GEF-8 PROJECT IDENTIFICATION FORM (PIF)

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General Project Information

Project Title	
Accelerating Cuban low-carbon and circular solutions for micro- , small and medium-sized enterprises	
Region	GEF Project ID
Latin America and the Caribbean	12227
Country(ies)	Type of Project
Cuba	MSP
GEF Agency(ies):	GEF Agency ID
UNIDO	250004
Executing Partner	Executing Partner Type
Technological University of Havana Jose A. Echeverria (CUJAE), Ministry of Higher Education (MES)	Government
GEF Focal Area (s)	Submission Date
Climate Change	12/17/2025
Project Sector (CCM Only)	
Technology Transfer/Innovative Low-Carbon Technologies	
Taxonomy	
Climate Change, Focal Areas, Climate Change Mitigation, Influencing models, Demonstrate innovative approache, Convene multi-stakeholder alliances, Strengthen institutional capacity and decision-making, Transform policy and regulatory environments, Deploy innovative financial instruments, Stakeholders, Beneficiaries, Private Sector, Civil Society, SMEs, Individuals/Entrepreneurs, Non-Grant Pilot, Gender-sensitive indicators, Gender Mainstreaming, Gender Equality, Sex-disaggregated indicators, Capacity, Knowledge and Research, Capacity Development, Innovation, Knowledge Generation, Workshop, Training	
Type of Trust Fund	Project Duration (Months)
GET	48
GEF Project Grant: (a)	GEF Project Non-Grant: (b)
1,858,676.00	0.00
Agency Fee(s) Grant: (c)	Agency Fee(s) Non-Grant (d)
176,574.00	0.00
Total GEF Financing: (a+b+c+d)	Total Co-financing
2,035,250.00	8,875,372.00
PPG Amount: (e)	PPG Agency Fee(s): (f)
50,000.00	4,750.00

PPG total amount: (e+f)	Total GEF Resources: (a+b+c+d+e+f)
54,750.00	2,090,000.00

Project Tags

CBIT: No NGI: No SGP: No Innovation: No Competitive Window: No

Project Summary

Provide a brief summary description of the project, including: (i) what is the problem and issues to be addressed? (ii) what are the project objectives, and if the project is intended to be transformative, how will this be achieved? iii), how will this be achieved (approach to deliver on objectives), and (iv) what are the GEBs and/or adaptation benefits, and other key expected results. The purpose of the summary is to provide a short, coherent summary for readers. The explanation and justification of the project should be in section B "project description".(max. 250 words, approximately 1/2 page)

Cuba faces persistent energy insecurity, heavy dependence on imported fossil fuels, and outdated infrastructure that limits economic productivity and slows progress toward more sustainable development. The industrial, tourism, and residential sectors account for a large share of national energy demand but also offer significant opportunities for efficiency improvements and low-carbon innovation. Micro, Small and Medium Enterprises could play a catalytic role in this transition, yet they face barriers such as limited access to clean technologies and finance, weak standards and testing systems, and low market demand for sustainable products - hindering progress toward a circular, low-carbon economy.

The project's objective is to reduce greenhouse gas emissions by supporting and accelerating the development, adoption and scaling of innovative decarbonization solutions, materials and business models through Cuban micro-, small- and medium-sized enterprises. Therefore, the project is structured around four components:

1. Strengthening policy and regulatory frameworks for low-carbon and circular materials and business models: updating the policy/legal framework, strengthening institutional capacity, integrating low-carbon requirements into public procurement, and updating/validating national standards and implementation guidelines for selected low-carbon products.
2. Developing and piloting low-carbon material value chains through MSME innovation and technology deployment: diagnosing and designing priority value chains and piloting at least 2–3 enterprise demonstrations across waste valorization, biomaterials and bioenergy, or others, as applicable, including prototyping and validation under local conditions.
3. Strengthening knowledge management and the innovation ecosystem: establishing a Community of Practice and a Market/Technology Observatory, conducting market outreach, and implementing innovation challenge/incubation and capacity-building mechanisms to support replication and scale-up (with gender-responsive participation embedded throughout).
4. Monitoring and Evaluation: ensuring robust indicator tracking (including sex-disaggregated data) and independent mid-term and final evaluations.

Expected outcomes include direct mitigation of approximately 5,286 tCO_2e over the project lifetime, in line with the project's GEF core indicator on greenhouse gas emissions mitigated. The project will directly benefit around 1,650 individuals (at least 40% women) through participation in MSME pilots, capacity-building activities, innovation support mechanisms and knowledge-sharing platforms. In addition to these climate benefits, the project will generate broader socio-economic co-benefits, including strengthened national institutional capacities, improved competitiveness and resource efficiency of MSMEs, increased market demand for low-carbon and circular solutions, and the development of scalable business models that support Cuba's transition toward more sustainable and circular production systems.

Indicative Project Overview

Project Objective

The project's objective is to reduce GHG emissions by promoting, supporting and accelerating the development, adoption and scaling of innovative decarbonization solutions, materials and business models through Cuban micro-, small- and medium-sized enterprises.

Project Components

C1. Strengthening policy and regulatory frameworks for low-carbon and circular materials, enterprises and business models

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing ($)	Co-financing ($)
215,538.00	1,077,690.00

Outcome:

1.1 Policy, regulatory and institutional frameworks are strengthened to create an enabling environment for the adoption and scaling of low-carbon and circular materials, enterprises and business models.

Output:

1.1.1 Policy and legal framework for decarbonization revised, with at least 3 proposals formulated and submitted for further development and enhancement.

1.1.2 Institutional capacity on policy and regulatory best practices — including circularity — strengthened through at least 5 national and local training sessions, reaching over 100 policymakers and officials.

1.1.3 Requirements and guidelines for low-carbon materials and products integrated into at least 2 public procurement frameworks, contributing to increased market demand for sustainable products.

1.1.4 National standards and technical requirements for selected low-carbon/decarbonized products in construction, tourism, and other sectors updated/revised and validated through participatory consultations with at least 20 stakeholders, and 2–3 practical implementation guidelines developed to support application of these standards across relevant product groups/value chains

C2. Developing and piloting low carbon/decarbonized material value chains through MSME innovation and technology deployment

Component Type	Trust Fund
Investment	GET
GEF Project Financing ($)	Co-financing ($)
1,000,000.00	4,670,000.00

Outcome:

2.1 Strengthened or created supply and value chains for 2–3 low-carbon/decarbonized materials and products with high market/deployment potential (including circularity models), piloted through MSMEs selected based on technology readiness, mitigation potential and market relevance to downstream end-use applications.

Output:

2.1.1 Designs of selected low-carbon/decarbonized materials and products developed or optimized, with at least 3 prototypes tested and validated under local conditions.

2.1.2 Engineering design of pilot small-scale manufacturing or conversion technological processes completed for at least 3 enterprises, one for each type of action (waste, biomaterials and bioenergy), including the development of 2–3 functional technological prototypes.

C3. Strengthening knowledge management and national innovation ecosystem for low-carbon materials, enterprises and business models with consideration of gender

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing ($)	Co-financing ($)
394,168.00	1,970,830.00

Outcome:

A low-carbon and circular materials Community of Practice and a Market and Technology Observatory are established and hosted by a designated national institution (to be confirmed during the PPG phase).

3.2 Cuban innovation acceleration and incubation capacity are strengthened to support low-carbon and circular materials and business models.

Output:

3.1.1 Publication and outreach of market assessment results to support national awareness and knowledge sharing

3.1.2 The Community of Practice and the Market and Technology Observatory are operationalized to enable continuous knowledge exchange, collaboration and monitoring of developments across stakeholders.

3.2.1 Innovation Challenge and incubation support mechanisms are implemented to foster early-stage ideas and entrepreneurship related to low-carbon and circular materials and business models.

3.2.2 Awareness-raising, outreach and capacity-building activities are conducted to improve understanding and uptake of low-carbon and circular solutions among key stakeholders, including MSMEs, supply chain actors and service providers.

3.2.3 Technical guidance materials, tools, and training modules on low-carbon materials and circular business models are developed and disseminated in collaboration with academic and local institutions to support practical application and replication.

