Policy** was approved in 2016, establishing long-term strategic guidelines for Uruguay to attain sustainable development, by promoting a more resilient and less vulnerable society, with intra and inter generation equality, based on economic, environmental and social sustainable economy. With a time horizon to 2050, the document identifies 5 dimensions to face climate change challenges: i) governance; ensuring participation of all stakeholder, ii) knowledge; aiming at increasing understanding and awareness, iii) social; focused in improving adaptability and resilience of the population, iv) environmental; focused in increasing adaptability and applying best practices in ecosystems and resource management, and v) productive; reduction of GHG emissions in agriculture, livestock and transport, energy matrix diversification, sustainable tourism, promotion of low-carbon and resilient industrial and commercial models and waste and water-waste management based on management and circular economy hierarchy.

5. In 2018, through a participative process, and building upon the existing national policies, commitments and normative framework, the National Environmental Plan for Sustainable Development was elaborated. The Plan provides a framework to efficiently align the actions and efforts of all stakeholders participating in the environmental national policy. Taking into consideration the country commitments in the NDC and the 2030 Agenda, the plan focuses in three dimensions:

- a) Healthy environment for a good quality of life, focus on the state of environmental systems, conservation of ecosystems and its relation to people wellness.
- b) Sustainable economic and productive activities, addressing sustainable consumption and production models, focused on the use and management of natural resources and environmental impact of productive processes
- c) Environmental management and citizenship, aiming at strengthening social capacities for environmental management, based on access to education, quality information and justice.

6. Based in these three dimensions, the plan establishes 13 objectives, with specific goals for 2030 and actions to implement. The plan aims at promoting an inclusive and sustainable economy for climate change mitigation, through adoption of clean energies, waste valorization and principles of circular economy, preservation of ecosystems, sustainable use of resources and sustainable production and consumption patterns. From the 13 objectives, the following 5 objectives of the plan are directly related to the environmental impact of food production and energy sector in Uruguay:

- a) Objective 1.1. Ensure urban and rural populations right to enjoy a healthy and balanced environment, through waste reduction, waste valorization and better waste management.
- b) Objective 2.2. Promote sustainable productive practices to reduce environmental impact of agriculture and livestock, focusing in agroecology and responsible use and management of soils and reduction in chemical phytosanitary products
- c) Objective 2.3 Reduce environmental impacts of industry, mining, infrastructure and services, through adequacy of regulatory framework and incorporation of best practices and technologies, instruments for planning and participation, through promoting the development and use of clean technologies and renewable energy sources
- d) Objective 2.4 Development of sustainable consumption and services models, through fostering technologies for responsible use of water, energy efficiency and sustainable mobility.
- e) Objective 3.2 Generate information and knowledge for environmental management, through promoting development of informatic tools, remote-sensing, as well as supporting private initiatives for innovation and technological developments.

7. For each objective, different actions were identified for attaining the 2030 target, mainly related to: strengthening the normative framework, building institutional capacity and awareness, and promoting development and adoption of innovative clean technologies.

8. One particular emphasis within the plan's framework, inspired by the 2030 Sustainable Development Agenda, is the promotion of an inclusive and sustainable economy for climate change mitigation. This principle will be achieved by promoting areas that align with the circular economy concept such as, clean energies, as well as preserving ecosystems and biodiversity, promoting sustainable use of land and resources, including the adoption of lifestyles in harmony with nature; and promoting sustainable production and consumption patterns.

9. In 2008, the Uruguayan Government established a National Energy Policy 2005-2030 (NEP), endorsed by a Multiparty Energy Commission in 2010. The main goal of the NEP was to satisfy the energy demand at appropriate costs in a sustainable way for every person, contributing to the country competitiveness and promoting efficient consumption. In order to achieve NEP goals, it included specific short-, medium- and long- term goals, strategic guidelines and lines of action that should guide its implementation. The four strategic guidelines established were: i) institutional: Government's role as policy director; ii) supply: diversification with strong national component; iii) demand: promoting energy efficiency, iv) social: energy as a human right.

10. The main goals established by the NEP for energy supply included reaching 50% of renewable energy in the primary matrix, aiming at using at least 30% of agroindustry and urban waste for energy generation in the short run (2015), and achieving an optimal use of them for 2020. Additionally, the policy established the goal of setting pilot plans for new energy sources and technologies, in order to foster the country capacity for using and developing new energy process and technologies.

11. Consequently, the framework of this project has a strong consistency with national priorities and with the efforts the country is undertaking towards climate change vulnerability.

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[i] Retrieved from: Inventario Nacional de Gases de Efecto Invernadero 2014

[ii] Estimated value by DNE-MIEM

## 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.**

1. The project will benefit from institutionalised and systematic knowledge sharing and management approach of the GCIP Framework, under which partner country projects will exchange knowledge and information, sharing best practices and lessons learned. The results and insights gained under this project will be shared with GCIP partner countries and UNIDO at the international level, as well as with key stakeholders at the national level based on the knowledge management strategy developed under outcome 3 of the project. As the project progresses and implementation results become tangible and demonstrable, the knowledge management system will be used to develop benchmarks for clean tech innovations in Uruguay and to develop case-studies for promotional activities. Therefore, the knowledge management postulates main framework of this programme and facilitates to capture findings, institutionalizing learning and knowledge sharing across participant countries by making the structure of the programme accessible and replicable, as well as bringing selected finalists from around the world to showcase their innovations at the GCIP Global Forum. These modalities facilitate the transfer, innovation and dissemination of low carbon technologies, contributing to a key challenge area under the UN Framework Convention on Climate Change.