M&E

Component Type	Trust Fund

Technical Assistance	GET
GEF Project Financing ($)	Co-financing ($)
80,000.00	320,000.00

Outcome:

4.1 Adequate monitoring of all project indicators, including gender-disaggregated data and gender-sensitive performance metrics.

Output:

4.1.1 Project monitoring and evaluation

4.1.2 Final evaluation

Component Balances

Project Components	GEF Project Financing ($)	Co-financing ($)
C1. Strengthening policy and regulatory frameworks for low-carbon and circular materials, enterprises and business models	215,538.00	1,077,690.00
C2. Developing and piloting low carbon/decarbonized material value chains through MSME innovation and technology deployment	1,000,000.00	4,670,000.00
C3. Strengthening knowledge management and national innovation ecosystem for low-carbon materials, enterprises and business models with consideration of gender	394,168.00	1,970,830.00
M&E	80,000.00	320,000.00
Subtotal	**1,689,706.00**	**8,038,520.00**
Project Management Cost	168,970.00	836,852.00
Total Project Cost ($)	**1,858,676.00**	**8,875,372.00**

Please provide justification

PROJECT OUTLINE

A. PROJECT RATIONALE

Briefly describe the current situation: the global environmental problems and/or climate vulnerabilities that the project will address, the key elements of the system, and underlying drivers of environmental change in the project context, such as

population growth, economic development, climate change, sociocultural and political factors, including conflicts, or technological changes. Describe the objective of the project, and the justification for it. (Approximately 3-5 pages) see guidance here

Cuba's productive landscape, including its growing micro, small and medium-sized enterprise sector alongside the tourism and residential, remains highly dependent on fossil fuels and resource-intensive processes. Many micro, small and medium-sized enterprises operate with outdated technologies, fragmented value chains and limited access to efficient equipment, resulting in high energy intensity, substantial waste generation and increased greenhouse gas emissions. Opportunities in areas such as waste valorization, biomaterials and bioenergy remain largely untapped. These challenges are compounded by Cuba's high vulnerability to climate change: hurricanes, droughts, heavy rainfall and sea-level rise frequently damage infrastructure, disrupt supply chains and impose significant uncertainty on enterprises and new business creation. While these vulnerabilities pose risks, they also open niches for business models that integrate sustainability and resilience into products and operations, with explicit consideration of gender dimensions in access to opportunities, decision-making and benefit-sharing.

Structural economic constraints and restricted access to finance and technology limit the ability of enterprises—especially micro, small and medium-sized ones - to modernize production and adopt low-carbon solutions. Women and youth often face additional barriers in accessing information, training, networks and financing, particularly within technical, manufacturing and innovation-driven sectors. Although Cuba has a strong cultural foundation for circularity - borne out of decades of reuse, repair and material efficiency – women remain underrepresented in technical and industrial roles, which constrains the diversity of innovation and the equitable distribution of economic benefits in emerging low-carbon value chains. Addressing these conditions requires strengthening both the enabling environment and the innovation ecosystem, ensuring that women and men participate and benefit equally from emerging opportunities in low-carbon materials, technologies and business models.

Cuba has invested significantly in renewable energy expansion, energy efficiency improvements and infrastructure rehabilitation. Over the past years, efforts have focused on solar photovoltaic development, modernization of wind facilities, rollout of distributed photovoltaic systems for households and measures to stabilize the national electricity grid. International cooperation – such as the EU-funded Energy Efficiency Programme, UNDP's Climate Promise, bilateral support for infrastructure rehabilitation and local energy access projects – has strengthened national planning capacities and climate governance. These investments, while critical for advancing the national energy transition, primarily focus on grid-scale generation, household measures and system stabilization. There is currently no investment program targeting low-carbon material development, circular value chains or enterprise-level innovation and prototyping, elements essential for driving decarbonization within micro, small and medium-sized enterprises and ensuring equitable participation of women and men in the transition to a low-carbon economy. This gap represents a core justification for the proposed GEF intervention.

National policies demonstrate strong commitments to climate action and sustainable development, reflected in the 2019 Constitution, the National Economic and Social Development Plan to 2030 and the climate framework Tarea Vida. Cuba's updated Nationally Determined Contribution expands mitigation efforts across sectors and highlights the need for international financial and technical support. Decree-Law 345 (2019) provides the legal foundation for renewable energy and energy efficiency, enabling independent producers to generate renewable electricity and incentivizing solar technologies. Decree-Law 110 (2024) requires large energy consumers to meet at least half of their peak-hour electricity demand with renewable sources and to implement ISO 50001 energy management systems. Complementary resolutions address tariffs, fiscal incentives, concessional loans, technology commercialization and regulatory processes. Despite this strong policy framework, gaps remain in translating commitments into operational standards, implementation guidelines and mechanisms that enable enterprises – including women-led businesses and cooperatives – to innovate, comply and respond to policy signals.

Several barriers hinder progress toward enterprise-level decarbonization. Technical barriers include limited testing facilities, lack of protocols and standards for low-carbon and circular materials, outdated equipment and scarce engineering capacity. Financial barriers constrain modernization due to high upfront costs and insufficient instruments tailored to early-stage innovation. Institutional barriers include fragmented implementation, slow updating of standards and weak operational tools for applying regulations. Market barriers reflect low awareness of low-carbon options. Gender-related barriers persist across these dimensions, including access to technical training, financing, innovation networks and decision-making spaces, which reduces the potential for women's full participation in emerging low-carbon value chains. Without targeted support, these constraints will persist and undermine progress toward national climate goals.

In a business-as-usual scenario, Cuba would continue prioritizing large-scale renewable energy generation and incremental efficiency measures, while micro, small and medium-sized enterprises remain unable to redesign production models or introduce low-carbon materials. Existing decrees and resolutions would remain under-implemented due to the absence of supporting standards, guidelines and innovation mechanisms. As the enterprise sector expands, emissions, resource consumption and waste generation would likely increase. Without targeted support for innovation and circularity – including equal participation of women and men – Cuba could face growing challenges in meeting its NDC targets and ensuring a just, inclusive transition.

GEF financing would provides the transformational leverage needed to address these gaps. The project would introduce interventions that would not occur without GEF support: development and validation of low-carbon and circular materials; creation of new value and supply chains in waste, biomaterials and bioenergy; strengthening of standards, implementation guidelines and regulatory coherence; and establishment of innovation support mechanisms, including a Market and Technology Observatory, a Community of Practice and targeted innovation challenges. These interventions reduce technological and market risks, build the operational tools required to implement climate policies and enable micro, small and medium-sized enterprises – including women-led and youth-led enterprises – to adopt new materials and business models that improve productivity while reducing emissions. By combining enabling frameworks, enterprise-level pilots and improvements to the national innovation ecosystem, the project strengthens the foundation for long-term replication and financing beyond the GEF lifecycle, in line with national development and gender equality priorities.

The project targets MSMEs and cooperatives across low-carbon and circular value chains, and will also map relevant informal micro-enterprises where they play material roles (e.g., collection, repair, fabrication). The Component 2 value-chain diagnostic will identify the most carbon-intensive material flows relevant to targeted MSMEs and priority end-use applications (e.g., construction inputs, packaging, etc.), and will specify barriers that prevent circular alternatives from scaling—such as gaps in standards/testing and conformity assessment, limited access to finance and equipment, weak demand signals and procurement criteria, and limited validated specifications for buyers.

The project's scaling strategy rests on three mutually reinforcing mechanisms already embedded in Cuba's policy context and in the PIF design: (i) demand-pull via regulation and procurement, (ii) supply-readiness via standards and testing, and (iii) pilot-specific partnership, contracting and financing pathways to be defined during the PPG phase in line with what is feasible in the Cuban context.

To operationalize this, Component 1 will prioritize the standards and technical requirements, conformity/testing approaches, and green public procurement criteria that determine market entry for MSME-supplied low-carbon and circular products, including integration of low-carbon requirements into at least two procurement frameworks (Output 1.1.3) and the update/validation of sector-relevant standards and implementation guidelines (Output 1.1.4). Recognizing trade and import limitations (including embargo-related constraints), pilots will prioritize locally compatible inputs and feedstocks, strengthen local testing/validation to reduce

reliance on imported certification, and include early procurement planning during the PPG phase to identify import-critical items and feasible substitutes.

Cuba's policy environment—though evolving—has high structural continuity in the areas directly relevant to this project: renewable energy expansion, energy efficiency, circularity, and environmental protection. Multiple legal instruments point to stable long-term trajectories and sectoral obligations, and the overall direction has been toward strengthening implementation. While policy details and pace may evolve, the project's results are not dependent on any single regulation or its timing.

Cuba's circular economy framework is becoming more structured, with a growing body of technical and legal norms. While still fragmented, the trajectory is toward greater formalization and adoption of standards rather than deregulation.

Cuba is facing a severe and persistent energy crisis, with chronic deficits, high fuel import costs, and grid instability. In this context, energy-saving, waste-reducing, and fuel-substituting MSME solutions are economically indispensable— which reinforces the relevance of energy-saving, waste-reducing and fuel-substituting MSME solutions under a range of policy scenarios.

The project helps pilots move toward scale by aligning them with existing policy drivers (including Decree 110/2024), updated standards and green public procurement. These measures create demand signals and make it easier for MSME solutions to be adopted, but they do not guarantee automatic scale-up. The specific partnership, contracting and financing approach for each pilot will be defined during the PPG phase based on what is feasible in the Cuban context.

A diverse set of stakeholders plays a central role in this process. The Ministry of Energy and Mines, the Electric Union and the National Office for the Rational Use of Energy lead energy policy, grid management and enforcement of efficiency requirements. The Ministry of Science, Technology and Environment oversees environmental policy, climate governance and MRV development. The Ministry of Industries and the Recycling Business Group support industrial transformation and circular production models. The National Institute of Non-State Economic Actors and territorial authorities support regulatory guidance and capacity-building for enterprises and cooperatives, which are the primary beneficiaries of the project. Universities and research centers contribute applied research, testing and engineering services. The National Office of Statistics and Information supports monitoring, reporting and verification. A gender-responsive stakeholder engagement strategy, developed during the PPG phase, will ensure inclusive participation, strengthened empowerment opportunities and equitable access to benefits throughout project implementation.

B. PROJECT DESCRIPTION

Project description

This section asks for a theory of change as part of a joined-up description of the project as a whole. The project description is expected to cover the key elements of good project design in an integrated way. It is also expected to meet the GEF's policy requirements on gender, stakeholders, private sector, and knowledge management and learning (see section D). This section should be a narrative that reads like a joined-up story and not independent elements that answer the guiding questions contained in the PIF guidance document. (Approximately 3-5 pages) see guidance here

The project's objective is to reduce GHG emissions by promoting, supporting and accelerating the development, adoption and scaling of innovative decarbonization solutions, materials and business models through Cuban micro-, small- and medium-sized enterprises.

The project targets MSMEs engaged in low-carbon and circular material value chains in priority areas, including waste valorization, biomaterials and bioenergy; these will be confirmed and refined during PPG phase based on

feasibility. These MSMEs supply low-carbon products and services to wider economic sectors - including construction, tourism, industrial and residential - where the project expects indirect and catalytic impacts.

The project will achieve this by strengthening policy and regulatory frameworks, providing technical and financial support for the development and piloting of low-carbon material value chains, and establishing a national innovation ecosystem that enables ongoing knowledge sharing, incubation and market uptake. The details of the project outputs will be further refined during PPG phase.

PROPOSED THEORY OF CHANGE (TOC)
If strengthened policies, standards and green public procurement create clearer demand signals for low-carbon and circular materials; and if innovative financing mechanisms reduce upfront and credit risks for micro, small and medium-sized enterprises; and if targeted incubation and training build the technical and managerial capacities required to design, select, install and operate low-emission technologies; then enterprises will be able to develop, prototype and pilot new low-carbon material solutions under local conditions. In practice, the pilots will prioritize MSME value chains in areas such as waste valorization, biomaterials and bioenergy, with downstream application and uptake targeted in end-use markets where these solutions can deliver measurable mitigation (e.g., construction and public buildings, tourism facilities, and industrial/residential uses, as applicable).

When these pilots/solutions are combined with knowledge-sharing mechanisms, such as the Community of Practice and the Market and Technology Observatory, they generate trusted performance data, business models and market confidence, enabling wider uptake across the residential, tourism and industrial sectors. This pathway works because reduced financial risk, stronger institutional guidance and accessible knowledge directly address the key barriers limiting their adoption. Gender-responsive engagement across institutions and enterprises ensures that women and men participate equitably in training, innovation and market opportunities.

The mitigation pathway is driven by (i) substitution of higher-carbon materials and fuels with low-carbon/circular alternatives supplied through MSME pilots, (ii) avoided emissions from waste disposal through valorization and improved material recovery, and (iii) reduced energy intensity and process losses through more efficient production and conversion processes. Baselines for shortlisted pilots (energy/fuel use, material inputs, waste practices and production volumes) will be established during the PPG phase to quantify and verify GHG reductions.

Through this sequence of interventions, the project will contribute to measurable reductions in greenhouse gas emissions by accelerating the development and adoption of low-carbon and circular materials and business models.

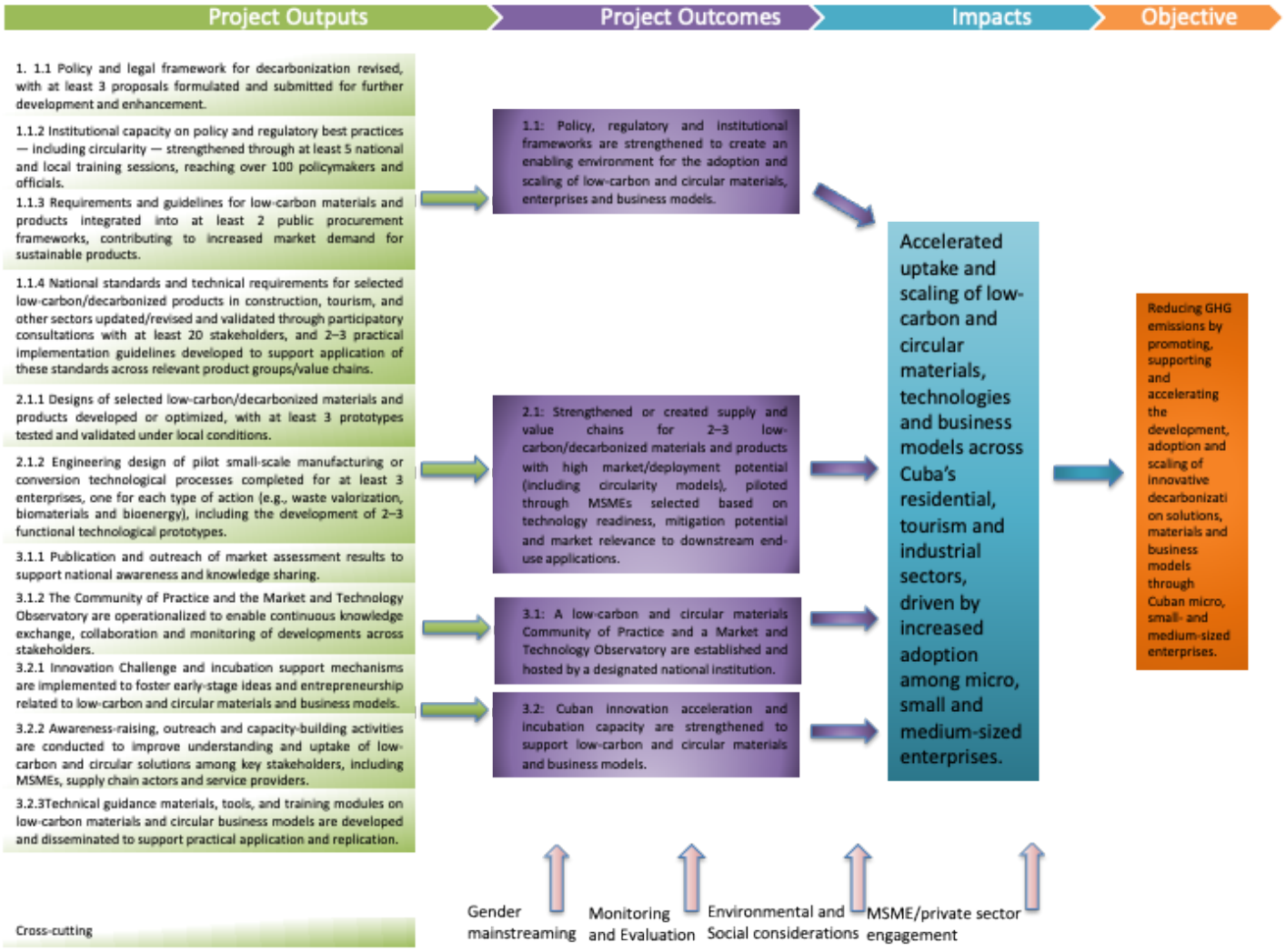
While the project does not directly intervene at scale in the residential, tourism, or industrial sectors, it will influence sectoral practices indirectly by strengthening how MSMEs operate and by creating validated solutions, supply chains and enabling conditions that can be scaled through national standards, green public procurement and replication mechanisms. Indirect and catalytic impacts will occur through: updated standards/procurement criteria that shape demand (notably in construction, tourism and industrial sectors); pilot-validated value chains (e.g., waste valorization, biomaterials and bioenergy) that supply lower-emission alternatives; and strengthened MSME capabilities to deliver competitive low-carbon products and services across the economy.