2. A key aspect in knowledge management will be the creation of a national pool of cleantech experts (mentors, coaches, judges) which allows sharing of best practices and business skills among participants and stakeholders in a structured manner. The national pool of experts will be created and trained to provide entrepreneurs required skills to enable their participation in this programme, and ultimately to bring their innovations to be commercialized at the market. The PMU will be responsible for including various stakeholders (as indicated in section 2 on stakeholders), to ensure that the selection process for entrepreneurs is inclusive and impactful in identifying the right candidates for the programme.

3. This is in line with the one of key government's goals, to expand innovative activities to ensure sustainable economic development and support scientific potential and innovative activity that is crucial for a knowledge-based economy. In order to support innovative entrepreneurship and developing new activity types and products in clean energy technology innovations, the government measures will be taken to establish industrial parks and innovation zones applying advanced technologies and designing knowledge intensive products and technologies in Uruguay.

4. In light of above, the continuation of GCIP programme will be further build upon the experiences and lessons learned at the global level. This will contribute to creating a vibrant platform and network members. It can represent a key partner for the implementation and delivery of this programme and also facilitates the transfer, innovation and dissemination of green technologies, a key challenge under the Framework Convention on Climate Change. The new trends in innovation cleantech areas and integration of lessons learned, based on completed and ongoing GCIP projects, will be incorporated. Through organization of trainings, workshops, roundtable, expert group meetings, printing materials and through the

Cleantech platform, the knowledge sharing will be strengthened as the programme expands into new countries and cleantech areas. These combined set of outreach activities will ensure recognition of and support for the programme beyond the competition cycle. In order to ensure sustainability of this project beyond project duration and to attract more interest, the national coordinators will be tasked to ensure the visibility of the programme and accessibility of key findings through the Cleantech Platform. This will provide the opportunity to reach out to future entrepreneurs and investors, while raising public awareness on clean energy technologies and ultimately contribute to the climate change mitigation. A number of regional and international events to bring project teams and semi-finalists together will be organized, as stated in the outputs. The project will strive to create a vibrant and sustainable Cleantech ecosystem through partnerships with various stakeholders, holding expert meetings with partners and SME associations to review successes in the various competition cycles and establish commitments to moving forward.

5. For its sustainability and further innovation fostering in the region, the inclusive and sustainable methods will be also discussed, in order to identify and apply tangible solutions to existing challenges in the country. These results will be made accessible to the public through the Cleantech platform and accelerator programme.

6. All project reports will be shared with the relevant counterparts and disseminated through their institutional websites and UNIDO's open data platform. All knowledge management material will be gender mainstreamed. For instance, gender responsive training and advocacy material will not perpetuate gender stereotypes through presenting women only in their traditional roles.

7. This project will bring support to Uruguayan Government for pushing regulatory policies promoting Circular Economy, and will help Uruguayan institutions like the National Agency for Development in Uruguay (ANDE) and the National Agency for Research and Innovation (ANII) to support CE projects.

**TABLE 5: OVERVIEW OF DELIVERABLES RELEVANT FOR KNOWLEDGE MANAGEMENT**

<b>Deliverable</b>	<b>Timeline</b>
A pool of experts (trainers, mentors, judges) created	Intensive focus for Year 1-2 of project implementation/execution with regular updates after every six months.
The knowledge management, communication, and advocacy strategy framework reviewed and adapted to GCIP Uruguay; including regular online trainings that are gender sensitive and actively seek participation from women (Output 3.1.2)	Integrated throughout the project, with intensive focus in the second quarter of every implementation year.
Policy briefs, impact reports, brochures, webinar sand other types of promotional materials distributed through briefing sessions, press releases, social media presence, advertising, etc. ? in line with the GCIP Uruguay knowledge management, communication, and advocacy strategy	Intensive focus for Year 1-2 of project implementation/execution with regular updates after every six months.
Local web platform launched and maintained (output 3.1.3) as a national hub for knowledge exchange and interactions	By the 6th month of project implementation/execution, and maintained throughout the project duration
Participation in GCIP Global Forum	Annual

## 9. Monitoring and Evaluation



## **Describe the budgeted M and E plan**

1. Under this project, project monitoring and evaluation (M&E) will be conducted in accordance with established UNIDO and GEF procedures: ?According to the Monitoring and Evaluation policy of the GEF and UNIDO, follow-up studies like 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.? The overall objective of the monitoring and evaluation is to provide visibility of the progress being made in the implementation of the project by observing and reviewing project activities. The evaluation team reports and verifies the actual progress against the work plan approved by the Project Steering Committee. Thus, M&E enables the project manager to take corrective measures in case there are significant deviations between the forecasted work plan and the actual implementation.

2. 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 work plan approved by the PSC. In case there are significant deviations between the forecasted workplan and actual implementation, corrective measures will need to be taken. By making reference to the impact and performance indicators defined in the Project Results Framework, the monitoring plan will track, report on, and review project activities and accomplishments in relation to GEBs including the energy savings achieved and GHGs emission reductions generated as a result of the project. The PMU will be responsible for continuous monitoring of project activities implementation, and performance. The PMU will be responsible for tracking overall project milestones and progress towards the attainment of the set project outputs and will also be responsible for narrative reporting to the GEF. Co-financing mobilisation efforts and results will also be monitored and reported on through the M&E plan, including through the annual GEF PIRs. The GEF OFP will be engaged in the M&E activities, such as regularly receiving all project progress reports, and providing inputs and comments, etc.

3. This project will benefit from a harmonized GCIP approach. A GCIP M&E framework provided by the GCIP Global, including time-bound milestones and deliverables, will be employed by this project. The M&E procedure will consist of project inception, project progress report, PIRs, a project final report and tracking tools following GEF requirements. A detailed monitoring plan for tracking and reporting on project time-bound milestones and accomplishments will be prepared by GCIP Global in collaboration with the PMU and project partners at the beginning of project implementation and then periodically updated. There will be an external mid-term review of the project conducted halfway through project implementation. Gender dimensions and baseline for gender related targets will be appropriately captured in the GCIP Uruguay M&E plan, in the progress review reports, as well as in the collection and assessment of relevant data. The plan will encompass monitoring of the Environmental and Social Management Plan, the Stakeholder Engagement Plan, the Gender Mainstreaming Action Plan, and a risk analysis.

4. The GCIP methodology for impact assessment will be developed by the GCIP Framework and shared with this project 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 energy 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.

5. The independent terminal evaluation will be conducted six months prior to the expected end of the project, and will be under the responsibility of the UNIDO Office of Evaluation and Internal Oversight (ODG/EIO).

TABLE 6: INDICATIVE M&E BUDGET

M&E Activity	Timeframe	GEF budget (USD)	UNIDO in-kind co-financing (USD)	Other in-kind co-financing (USD)	Responsible
M&E plan	First 3 months of implementation start	-	10,000	50,000	LATU
Periodic progress reports	- Annual progress reports for validation by PSC - GEF PIRs - Annual project results tracking (based on GCIP framework)	12,000	10,000	25,000	LATU
Mid-term review	At 1.5 years	20,000	10,000	25,000	External evaluator, submission to UNIDO
Independent terminal evaluation	6 months prior to project close	30,000	10,000	50,000	External evaluator, submission to UNIDO
<b>TOTAL</b>		<b>62,000</b>	<b>40,000</b>	<b>200,000</b>	

## 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 (LDCE/SCCF)?**

1. The project will act as a catalyst for increased innovations in clean energy technologies, as well as more Cleantech enterprises being established, in particular the SMEs, thus creating more jobs and generating more income at the local and national levels. The clean technologies deployed will contribute to the reduction of waste and emissions, and to the improvement of resource efficiency, resulting in environmental improvements, and reducing health risks, in particular for women and children. The project can also improve energy access for people living in rural areas.

2. It is expected that special attention will be given to address gender issues as described above; therefore, the project will contribute to the promotion of women entrepreneurial development and job creation for women in Uruguay.

3. In summary, the project yields the following socioeconomic benefits as a result of supporting and introducing new cleaner technologies 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:

1. Enhancement of human capital

Entrepreneurial, environmental and technological skills development and awareness raising have the effect of a larger number of cleantech products being commercialized and entering the market.

Better decisions are made by entrepreneurs regarding the sustainability and life cycle approach to the products and businesses.

2. Local product development and production with job creation, generating more income

Fostering new local technologies lowers costs benefiting both the technology developer and end-user and encourages consumers to buy more efficient products and have a great benefit from this technological change.

3. An enriched innovation ecosystem

The high quality institutions attract the build confidence in local and foreign investors as well as the small business community in an economy due to low volume of transactions costs that result in the advancement of environment friendly technologies.

4. Promotion of women and youth entrepreneurial development and job creation

The promotion of gender and youth inclusion and mainstreaming in a country tends to be productive, innovative and creative for problem solution so it is an advantage to obtain environmental targets. Mainstreaming diversity will encourage the cooperation and cohesion of people in advocating for environmentally beneficial practices and products.

**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
Low			

**Measures to address identified risks and impacts**

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

The following table lists types of risks and planned measures for their mitigation. For more details, please refer to the project's Environmental and Social Management Plan (Annex J).

<b>E&amp;S risks</b>	<b>Mitigating Measure</b>	<b>Details of the mitigation technology, process, equipment, design, and operating procedures</b>
<p>Increasing GHG emissions due to selection of clean technology (e.g., blockchain, land use change, etc.)</p>	<p>Strict E&amp;S criteria and screening of potential cleantech supported to minimize negative impacts of cleantech</p>	<p>Every application for support from the accelerator and post-acceleration will need to meet strict criteria including environmental and social impacts. The possible environmental and social impacts, and any mitigation measures proposed, of each technology will be assessed by an expert. Where necessary, expertise will be used to help the entrepreneurs to minimise the negative impacts. For example, use of renewable energy for powering IT systems.</p> <p>Note that expertise will also be used to help the entrepreneurs to maximize the environmental benefits associated with the cleantech innovation.</p> <p>If the mitigation measures are not sufficient then that technology will not be supported by the project</p>