1 (footnote) Innovative Financing
The project will introduce innovative financing mechanisms to address the limited access to capital, high upfront costs, and investment risks that constrain MSME adoption of low-carbon technologies in Cuba. In collaboration with national institutions and the National Institute of Non-State Economic Actors, the project will support the

design of fit-for-purpose financial instruments that complement existing policies such as Decree-Law 345/2019 and the 2024 “50% Rule.”
The approach includes:

- Risk-mitigation tools to reduce perceived credit and technology risks for MSMEs and suppliers.
- Performance-based or pay-as-you-save models that allow repayment through efficiency gains, easing upfront capital needs.
- Revolving or reinjectable schemes that extend the reach of available resources.
- Supplier-based financing and leasing models that lower entry barriers for clean technologies.

These mechanisms will mobilize complementary public and private resources, reduce structural financial barriers, and enable MSMEs to invest in renewable energy, energy efficiency, and circular business models—strengthening competitiveness and accelerating decarbonization. (end of footnote)



Component 1: Strengthening policy and regulatory frameworks for low-carbon and circular materials, enterprises and business models

The first component will strengthen the policy, regulatory and institutional environment needed to enable the adoption and scaling of low-carbon and circular materials, enterprises and business models.

The first component will strengthen the policy, regulatory and institutional environment needed to enable the adoption and scaling of low-carbon and circular materials, enterprises and business models. These cross-cutting instruments apply across multiple end-use sectors (e.g., construction, tourism and industry) and are designed to create demand signals and implementation pathways that enable MSMEs to supply and scale low-carbon and circular solutions into those sectors, generating aggregated impact despite differing sectoral decision cycles.

It will support revisions to standards, regulatory tools and public procurement criteria, while building the capacities of national and local institutions to guide enterprises and apply these frameworks effectively. This creates a clearer and more consistent enabling environment in which enterprises can invest, innovate and respond to demand signals for low-carbon solutions, with systematic considera-tions of gender dimensions throughout implementation.

Outcome 1.1: Policy, regulatory and institutional frameworks are strengthened to create an enabling environment for the adoption and scaling of low-carbon and circular materials, enterprises and business models.
Output 1.1.1: Policy and legal framework for decarbonization revised, with at least 3 proposals formulated and submitted for further development and enhancement.
Activities will include consultative reviews, stakeholder workshops, and alignment with national climate commitments. Gender-responsive consultation processes will ensure women's participation in shaping regulatory reforms.
Output 1.1.2 Institutional capacity on policy and regulatory best practices – including circularity – strengthened through at least 5 national and local training sessions, reaching over 100 policymakers and officials.
Activities will include training sessions, technical guidelines, and peer-learning exchanges. Gender considerations will ensure balanced participation and targeted support for women professionals in regulatory agencies.
Output 1.1.3 Requirements and guidelines for low-carbon materials and products integrated into at least 2 public procurement frameworks (e.g., construction, tourism infrastructure, public buildings, and other end-use sectors, as applicable), contributing to increased market demand for sustainable products.
Drafting of procurement criteria, piloting GPP tools, and training procurement officers. Special effort will be made to support women-led MSMEs in accessing public procurement opportunities.
Activities will include drafting procurement criteria, piloting GPP tools, and training procurement officers. Special effort will be made to support women-led MSMEs in accessing public procurement opportunities.
Updated Green Public Procurement (GPP) frameworks under Component 1 will integrate low-carbon and circular material requirements into at least two public procurement systems. This can position public procuring entities (e.g., public works and infrastructure, public buildings, and tourism-related public procurement, as applicable) as anchor buyers, creating more predictable demand and reducing market-entry risk for MSME-supplied low-carbon and circular products. Together with the standards and implementation guidance developed under Output 1.1.4, this is expected to improve buyer confidence and support scale-up.
Output 1.1.4 National standards and technical requirements for selected low-carbon/decarbonized products in construction, tourism, and other sectors updatedrevised and validated through participatory consultations with at least 20 stakeholders, and 2 to 3 practical implementation guidelines developed to support the application of these standards., Oone guideline for each type of action (e.g., waste, biomaterials and bioenergy).
Expert working groups, technical validation sessions, and publication of updated standards. Gender-inclusive participation will be promoted to integrate perspectives of women professionals, entrepreneurs, and community representatives.
Component 2: Developing supply chains for low-carbon/decarbonized materials, enterprises, and businesses models.and piloting low carbon/decarbonized material value chains through MSME innovation and technology deployment

The second component will support enterprises in designing, piloting and validating low-carbon and circular material solutions in priority areas such as waste, biomaterials and bioenergy. It will provide technical assistance, engineering design support, prototyping and pilot testing under local conditions, complemented by innovative financing mechanisms that reduce upfront and credit risks for micro, small and medium-sized enterprises. These activities will generate practical evidence of technical and economic feasibility, strengthen investment readiness and demonstrate pathways for wider market uptake.

The project will work with MSMEs operating in low-carbon material and circular value chains, structured around priority thematic areas that are consistently referenced under this Component, including:

- Waste valorization (e.g., recycling, conversion of post consumer and industrial waste into secondary raw materials)
- Biomaterials (e.g., bio based construction materials, circular wood or agro residue derivatives)
- Bioenergy (e.g., small scale biomass based fuels, biogas production, efficient biomass processing technologies)

These thematic areas represent the project's initial priority MSME focus, and enterprise-level activities, which include prototyping, engineering design, piloting, innovation challenges, incubator support and financing mechanisms, and will prioritize MSMEs within these value chains, as confirmed and refined during PPG phase.

During this phase the project will conduct a structured, multi-stage value chain and technology readiness diagnostic for selected priority thematic areas (e.g., waste valorization, biomaterials and bioenergy), to confirm and refine pilot focus areas and inform on MSME pilot selection.

Each assessment will evaluate:

- current material flows and bottlenecks
- MSME roles and capabilities within each chain
- market opportunities and pricing
- gender specific barriers
- readiness for low carbon technology adoption
- mitigation potential across the chain

This helps ensure pilots are grounded in evidence and aligned with national demand signals created under Component 1.

To address technology readiness, the project will introduce a standardized Technology Readiness Assessment process, aligned with common UNIDO practices, applied to selected potential MSME pilots. This will include:

- Technology Readiness Levels (TRL) scoring for each proposed material/product prototype
- Feasibility screening under Cuban technical conditions (energy supply, inputs, testing capacity)
- Gender responsive assessment of who participates in technical jobs and who benefits
- Operational viability screening through engineering design and prototyping steps already referenced in Outputs 2.1.1 and 2.1.2

This strengthens the credibility of pilot selection and ensures technologies selected for piloting are technically and commercially viable.