<p>Unintended harmful environmental impacts from hazardous materials used in cleantech innovations (e.g., mining, manufacture and decommissioning of batteries/PV)</p>	<p>Strict E&amp;S criteria and screening of potential cleantech supported to minimize negative impacts of cleantech</p>	<p>Every application for support from the accelerator and post-acceleration will need to meet strict criteria including environmental and social impacts.</p> <p>The possible environmental and social impacts, and any mitigation measures proposed, of each technology will be assessed by an expert. Where necessary, expertise will be used to help the entrepreneurs to minimise the negative impacts. For example, use of additional training. The alignment of proposed technologies will be reviewed against local climate risks in the target markets, as part of the support provided within the accelerator.</p> <p>Note that expertise will also be used to help the entrepreneurs to maximize the environmental benefits associated with the cleantech innovation.</p> <p>If the mitigation measures are not sufficient then that technology will not be supported by the project.</p> <p>Adaptation strategies will also be prepared if necessary. GIZ's Climate Expert Tool could be used as one tool available by entrepreneurs and GCIP mentors and judges.</p>
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<p>Unintended pollution / waste disposal from the cleantech innovations</p>	<p>Strict E&amp;S criteria and screening of potential cleantech supported to minimize negative impacts of cleantech</p>	<p>Every application for support from the accelerator and post-acceleration support will need to meet strict criteria including environmental and social impacts.</p> <p>The possible environmental and social impacts, and any mitigation measures proposed, of each technology will be assessed by an expert. Where necessary, expertise will be used to help the entrepreneurs to minimise the negative impacts. For example, use additional training, use of licensed waste operators. The alignment of proposed technologies will be reviewed against local climate risks in the target markets, as part of the support provided within the accelerator.</p> <p>Note that expertise will also be used to help the entrepreneurs to maximize the environmental benefits associated with the cleantech innovation.</p> <p>If the mitigation measures are not sufficient then that technology will not be supported by project.</p> <p>Adaptation strategies will also be prepared if necessary.</p>
<p>SMEs/entrepreneurs lack the capacity/awareness to properly identify and mitigate the E&amp;S risks related to their technology</p>	<p>Inclusion of impact of E&amp;S risks in the training modules</p>	<p>Judges and mentors will be trained by E&amp;S experts to identify potential E&amp;S risks and will provide mentoring and training on mitigation to SMEs. If necessary additional E&amp;S expertise will be called upon.</p>
<p>Cleantech innovations do not deliver the pledged impacts</p>	<p>The innovative technologies will be assessed by technical judges/mentors during the competition. The innovations will be verified by key partner institutions as part of the post competition support.</p>	<p>Judges and mentors will include technical experts in the relevant field. Support provided will include maximizing environmental benefits and associated trainings. Stringent monitoring of innovations will be carried out post- project support.</p>

<p>SMEs/entrepreneurs do not comply with national regulation requirements (e.g., products do not meet quality/safety standards)</p>	<p>During the Accelerator phase, the PEE will verify that innovations comply with national regulation requirements and post ?support monitoring will check compliance after funding.</p>	<p>Mentors with expertise on national regulation requirements to support SMEs/entrepreneurs in quality/safety standards. Stringent monitoring of innovations will be carried out post- project support</p>
<p>SMEs/entrepreneurs do not comply with national regulation requirements relating to working conditions and health and safety regulations</p>	<p>During the Accelerator phase, the PEE will verify that SMEs? workplaces comply with national regulation requirements and post ?support monitoring will check compliance after funding.</p>	<p>Mentors with expertise on national regulation requirements to support SMEs/entrepreneurs in OSH and working conditions. Stringent monitoring of innovations will be carried out post-project support</p>
<p>Cleantech innovation has a negative social or environmental impact on SME workers or beneficiaries (e.g., hazardous materials)</p>	<p>Strict E&amp;S criteria and screening of potential cleantech supported to minimize negative impacts of cleantech on workers and beneficiaries</p>	<p>Every application for support from the accelerator and post-acceleration will need to meet strict criteria including environmental and social impacts.</p> <p>The possible environmental and social impacts, and any mitigation measures proposed, of each technology will be assessed by an expert. Where necessary, expertise will be used to help the entrepreneurs to minimize the negative impacts. For example, use of additional training.</p>
<p>Low participation rates of females in project participation</p>	<p>Social safeguarding to ensure gender is mainstreamed throughout the project design</p>	<p>Gender mainstreaming will include thorough and gender responsive communication and ensure stakeholder involvement at all levels, and from the beginning of the project design, with special regard to involving women and men, as well as civil society and non-governmental organizations promoting gender equality. Targets will be set and specific women only prizes considered. This shall mitigate social and gender related risks, promote gender equality, and maximize the potential contribution of the project to improving gender equality in the cleantech field.</p>

Low participation rates of youth in project	Social safeguarding to ensure that youth inclusion is a target for the entrepreneur support	Youth will be mainstreamed in the project through responsive communication and ensure stakeholder involvement at all levels, with special regard to involving youth, as well as civil society and non-governmental organizations promoting youth.
Increase in carbon emissions due to travel, meetings, training, and events related to the project	Advice and training provided to promote the use of public transport, use webinars where possible, select environmentally conscious venues	Advice and training will be provided to all stakeholders involved in the project on how to minimise their carbon footprints, virtual meetings will be held when possible.
Climate change risks that may affect the SMEs supported under the project (for example impacts due to a reduction in bioenergy or water sources, or logistic disturbances, disruptions to production, effects to working conditions or to the market, increased utility prices and costs for insurance, finance, or imports.	Strict E&S criteria and screening of potential cleantech supported to include assessment of climate risks over the next 30 years.	Every application for support from the accelerator and post-acceleration support will need to meet strict criteria including an assessment of climate risks, which will be assessed by an expert. Where necessary, expertise will be used to help the entrepreneurs to develop adaptation or management strategies. The alignment of proposed technologies will be regularly reviewed against local climate risks, as part of the support provided within the accelerator.  Adaptation strategies will also be prepared if necessary. GIZ's Climate Expert Tool could be used as one tool available by entrepreneurs and GCIP mentors and judges.
Participants are not able to access information from the global programme.	Time and budget will be allocated towards the translation of GCIP documents from the global programme into Khmer.	In addition to a translation budget for all GCIP global resources, budget is also allocated towards creating posters and visual materials that may be more appropriate for sharing information with cleantech engineers.

#### Supporting Documents

Upload available ESS supporting documents.

Title	Module	Submitted
Annex J ESMP Uruguay GEF7	CEO Endorsement ESS	



**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	Baseline	Target	Means of Verification	Assumptions and Risks
To accelerate the uptake of innovative, affordable and scalable cleantech solutions for climate action and sustainable and inclusive green value chains, in selected sectors, through a Circular Economy perspective.	amount of investment (co-financing) leveraged	0	\$15,250,000	Project progress reports;	Continuous support from the Government of Uruguay and national partner institutions
	number of enterprises supported through the accelerators and pilot projects	0	20 enterprises accelerated and supported (at least 40% women-led)		Final independent project evaluation report;
	number of direct beneficiaries	0	350 beneficiaries (at least 40% women)	GEF Tracking Tools;	Adequate participation is possible based on eligible potential beneficiaries
	number of cleantech experts trained	0	20 cleantech experts (judges, mentors and coaches) trained (at least 40% women)	Database and records maintained during and after project completion.	
	number of participants sensitized to cleantech business opportunities and strategies	0	300 to 500 participants sensitized (at least 40% women)		

	CO2eq emissions reduced (tons) directly and indirectly	0	Indicative expected results of 86,000 tCO2e of direct GHG emission savings and 430,000 tCO2e of indirect GHG emission savings at the end of project implementation		SMEs perform at target level of emissions reductions
<b>Component 1 : Policy and regulatory framework strengthened</b>					
<b>Outcome 1.1 Policy framework to promote cleantech solutions for low GHG emissions and circular economy in priority sectors (food systems, energy) strengthened</b>					
<b>Output</b> 1.1.1 Assessment framework (1) including indicators developed and baseline values quantified to evaluate the performance of circular and low GHG emission technologies	Number of indicators developed (gender responsive)  Baseline determined	No existing national indicators to track and evaluate the GHG emission reduction impacts of low GHG emission technology solutions. No existing national Baseline.	1 set of indicators (gender responsive) is developed to track and evaluate low-carbon technologies in the targeted sectors Baseline determined	Project progress and evaluation reports  Indicators sheet and methodology	Sufficient capacity of the Executing Entity to develop GHG tracking indicators exists

<p><b>Output 1.1.2</b> Three evidence-based policy instruments developed and compiled as a policy recommendation report (3 instruments developed)</p>	<p>Number of policy recommendation reports developed (incorporating gender and youth dimensions)</p>	<p>Current policy and institutional frameworks not focused on clean energy technology innovations and financing</p>	<p>1 policy recommendation report (incorporating gender and youth dimensions) is developed and shared with national decision-making institutions  3 regulatory instruments developed</p>	<p>Project progress and evaluation reports</p>	<p>Executing Entity has the capacity to develop relevant tools, methodologies and guidelines to meet Cleantech innovation needs</p>
<p><b>Output 1.1.3</b> Draft policy (1) for financial and non financial incentives developed including guidelines (1) for establishment of a non-grant instrument</p>	<p>Number of policy recommendations report for the creation of financial incentives developed (incorporating gender and youth dimensions)  Number of guidelines developed for non-grant instruments developed (including guidelines on how to consider gender and youth dimensions)</p>		<p>Policy best practices are documented and disseminated on a national level to promote linkages, collaboration and synergies across cleantech sector</p>	<p>Policy recommendations report for policy instruments  Policy recommendations report for financial incentives and non-grant instruments</p>	<p>Continuous support from the Government and national partner institutions</p>
<p><b>Output 1.1.4</b> Financial mechanism (1) designed to promote investments in circular economy and low GHG emission technologies</p>	<p>Financing mechanism is designed (incorporating gender and youth dimensions)</p>	<p>No existing financing mechanism for promoting investments into circular economy and low carbon technologies</p>	<p>Financing mechanism for promoting investments into circular economy and low carbon technologies established (incorporating gender and youth dimensions)</p>		<p>Sufficient availability of funding</p>

**Component 2: Circular economy solutions are identified and implemented in Uruguay through acceleration and commercialization of cleantech innovations**

**Outcome 2.1: Business opportunities mainstreaming low GHG emissions identified and facilitated in priority sectors**

<p><b>Output</b>  <b>2.1.1</b> Early-stage circular economy and cleantech innovations identified and accelerated into enterprises (at least 60) through GCIP or related processes, with at least 3-5 solutions receiving intensive support</p>	<p>Number of cleantech accelerator rounds conducted (incorporating gender and youth dimensions)</p>	<p>Limited coordination between stakeholders  Limited awareness of cleantech and low-carbon technology solutions</p>	<p>3 accelerators are held (1 per year)  20 cleantech or low-carbon SMEs or entrepreneurs are accelerated per round (of which 40% are women-led)</p>	<p>Attendance sheets and outputs of the meetings  Project progress and evaluation reports  Surveys from training participants</p>	<p>Lack of stakeholder participation  Continuous support from Government of Uruguay and national partner institutions</p>
<p><b>Output</b>  <b>2.1.2</b> Capacity needs assessment to promote cleantech solutions conducted (1), and formal education program on circular economy developed (1)</p>	<p>Number of needs assessment conducted for systematic production and acceleration of cleantech commercialization  Number of comprehensive education programme at university level in Circular Economy established</p>	<p>Limited capacity to conduct cleantech innovation accelerators and provide business growth services</p>	<p>1 needs assessment conducted  1 education programme established</p>	<p>Number of methodologies, guidelines and tools developed</p>	<p>Capacity building and training sessions are assumed to accommodate women's needs and schedules</p>
<p><b>Outcome 2.2 Innovative cleantech solutions for circular economy with low GHG emissions in priority sectors demonstrated in full-size scale</b></p>					