Baseline establishment will be built into PPG phase and initial component 2 Activities.

The following baseline elements will be developed for each MSME selected for pilot participation:

- Current energy and material use
- GHG emissions from existing processes,
- Waste generation and disposal practices
- Current production efficiency
- Gender disaggregated labor data

These baselines will form the foundation for calculating the mitigation potential of each prototype and value chain pilot. GHG emission reductions will be achieved by (i) substituting higher-carbon inputs with low-carbon/circular materials and fuels produced or enabled through MSME pilots, (ii) avoiding emissions from waste disposal through valorization and improved material recovery, and (iii) reducing energy intensity and process losses through improved production efficiency and upgraded conversion/manufacturing processes. Downstream emission reductions will be estimated using baseline data and monitored through production volumes, energy/material input changes and uptake in end-use applications.

Gender-responsive value-chain diagnostics and pilot selection criteria will be applied to promote equitable participation of women. This includes mapping women-led MSMEs/cooperatives (and relevant informal enterprises), integrating gender into readiness and baseline assessments, and prioritizing women-owned or women-managed enterprises for pilot selection, with participation tracked through sex-disaggregated indicators (including the share of women-owned/women-managed MSMEs supported).

Outcome 2.1: Strengthened or created supply and value chains for 2–3 low-carbon/decarbonized materials and products with high market/deployment potential (including circularity models), piloted through MSMEs selected based on technology readiness, mitigation potential and market relevance to downstream end-use applications.

Outtput 2.1.1: Designs of selected low-carbon/decarbonized materials and products developed or optimized, with at least 3 prototypes tested and validated under local conditions.
Activities will include laboratory testing, material characterization, and iterative prototyping. Gender dimensions will ensure that women engineers, researchers, and MSME owners have equal access to design and testing opportunities. This will be accompanied by a market integration package identifying compliance routes (standards/testing/procurement requirements) and potential anchor buyers/off-takers for scale-up.

Output 2.1.2: Engineering design of pilot small-scale manufacturing or conversion technological processes completed for at least 3 enterprises, one for each type of action (e.g., waste valorization, biomaterials and bioenergy), including the development of 2–3 functional technological prototypes.

Activities will support process engineering, prototype fabrication and pilot demonstration, helping enterprises validate technical and operational feasibility under real conditions. Gender-responsive trainings will promote women's participation in technical, operational and engineering roles during prototype development. During the PPG phase, each selected pilot will also define a practical scale-up roadmap (deployment requirements, conformity/standards steps, and buyer/off-taker engagement) to support replication beyond the initial demonstrations.

Component 3: Strengthening knowledge management and national innovation ecosystem for low-carbon materials, enterprises and business models with consideration of gender

The third component will strengthen Cuba's national innovation ecosystem by improving knowledge generation, collaboration and information flows needed to support uptake and scaling of low-carbon and circular solutions. It will establish mechanisms such as a Community of Practice and a Market and Technology Observatory, launch innovation and incubation initiatives, and deliver awareness-raising and technical guidance. These efforts will enable continuous learning, replication and capacity strengthening across public and private actors, with gender-responsive participation. The Innovation Challenge and incubation support will include gender-responsive outreach and selection (e.g., targeted outreach to women-led enterprises/cooperatives and tailored mentoring) and will monitor participation using sex-disaggregated indicators. Knowledge products will document and disseminate lessons learned on gender mainstreaming (including what worked to increase women's participation and benefits in MSME pilots and value chains) through the Community of Practice and the Market and Technology Observatory to support replication and scale-up.

Outcome 3.1: A low-carbon and circular materials Community of Practice and a Market and Technology Observatory are established and hosted by a designated national institution (to be confirmed during the PPG phase).

Ouput 3.1.1 Publication and outreach of market assessment results to support national awareness and knowledge sharing

Activities will include preparing and publishing a national report that synthesizes market assessment findings and priority opportunities for low-carbon and circular materials. Dissemination efforts will involve knowledge-sharing events and sector dialogues targeting policymakers, MSMEs, academia and industry actors, with gender-responsive outreach to ensure that women professionals and women-led enterprises participate equally.

Output 3.1.2 The Community of Practice and the Market and Technology Observatory are operationalized to enable continuous knowledge exchange, collaboration and monitoring of developments across stakeholders.

Activities will include establishing or upgrading institutional and digital platforms; setting governance/participation arrangements; and convening regular multi-stakeholder dialogues, thematic working groups and learning cycles. Inclusive participation of women-led enterprises, academic institutions, youth groups and other relevant actors will be supported through targeted outreach and facilitation.

Outcome 3.2: Cuban innovation acceleration and incubation capacity are strengthened to support low-carbon and circular materials and business models.
Cuban innovation capacity and support mechanisms are strengthened to promote enterprise incubation, awareness, and practical application of low-carbon and circular materials and business models.

Output 3.2.1: Innovation Challenge and incubation support mechanisms are implemented to foster early-stage ideas and entrepreneurship related to low-carbon and circular materials and business models.

Activities will include designing and launching Innovation Challenge calls, targeted outreach and selection (including women-led enterprises/cooperatives), mentoring and incubation support to refine solutions and business models, and convening pitching/matchmaking sessions to connect innovators with potential partners and buyers. Participation and results will be tracked using sex-disaggregated indicators.

Output 3.2.2: Awareness-raising, outreach and capacity-building activities are conducted to improve understanding and uptake of low-carbon and circular solutions among key stakeholders, including MSMEs, supply chain actors and service providers.

Activities will include stakeholder outreach, knowledge-sharing sessions and targeted trainings to strengthen understanding of low-carbon and circular options, market opportunities and adoption pathways, with gender-responsive outreach to ensure inclusive participation.

Output 3.2.3: Technical guidance materials, tools, and training modules on low-carbon materials and circular business models are developed and disseminated in collaboration with academic and local institutions to support practical application and replication.

Activities will include development of practical guidance (manuals, templates, toolkits and training modules) validated with universities and technical institutes and disseminated through digital platforms, training centres and MSME networks, ensuring accessibility for diverse users, including women-led enterprises and practitioners.

Component 4: Monitoring and Evaluation
Outcome 4.1 Adequate monitoring of all project indicators
This component will be executed by UNIDO according to the GEF and UNIDO rules and regulations related to the M&E.
Output 4.1.1: Monitoring and mid-term project review

The project results, corresponding indicators and mid-term and end-of-project targets in the project results framework will be monitored annually and evaluated periodically during project implementa-tion. The

Monitoring Plan included in the Monitoring and Evaluation table below including the roles, responsibilities, and frequency of monitoring project results. Project-level monitoring and evaluation will be undertaken in compliance with UNIDO, GEF and the Cuban government's requirements.

Gender-specific indicators (including sex-disaggregated data) and Gender Action Plan implementation will be tracked as part of annual monitoring and reported through the project's PIRs. Progress on gender outcomes and GAP implementation will also be assessed and documented in the MTR and TE.

Mid-term Review (MTR): The MTR will be conducted in the second year of the project implementation. The evaluation will be independent, impartial and rigorous. The evaluators that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing, or advising on the project to be evaluated. Equally, the evaluators should not be in a position where there may be the possibility of future contracts regarding the project under review.

The GEF Operational Focal Point and other stakeholders will be involved and consulted during the evaluation process. The final MTR report and MTR TOR will be publicly available in English and will be publicly posted. A management response to MTR recommendations will be posted publicly within six weeks of the MTR report's completion.

Output 4.1.2. Project terminal evaluation

Terminal Evaluation (TE): An independent terminal evaluation (TE) will take place upon completion of all major project outputs and activities. The terms of reference, the evaluation process and the final TE report will follow the standard templates and guidance for GEF-financed projects. The evaluation will be independent, impartial and rigorous. The evaluators that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Equally, the evaluators should not be in a position where there may be the possibility of future contracts regarding the project being evaluated. The GEF Operational Focal Point and other stakeholders will be actively involved and consulted during the terminal evaluation process. The final TE report and TE TOR will be publicly available in English.