<p><b>Output</b> 2.2.1. Feasibility studies (at least 5) conducted and financing mobilized resulting in at least two fully functional food system cleantech solutions demonstrated</p>	<p>Number of business plans for innovative low-carbon and cleantech solutions for circular economy in the priority sectors developed</p>	<p>No existing financing mechanisms exist for cleantech solutions in the targeted sectors</p> <p>Lack of access to early-stage financing opportunities for SMEs in the food systems sector</p>	<p>5 feasibility and technical designs are evaluated and validated by the PMU (fully incorporating ESS considerations including gender dimensions)</p>	<p>Early-stage business growth support services are established and operating to a high standard</p> <p>Final / revised business plans</p> <p>Pilot projects validated and financed</p>	<p>There is sufficient capacity and technical skills to provide business growth support services</p> <p>Adequate interest from co-financiers</p> <p>Continuous participation of selected SMEs and entrepreneurs</p> <p>Investment readiness is achieved within the project time frame</p>
	<p>Number of technical and financial feasibility studies, product verification assessments and business plans developed</p> <p>Number of fully functional food system pilot implemented</p>	<p>Insufficient capacity and technical skills to prepare technical and financial feasibility studies in the targeted sectors</p>	<p>At least 2 pilot projects are implemented for food system sector</p>		
<p><b>Output</b> 2.2.2 Feasibility studies (at least 3) conducted and financing mobilized resulting in at least two fully functional Power-to-X plants commissioned</p>	<p>Number of business plans for innovative low-carbon and cleantech solutions for Power to X sector</p>	<p>No existing financing mechanisms exist for cleantech solutions in the targeted sector</p> <p>Lack of access to early-stage financing opportunities for SMEs in the Power to X sector</p>	<p>3 feasibility and technical designs are evaluated and validated by the PMU (fully incorporating ESS considerations including gender dimensions)</p>		

	Number of technical and financial feasibility studies, product verification assessments and business plans developed. Number of Power-to-X plants commissioned	No Power-to-X plants commissioned	At least 2 Power-to-X plants commissioned		
<b>Component 3: Project monitoring, impact capturing and evaluation</b>					
<b>Outcome 3.1: Deliver skills and promotion of circular economy at a national level, and efficiency and sustainability of the project is ensured through coordination and coherence with other circular economy initiatives and GCIP country projects</b>					
<b>Output 3.1.1</b> The GCIP internal guidelines for project management teams are reviewed and adapted by the project	#Global GCIP methodologies, tools and standards adapted and followed #PMU or other training sessions attended GCIP Uruguay sustainability and exit strategy % of PMU staff that completed the UN I-Know-gender training, and the UNIDO gender lens investing e-training	N/A	Operational GCIP methodologies, tools and standards adapted and followed for Uruguay GCIP Uruguay sustainability and exit strategy 100%	Project progress and evaluation reports  Web platform	Sufficient commitment and participation by national experts and mentors Continuous support from the Government and national partner institutions

<p><b>Output</b> 3.1.2 Program level knowledge management, communication and advocacy strategy is adapted and implemented by the project</p>	<p>Knowledge management, communication and advocacy strategy and action plan for GCIP Uruguay</p> <p>Awareness raising and marketing material available for the public</p> <p>Awareness raising and marketing material available for entrepreneurs and officials</p> <p># briefing sessions # press releases # social media activity # gender focal points identified and trained on project elements</p> <p>% of knowledge/communication/awareness raising products that are gender responsive</p>	<p>Lack of awareness of cleantech</p> <p>Shortage of effective and good quality public awareness raising and marketing material on cleantech</p>	<p>Knowledge management, communication and advocacy strategy and action plan for GCIP Uruguay</p> <p>Public awareness raising, marketing and training material developed and adapted for Uruguay and made available in printed and electronic format</p> <p>&gt;3 briefing sessions &gt;6 press releases Monthly social media activity 100%</p>	<p>Website and project documents</p> <p>Social media Programmes and attendance lists (gender-disaggregated) for regional and international events</p> <p>GCIP</p>	<p>Sufficient commitment and participation by national experts and mentors</p> <p>Continuous support and appropriate gender-expertise is available from the Government and national partner institutions</p>
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<p><b>Output</b> 3.1.3. Awareness raising campaign conducted and knowledge products (at least 50) for circular economy concepts and tools, including the promotion of new and smart cleantech solutions and business model opportunities</p>	<p>Number of awareness raising campaigns conducted nationally</p> <p>% of knowledge/communication/awareness raising products that are gender responsive</p>	<p>Weak nationwide campaigns for the promotion of circular economy concepts and tools</p>	<p>Materials on major takeaways and lessons learned are disseminated</p> <p>100%</p>	<p>Project progress and evaluation reports</p> <p>Evidence from awareness raising campaigns: reports, pictures, new articles</p> <p>Local Web platform</p> <p>Web platform statistics (gender-disaggregated)</p>	<p>Development of a local web-based knowledge management platform for the exchange of know-how and expertise on Circular Economy schemes will be carried out, in particular to gather and provide analysis in developed and studied technologies</p>
<b>Outcome 3.2. Project management, monitoring and evaluation</b>					
<p><b>Output</b> 3.2.1. Project activities monitored and reported based on the M&amp;E framework conducted</p>	<p>Project-level MRV system established, indicators tracked (incl. GHG emissions) and disaggregated by gender</p> <p>Impact of GCIP tracked according to programme-level guidelines</p> <p>% of progress and review reports tracking progress of gender action plan</p>	<p>NA</p>	<p>Monthly progress reports</p> <p>Mid-term review report</p> <p>Annual progress report</p> <p>100%</p>	<p>Monthly progress reports</p> <p>Mid-term review report</p> <p>Project completion report</p> <p>Annual progress reports</p>	<p>MRV is undertaken efficiently and effectively; project participants are willing to adjust as the MRV findings indicate</p>
<p><b>Output</b> 3.2.2 Independent final technical review is conducted</p>	<p>Final technical review report</p>	<p>NA</p>	<p>1 Final technical review report</p>	<p>Final technical review</p>	

**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 Council were addressed across all the 11 projects and, where feasible, country specific responses are provided.