Final Report: The project's terminal GEF PIR along with the terminal evaluation (TE) report and corresponding management response will serve as the final project report package. The final project report package shall be discussed with the Project Steering Committee during and at end-of-project review meeting to discuss lessons learned and opportunities for scaling up and replication.

Key assumption:
The theory of change rests on several conditions that are expected to hold throughout implementa-tion. It assumes that the Government of Cuba, through MINEM, CITMA, MINDUS, UNE and ONURE, will maintain its current level of commitment and coordination, enabling the timely adoption and enforcement of updated standards, certification procedures and green public procurement criteria. It further assumes that public procurers, ministries, state-owned enterprises, municipalities and anchor firms will actively engage in pilots, apply revised regulatory and procurement tools, and share performance data to support replication, while MSMEs and service providers participate in the community of practice and capacity-building initiatives. The regulatory environment is expected to remain sufficiently stable and adaptable to allow updates to standards, testing and procurement rules without significant delays. It is also assumed that available financial and non-financial support mechanisms will be adequate for MSMEs to engage in demonstrations and adopt low-carbon technologies. National and local institutions are expected to retain or strengthen the technical capacities needed to implement, monitor and enforce revised frameworks. Finally, the project assumes that enterprises and implementing partners will be willing and able to absorb training, adopt operational tools and apply energy-efficient, low-emission technologies, including MRV and ISO 50001 practices where relevant. These

assumptions will be monitored and revisited during implementation to ensure their continued validity and to adjust strategies as needed.

Barriers

Several contextual barriers may influence the project's ability to achieve its intended outcomes and impacts. Geopolitical constraints linked to the U.S. embargo may restrict access to technologies, equipment and foreign investment, potentially affecting the pace of pilot deployment and value-chain development. Institutional priorities across ministries and state entities may shift over time, slowing regulatory revisions and delaying the implementation of updated standards and procurement practices. Capacity-building efforts may be challenged by limited domestic technical expertise, increasing the risk that circular economy practices are adopted superficially rather than embedded meaningfully into enterprise and institutional operations. Green Public Procurement (GPP) processes may face budgetary constraints within public contracting agencies, reducing incentives to prioritize low-carbon suppliers. Many new economic actors continue to face financing gaps for piloting low-carbon technologies, compounded by Cuba's restricted access to international capital markets. Technological obsolescence in existing manufacturing infrastructure could limit the scalability of prototypes and slow the establishment of new value chains. In addition, data scarcity, particularly in baseline measurements for GHG emissions, material flows and resource efficiency, may complicate monitoring and hinder the project's ability to demonstrate quantifiable impact. Addressing these barriers will require adaptive governance, diversified funding approaches and strong public–private collaboration to maintain momentum and support the project's contribution to national decarboniza-tion objectives.

While the project's direct interventions target MSMEs, the resulting products and services are deployed in downstream end-use applications (e.g., construction, tourism, industrial and residential). Key drivers include fossil-fuel dependence and high energy/material intensity in production and service delivery. To quantify mitigation, the project will establish MSME-level baselines during the PPG phase for shortlisted pilots (energy/fuel use, material inputs and waste practices, among others), enabling credible estimation and verification of GHG reductions from substitution, avoided waste and efficiency gains.

Global Environmental Benefits

The project will generate significant global environmental benefits by aiming at transforming the enabling environment for industrial decarbonization, strengthening low-carbon supply chains, and accelerating market uptake of circular materials and business models. Through policy and regulatory transformation, the project will modernize outdated industrial regulations, introduce enforceable mandates for decarbonization, and align national frameworks with international climate goals and energy transition commitments. Strengthened institutional capacities will ensure that key actors can continue advancing regulatory reforms, certification practices, and procurement criteria beyond the project's duration. By leveraging state purchasing power, updated green public procurement mechanisms will stimulate demand for low-carbon products and incentivize enterprises to innovate and compete in emerging circular markets.

Strengthened low-carbon supply chains will further contribute to national and global benefits. Targeted technical assistance and investment support will enable Cuban micro, small and medium-sized enterprises to pilot and scale resource-efficient technologies, improving their competitiveness and resilience. Demonstration projects will serve as replicable models that showcase the feasibility of decarbonized production methods and circular business practices. Optimized design and manufacturing processes will reduce material and energy consumption, resulting in measurable reductions in greenhouse gas emissions. By validating supply chains for two to three key materials, the project will catalyze wider adoption across sectors and lay the groundwork for future replication and scaling.

At the same time, enhanced knowledge generation, innovation and community engagement will ensure sustained uptake of low-carbon solutions. Establishing a Community of Practice and a Market and Technology Observatory will foster collaboration among public and private stakeholders, academia and technical institutions. Awareness-raising and capacity-building activities will facilitate the understanding and practical adoption of circular approaches across the supply chain. The decarboniza-tion innovation challenge will identify

and support start-ups and innovators developing new low-carbon business models and technologies, while strengthened incubation and accelerator programs will nurture local talent and contribute to long-term economic diversification. Together, these efforts will reinforce national capacity to advance decarbonization objectives, support Cuba's climate commitments, and generate enduring global environmental benefits.

Gender Dimensions

The project integrates gender considerations across all components by ensuring equal participation of women in consultations, training, innovation challenges, and technical activities; promoting women's engagement in regulatory processes and decision-making; and supporting women-led MSMEs in accessing public procurement, financing mechanisms, and technology opportunities. Gender-disaggregated data will be collected to identify barriers and inform targeted actions that enhance women's leadership and economic empowerment within the emerging low-carbon value chains.

Knowledge Management (KM)

Knowledge generation and dissemination will be implemented through the Community of Practice, the Market and Technology Observatory, training activities, and publicly accessible knowledge products. Lessons learned, data on performance and pilots, and best practices will be consolidated and shared in alignment with UNIDO's KM framework and GEF Knowledge Management Guidelines, ensuring replicability, adaptive learning, and integration into national institutions.

Private Sector Engagement

The project will engage MSMEs, cooperatives, suppliers, and innovators throughout the design, piloting, and scale-up of low-carbon technologies and business models. Activities such as the Decarbonization Innovation Challenge, supplier-based financing approaches, and pilot demonstrations will strengthen private sector participation, foster entrepreneurship, and build new market opportunities aligned with national decarbonization goals.

Coordination and Cooperation with Ongoing Initiatives and Project.

Does the GEF Agency expect to play an execution role on this project?

If so, please describe that role here. Also, please add a short explanation to describe cooperation with ongoing initiatives and projects, including potential for co-location and/or sharing of expertise/staffing

Coordination with ongoing initiatives and projects

The project aligns closely with Cuba's national climate priorities, including Tarea Vida and the country's updated Nationally Determined Contribution (NDC 3.0, February 2025). It will coordinate with and complement ongoing initiatives to ensure coherence, avoid duplication, and maximize synergies, including:

- Program for the Ecological Transition Towards Sustainable Municipalities (AICS–EU–UNDP): Coordination will focus on aligning local-level clean energy and capacity-building activities relevant to MSMEs and pilot demonstrations.
- Participation in Carbon Markets (UNDP – Climate Promise): Coordination will ensure consistency with national MRV systems and emerging voluntary carbon market frameworks.
- Technological and Business Upgrade Program for Agrochemical and Agricultural Machinery Industries (Government of Russia – UNIDO): Synergies are expected in industrial modernization, energy efficiency, and technology upgrading.
- Support Programme for the Energy Sector in Cuba – Energy Efficiency (EU-funded, UNDP–UNIDO): Lessons learned, tools, and institutional partnerships will inform project design and implementation.
- Cuba's Biennial Transparency Reports and National Communications (GEF-funded): Coordination will ensure consistency in greenhouse gas accounting and integration of results into national transparency processes.

Coordination mechanisms and institutional arrangements

As GEF Agency, UNIDO is expected to support project execution through overall fiduciary oversight, technical supervision, and quality assurance in line with GEF policies and procedures. UNIDO will work with the Government of Cuba and the designated Executing Entity (once confirmed) to support the establishment of implementation arrangements and ensure coordination with relevant national and international initiatives.
Project coordination will be ensured through the establishment of a Project Steering Committee (PSC) and a Project Management Unit (PMU). The PSC will provide strategic guidance, ensure alignment with national policies and ongoing initiatives, and endorse annual workplans and budgets. It is expected to include representatives from relevant ministries (including energy and environment), key national institutions, and the GEF Agency.
A PMU will be established within the Executing Entity (once confirmed) and will be responsible for day-to-day coordination, monitoring and reporting, stakeholder engagement, and implementation of project activities. The PMU will operate under the oversight of the GEF Agency and will serve as the primary interface for coordination with ongoing initiatives, facilitating information sharing, technical exchanges, and, where feasible, the sharing of expertise and resources.

Core Indicators

Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO_2e (direct)	5286	0	0	0
Expected metric tons of CO_2e (indirect)	0	0	0	0

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

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO_2e (direct)				
Expected metric tons of CO_2e (indirect)				
Anticipated start year of accounting				
Duration of accounting				

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

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO_2e (direct)	5,286			
Expected metric tons of CO_2e (indirect)				
Anticipated start year of accounting	2026			
Duration of accounting	4			

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

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

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

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

Indicator 11 People benefiting from GEF-financed investments

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	660			
Male	990			
Total	**1650**	**0**	0	**0**

Explain the methodological approach and underlying logic to justify target levels for Core and Sub-Indicators (max. 250 words, approximately 1/2 page)

The primary global environmental benefit of the project is the mitigation of greenhouse gas emissions. Target levels for Indicator 6 are estimated drawing on projected reductions from three complementary intervention pathways: (i) strengthened policy, regulatory and standards frameworks that incentivize or require the adoption of low-carbon and circular practices; (ii) direct technical assistance and investment support enabling MSMEs to upgrade to resource-efficient, low-carbon technologies and processes; and (iii) pilot demonstrations that validate scalable decarbonization models for priority industrial and commercial sectors. Emissions reductions are calculated by comparing baseline energy and process performance with expected improvements from technology deployment, efficiency gains, and material substitution.

For Indicator 11, beneficiary estimates reflect the number of individuals who will directly participate in or benefit from project-supported activities, including MSME employees involved in pilots, policymakers and technical staff engaged in training and standards work, and participants in awareness, innovation and knowledge-sharing activities. The estimate is based on projected participation numbers across these interventions, applying a gender target of at least 40% women's participation in all capacity-building, training, and innovation-related activities

Key Risks

	Rating	Explanation of risk and mitigation measures
CONTEXT		
Climate	Substantial	Cuba is highly exposed to hurricanes, floods and droughts that may disrupt supply chains, pilot demonstrations and institutional workplans. The project would aim to mitigate these risks by prioritizing resilient technologies, integrating climate-risk screening into design, and aligning with national adaptation planning. Residual risk remains substantial due to external climatic conditions.
Environmental and Social	Moderate	Project activities involve policy work, capacity building and SME-level demonstrations with localized and manageable environmental and social risks. These will be addressed through UNIDO safeguards, site-specific screening, ESMPs, and continuous stakeholder consultation. With these measures, residual risk remains moderate.
Political and Governance	Moderate	Shifts in government priorities, inter-ministerial coordination delays or competing agendas may affect policy reforms. Mitigation includes strong PSC oversight, alignment with national strategies, and continu-ous dialogue with MINEM, CITMA, MINDUS, UNE and the Institute of Non-State

		Economic Actors. These measures keep residual governance risk at a moderate level.
INNOVATION		
Institutional and Policy	Moderate	Limited experience with circular economy, MRV and green public procurement may slow implementation. Targeted capacity-building for regulatory bodies, technical working groups, and support for developing standards and procurement tools reduce this risk, though institutional capacity gaps remain moderate.
Technological	Moderate	Technological obsolescence, lack of modern equipment and constraints related to energy storage or grid conditions may affect technology viability. Feasibility screening during PPG, prioritizing proven and ser-viceable technologies, engineering support and supplier-based financing mitigate these factors, leaving moderate residual risk.
Financial and Business Model	Substantial	Restricted access to international financing, foreign-exchange limitations and liquidity constraints for MSMEs may slow adoption of low-carbon solutions. The project introduces innovative financing (risk-sharing, pay-as-you-save, revolving models) and leverages procurement incentives, but macroeconomic constraints persist. Residual risk is therefore subs-tantial.
EXECUTION		
Capacity	Moderate	Limited domestic expertise in circularity, EE, MRV and enforcement may affect implementation quality. Mitigation includes extensive capaci-ty-building under Components 1 and 3, long-term skills transfer, and institutional strengthening via the PMU and technical partners. Residual risk is moderate.
Fiduciary	Low	UNIDO's financial management, procurement procedures and audit systems will apply, ensuring strong controls and transparent fund man-agement. With clear roles and oversight, fiduciary risk is assessed as low.
Stakeholder	Moderate	MSMEs may hesitate to adopt unfamiliar technologies, and women may be under-represented in technical training and innovation activi-ties. Mitigation includes awareness campaigns, technical assistance, demonstration pilots, gender-responsive outreach, and strengthened participation mechanisms via the Community of Practice and Innovation Challenge. Residual stakeholder risk is moderate.
Other	Moderate	Data gaps and limited MRV systems may constrain accurate GHG track-ing and performance measurement. A strengthened M&E system, cooperation with CITMA, and the use of the Innovation Challenge and Observatory as data hubs will mitigate this, though some uncertainty remains.

Overall Risk Rating	Substantial	The combination of macro-financial constraints, climate hazards and institutional capacity gaps warrants an overall substantial risk rating, which is acceptable given the project's expected transformational impacts.

C. ALIGNMENT WITH GEF-8 PROGRAMMING STRATEGIES AND COUNTRY/REGIONAL PRIORITIES

Describe how the proposed interventions are aligned with GEF- 8 programming strategies and country and regional priorities, including how these country strategies and plans relate to the multilateral environmental agreements.

Confirm if any country policies that might contradict with intended outcomes of the project have been identified, and how the project will address this.

For projects aiming to generate biodiversity benefits (regardless of what the source of the resources is - i.e., BD, CC or LD), please identify which of the 23 targets of the Kunming-Montreal Global Biodiversity Framework the project contributes to and explain how. (max. 500 words, approximately 1 page)

The project is fully aligned with GEF-8 Programming Directions, particularly the Climate Change Focal Area's goals of accelerating clean energy transitions and transforming value chains through circular economy approaches. By establishing enabling regulatory frameworks, supporting SME innovation in low-carbon materials, and strengthening national knowledge management systems, the project addresses both systemic and sectoral barriers to decarbonization. This directly supports Cuba's national priorities for climate mitigation, sustainable industrial development, and economic diversification, as articulated in its NDC and national development strategies. The project's focus on capacity building, private sector engagement, and robust monitoring further ensures alignment with both GEF-8 cross-cutting priorities and national/regional commitments. GEF-8 Core Strategies Relevant to the Project are identified as follows:

- Climate Change Mitigation: Promoting decarbonization, circular economy, and low-carbon technologies directly supports GEF-8's climate change mitigation goals, especially under the "Accelerating Clean Energy Transitions" and "Transforming Value Chains" programs.
- Circular Economy and Resource Efficiency: The project's emphasis on regulatory frameworks, green public procurement, and circular business models aligns with GEF-8's push for systemic transformation in material use and waste reduction.
- Private Sector Engagement: Support for SMEs, innovation accelerators, and business incubation matches GEF-8's focus on leveraging private sector solutions and financing for environmental benefits.
- Knowledge and Capacity Building: Strengthening knowledge management, stakeholder engage-ment, and innovation ecosystems is central to GEF-8's cross-cutting priorities, ensuring sustain-ability and replicability.

Although the main focus is climate, the project generates co-benefits for biodiversity by contrib-uting to:

- Goal 7 (Pollution): Reduce industrial waste and polluting emissions.
- Goal 8 (Climate Change): Mitigates climate impacts that affect ecosystems.
- Goal 10 (Sustainable Agriculture and Aquaculture): Promoting cleaner production practices.
- Goal 15 (Business and Biodiversity): Encouraging SMEs to adopt sustainable models.