	Comments	UNIDO Responses
	<b>Germany</b>	
	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
1	Germany asks to review the risks section of the document as to identify environmental risks for relevant strategies and develop associated mitigation measures. The proposal currently considers environmental risks to be low without providing detail. 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 projects, the environmental risk section was reviewed and revised based on the comments, and the environmental risks of some technologies were acknowledged, and mitigation measures proposed. More specifically, the project now includes environmental experts amongst the mentors, judges and trainers that will support the SMEs. This will ensure that all possible environmental risks for all innovations are systematically identified and mitigated. The technology selection criteria for applications submitted to GCIP will be devised to include assessment of mitigation measures for possible negative environmental and social impacts. Where required, specialized expertise will be sourced to help the entrepreneurs to minimise the negative impacts and in the event that mitigation measures are not sufficiently addressed, then that technology will not be supported by GCIP.
2	In this context, Germany also suggests to review the technologies alignment with local climate risks, when deployed. The GIZ 'Climate Expert' tool could provide a relevant frame to do so in a local context.	The impact of technologies will be assessed against local climate risks in the target markets, as part of the support provided within the GCIP Accelerator. Minimizing any negative environmental and social impacts will be accounted for in the technology selection criteria for applications submitted to GCIP. Adaptation strategies will also be prepared if necessary. UNIDO reviewed the Climate Expert Tool in detail and found it to be quite relevant. UNIDO will systematically recommend Climate Expert tool as one tool available to entrepreneurs and GCIP mentors, judges, and trainers across the 10 countries.

3	<p>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.</p>	<p>The scope of technologies to be supported is not prescriptive as long as it is cleantech and in line with GEF 7 CCM focal area programming directions <a href="https://www.thegef.org/council-meeting-documents/gef-7-programming-directions">https://www.thegef.org/council-meeting-documents/gef-7-programming-directions</a> (i.e. electric drive technologies and electric mobility, accelerating energy efficiency adoption, decentralized renewable power with energy storage, cleantech innovation, sustainable cities, and food systems, land use and restoration, etc.). As such, low-tech and lower-tech approaches to energy, resource efficiency, waste management etc. will not be excluded from the GCIP scope of support. Their uptake will depend on the state of the markets in each of the countries. In the Global project, an appropriate footnote was added to Output 1.1.1. For the 10 Country projects, the technology selection criteria for the national GCIP Accelerators will be adapted at the national level and will consider the local skills and technology base. The GCIP approach is designed to address other ecosystem weaknesses that may impact SME's ability to develop and scale-up beyond finance and skills. For example, Component 2 is designed to address some of these weaknesses by building capacity and supporting policy development that will strengthen the local ecosystem.</p>
4	<p>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.</p>	<p>All GCIP child projects will actively identify synergies with other programmes or initiatives in respective countries and as outlined in the stakeholder engagement plans, they will engage and work with others, such as for example KfW and GIZ. The GCIP Morocco child project will seek to maximize synergies and avoid duplications with the KfW's and GIZ's projects in the country.</p>
5	<p>Germany further invites consideration of potential additional synergies with research institutes (e.g. by leveraging the partnership 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</p>	<p>UNIDO has been in discussions with various other accelerators with a view to establishing strategic partnerships and synergies. Such accelerators include Cleantech Scandinavia, Impact Hub, and Climate-KIC. In the case of Climate-KIC, UNIDO recognized the need for a strategic partnership on GCIP and other programmes. Accordingly, UNIDO and Climate-KIC will sign Memorandum of Understanding to promote partnership under GCIP to leverage opportunities for co-innovation and joint ventures between GCIP alumni and Climate-KIC alumni. Part of the collaboration is focused on creating linkages between the two programmes (KIC and GCIP) as well as on application of common methodologies and tools, and 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&amp;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.</p>
	<p><b>United States</b></p>	

1	<p>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</p>	<p>In the meeting the Secretariat clarified that the GCIP uniquely combines an array of comprehensive and interlinked services to promote innovative cleantech solutions in developing countries and emerging economies. There are no known overlaps with any existing programmes or initiatives pursued by the UN, IRENA or other institutions. As specified in the descriptions of baseline scenario and any associated baseline projects in the respective RCEs, all child projects are designed with careful consideration of other ongoing project/ initiatives and with the objective to maximize synergies and avoid duplications with them.</p>
2	<p>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.</p>	<p>The independent evaluation by GEF IEO of past GCIP projects (<a href="https://www.gefio.org/evaluations/evaluation-gef-unido-global-cleantech-innovation-programme-2018">https://www.gefio.org/evaluations/evaluation-gef-unido-global-cleantech-innovation-programme-2018</a>) unequivocally concluded that the programme was successfully implemented. These evaluation findings and feedback from participants have served as a basis to design the activities of the GCIP Global child project and cascaded to all the 10 countries. Further details regarding the findings of the GEF IEO thematic evaluation of GCIP are provided in Annex N. Furthermore, UNIDO has also been successfully implementing projects under other GEF programmes within the GEF 7 CCM focal area but with focus on topics other than cleantech, such as e-mobility and sustainable cities. In implementing GCIP, UNIDO will continuously review lessons from these and other successful programmes pursued by various institutions, so as to learn and apply best practices.</p>

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

<i>Project Preparation Activities Implemented</i>	<i>GETF Amount (\$)</i>		
	<i>Budgeted Amount</i>	<i>Amount Spent To date</i>	<i>Amount Committed</i>
Description of the project implementation/execution modalities and agencies, incl. - HACT assessment of the proposed executing agency	10,000	8,339.80	0

Development of the project document (incl.), incl. - Analysis of baseline and ongoing/planned initiatives - gender analysis/ assessment - Preparation of environmental and social management plan (ESMP) (for Category B projects)	25,000	23,700	0
Stakeholder engagement activities: Stakeholder Workshop to verify the project document Obtaining of co-financing letters from donors, NGOs, Agencies and government	15,000	0	17,969.20
<b>Total</b>	50,000	32,039.80	17,960.20

#### **ANNEX D: Project Map(s) and Coordinates**

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

Please refer to section 1b of the project document.

#### **ANNEX E: Project Budget Table**

**Please attach a project budget table.**

The below is a summary of the budget table.

Please see the attached excel file (Annex E) for full details.

Years 1-4 (USD)											
Expenditure Category	Detailed Description (Activity)	Outcomes					Sub-Total	M&E	PMC	TOTAL	Responsible Entity
		1,1	2,1	2,2	3,1	3,2					
Contractual Services	1.1.2.1. Development of policy recommendation report on best practices within the circular economy and cleantech solutions into priority sectoral frameworks and associated roadmap, to be promote in Uruguay	20.000					20.000			20.000	LATU
	1.1.2.2. Workshop with key stakeholders to share policy findings and to promote social and environmental responsibility within the waste and energy sector	5.000					5.000			5.000	LATU
	2.1.1.2. Conduct 3 GCIP Accelerator rounds (or ralated process) focusing on the priority sectors (food systems, power to X) with at least 20 semi-finalists and 5 finalists per round		30.000				30.000			30.000	LATU
	2.1.1.3. Support at least 3 to 5 innovations in food systems, power to X with high impact and commercialization potential		68.000				68.000			68.000	LATU
	2.2.1.2. Conducts at least five feasibility studies and technical designs evaluations for validation by the PSC (drawing from the accelerator rounds and advanced accelerator services and other selection process in place) to support a circular economy.			50.000			50.000			50.000	LATU
	2.2.1.3 Pilot two food system solutions with co-financing from other public or private entities			340.000			340.000			340.000	LATU
	2.2.2.1. Conduct at least three feasibility studies for Power-to-X plants for validation by the PSC			50.000			50.000			50.000	LATU
	2.2.2.2. Commission two fully functional Power-to-X plants with co-financing from other public or private entities			340.000			340.000			340.000	LATU
	3.1.3.3. Participate in the Global Forums of GCIP				7.443		7.443			7.443	LATU
	3.2.1.1. Prepare Annual Progress Reports every six months (6 in total) for validation by the PSC						-	6.000		6.000	LATU
	3.2.1.2. Track and report project results based on the GCIP monitoring and evaluation (M&E) framework						-	8.000		8.000	LATU
	3.2.1.3. Conduct an external mid-term review						-	12.000		12.000	UNIDO
	3.2.1.4. Conduct technical and financial audit reports each year						-	6.000		6.000	LATU
	3.2.2.1 Conduct an external, independent terminal evaluation						-	30.000		30.000	UNIDO
	<b>sub-total</b>	<b>25.000</b>	<b>98.000</b>	<b>780.000</b>	<b>7.443</b>	<b>-</b>	<b>910.443</b>	<b>62.000</b>		<b>972.443</b>	
International consultants	1.1.1.1. Convene a Technical Team to analyze and propose appropriate indicators, and elaborate the baseline	20.000					20.000			20.000	LATU
	1.1.1.2. Presentation and proposal to the Project Steering Committee, relevant national authorities, and stakeholders of nationally appropriate indicators to evaluate performance of circular economy and climate change to support and strengthen policy framework	10.000					10.000			10.000	LATU
	1.1.2.3. Market research and policy-relevant recommendations identified for developing market opportunities within the circular economy	10.000					10.000			10.000	LATU
	2.1.1.1. Conduct training and certification of at least 20 experts (mentors, teachers, business coaches and judges) with at least 40% women through at least 2 trainings		20.000				20.000			20.000	LATU
	3.1.1.1. Review, adapt and operationalize the Global GCIP methodologies, tools and standards for GCIP Uruguay				2.300		2.300			2.300	LATU
	3.1.2.2. Identify and train gender focal points within the PEE as well as engaged ministries and partners for coordinated implementation of gender action plan				4.000		4.000			4.000	LATU
	<b>sub-total</b>	<b>40.000</b>	<b>20.000</b>	<b>-</b>	<b>6.300</b>	<b>-</b>	<b>66.300</b>			<b>66.300</b>	
	and consultants -term consultants	1.1.2.4. Development of new policy / regulation draft or revision of existing policy / regulation based on the identified areas.	10.000					10.000			10.000
1.1.3.1. Identify areas of cooperation between local banks to establish a financial mechanism that utilises green bonds and other strategies to leverage finance for circular economy.		10.000					10.000			10.000	LATU
1.1.3.2. Identify non-financial incentives based on best practices and lessons learned from national and international experiences		5.000					5.000			5.000	LATU
1.1.3.3. Development of financial and non-financial incentives report, including recommendations and guidelines for implementation		2.000					2.000			2.000	LATU
1.1.4.1. Design a financial mechanism (1) that utilises green bonds and other strategies to leverage finance for RE power generation and the circular economy in collaboration with local banks and financial institutions.		30.000					30.000			30.000	LATU
2.1.2.1. Conduct capacity needs assessment (1) for systematic production and acceleration of cleantech commercialisation			10.000				10.000			10.000	LATU
2.1.2.2. Design and establish a comprehensive training and education programmes (1) and at university levels in Circular Economy			20.000				20.000			20.000	LATU
2.2.1.1. Conduct series of technical pre-feasibility and				16.000			16.000			16.000	LATU

**ANNEX F: (For NGI only) Termsheet**

Instructions. Please submit a 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 Agency 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.

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