This intervention represents a transformative opportunity for Cuba by integrating deep decarboni-zation approaches with circular economy strategies in the manufacturing sector for the first time, creating synergies between international climate commitments and national sustainable develop-ment priorities. The lessons learned will be particularly relevant for other small island developing states facing similar industrial decarbonization challenges with limited resources. The proposed governance model (which combines institutional strengthening, public-private partnerships, and lo-calized innovation systems) could be replicated in other contexts in Latin America and the Caribbean, thus contributing to the GEF's regional portfolio of low-carbon industrial transitions.

D. POLICY REQUIREMENTS

Gender Equality and Women's Empowerment:

We confirm that gender dimensions relevant to the project have been addressed as per GEF Policy and are clearly articulated in the Project Description (Section B).

Yes

Stakeholder Engagement

We confirm that key stakeholders were consulted during PIF development as required per GEF policy, their relevant roles to project outcomes and plan to develop a Stakeholder Engagement Plan before CEO endorsement has been clearly articulated in the Project Description (Section B).

Yes

Were the following stakeholders consulted during project identification phase:

Indigenous Peoples and Local Communities:

Civil Society Organizations:

Private Sector: Yes

Provide a brief summary and list of names and dates of consultations

Stakeholder	Role in Decarbonization	Engagement Strategy
MINEM, UNE, ONURE	Policy, regulation, technical leadership	Multi-stakeholder governance, capacity building
CITMA, MINDUS	Environmental and industrial innovation	Knowledge sharing, integration into planning
National Institute of Non-State Economic Actors	MSMES and cooperative support	Training, resource facilitation, private sector incentives
ONEI	Data and MRV	Data-driven decision-making, reporting
Provincial/Municipal Entities	Local implementation	Community participation, local planning
MSMEs, Cooperatives, Private Sector	Innovation, renewable adoption	Public-private partnerships, access to finance
Civil Society, Academia	Awareness, research, capacity building	Participatory planning, education, coalition building
Independent Producers	Decentralized generation	Regulatory support, technical assistance

While the project's direct interventions focus on MSMEs, civil society organizations and local community groups are important enabling actors for pilots to take root and support replication. They can help build local acceptance of new low-carbon and circular products and practices, strengthen outreach to women-led groups and cooperatives, and surface practical constraints and risks that may not be visible through enterprise-only engagement. During the PPG phase, the project will engage civil society and community representatives through stakeholder mapping and local consultations in potential pilot areas to understand local needs, barriers and acceptance factors, and to shape inclusion measures and risk management for the pilots. During

implementation, these actors will remain engaged through periodic feedback and consultation moments and will be invited to participate in knowledge-sharing and replication activities under Component 3 (e.g., the Community of Practice and Market and Technology Observatory).

June 2, 2025 - UNIDO Havana Office

The mission began with an internal UNIDO coordination meeting attended by international expert José La Cal, national expert Orlando Rey Santos, UNIDO Project Associate Ivette Tortosa, UNIDO PP Coordinator Fidel Doménech López, and CUJAE's Innovation Hub Head Ileana Pereda Reyes. Key government representatives participated, including two General Directors from MINDUS, ONURE's delegate, CITMA's General Director of Environment, and MINEM's General Director.

Internal UNIDO team meeting to prepare and plan interviews with public and private stakeholders: CITMA, MINDUS, ONURE and MINEM. Discussion of potential management models and actors involved in implementation (MSMEs, spin-offs, EBCs, etc.). Three potential work streams identified regarding materials: plastic, paper/cardboard, and steel to be implemented by MSMEs like PRODEN (steel), CNA3 (plastic) and ENVACONS (paper/cardboard), who were invited to a meeting later that week.

June 3, 2025 – Technological University of Havana (CUJAE)

The team visited CUJAE to meet with CETA S.A. (the university's interface company), including CEO Antonio Torrá, Vice-Rector Daniel Alfonso Robaina, and advisor José María Ameneiros.

Meeting with CETA S.A. management (CUJAE's state-owned interface company) to present the project and explore collaboration opportunities for implementation, as it's a CUJAE-affiliated company with an innovation lab and early-stage business incubation program.

A subsequent meeting convened with MICONS officials and representatives from the National Institute of Non-State Economic Actors (INAENE) to explore public-private collaboration frameworks.

June 4, 2025 - UNIDO Havana Office

Morning sessions reviewed mission findings and planned afternoon engagements. Later, substantive discussions occurred with MSMES representatives: ENVACONS (private paper/cardboard sector), PRODEN (state-owned steel company), and CNA3 (plastic sector, via videoconference), examining sector-specific circular economy challenges.

June 5, 2025 - Hotel Habana Libre

The team participated in three concurrent events:

1. The 11th National Conference on Renewable Energy, Energy Saving and Energy Education, where José La Cal delivered the keynote 'Circular Economy Perspectives in Cuba: A Public-Private Vision'.

2. The 2nd Circular Economy and Sustainability Workshop.

3. The 3rd Biomass Workshop, featuring the presentation 'Bioenergy: Security and Sustainability'. Side meetings with CUBAENERGÍA and other technical experts facilitated knowledge exchange on renewable energy integration.

(Please upload to the portal documents tab any stakeholder engagement plan or assessments that have been done during the PIF development phase.)

Private Sector

Will there be private sector engagement in the project?

Yes

And if so, has its role been described and justified in the section B project description?

Yes

Environmental and Social Safeguard (ESS) Risks

We confirm that we have provided indicative information regarding Environmental and Social risks associated with the proposed project or program and any measures to address such risks and impacts (this information should be presented in Annex D).

Yes

Overall Project/Program Risk Classification

PIF	CEO Endorsement/Approval	MTR	TE
Medium/Moderate			

E. OTHER REQUIREMENTS

Knowledge management

We confirm that an approach to Knowledge Management and Learning has been clearly described in the Project Description (Section B)

Yes

ANNEX A: FINANCING TABLES

GEF Financing Table

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

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	Grant / Non-Grant	GEF Project Grant($)	Agency Fee($)	Total GEF Financing ($)
UNIDO	GET	Cuba	Climate Change	CC STAR Allocation: CCM-1-2	Grant	1,858,676.00	176,574.00	2,035,250.00
Total GEF Resources ($)						**1,858,676.00**	**176,574.00**	**2,035,250.00**

Project Preparation Grant (PPG)

Is Project Preparation Grant requested?

true

PPG Amount ($)

50000

PPG Agency Fee ($)

4750

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	Grant / Non-Grant	PPG($)	Agency Fee($)	Total PPG Funding($)
UNIDO	GET	Cuba	Climate Change	CC STAR Allocation: CCM-1-2	Grant	50,000.00	4,750.00	54,750.00
Total PPG Amount ($)						**50,000.00**	**4,750.00**	**54,750.00**

Please provide justification

Sources of Funds for Country Star Allocation

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Sources of Funds	Total($)
UNIDO	GET	Cuba	Biodiversity	BD STAR Allocation	2,090,000.00
Total GEF Resources					**2,090,000.00**

Indicative Focal Area Elements

Programming Directions	Trust Fund	GEF Project Financing($)	Co-financing($)
CCM-1-2	GET	1,858,676.00	8875372
Total Project Cost		**1,858,676.00**	**8,875,372.00**

Indicative Co-financing

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
Beneficiaries	MSMEs Pilots	Grant	Investment mobilized	2926000
Recipient Country Government	National Funds (National Environmental Fund, National Fund for Science and Technology)	Grant	Recurrent expenditures	5949372

Total Co-financing				**8,875,372.00**

Describe how any "Investment Mobilized" was identified

Investment mobilized was calculated based on the expected cash and capital contributions from MSME pilot participants. These contributions include direct expenditures on technology upgrades, equipment purchases, process improvements, and other capital investments required to implement the project-supported pilot interventions.

ANNEX B: ENDORSEMENTS

GEF Agency(ies) Certification

GEF Agency Type	Name	Date	Project Contact Person	Phone	Email
Project Coordinator	Marco Matteini	12/15/2025		+43 1 26026 4583	m.matteini@unido.org
GEF Agency Coordinator	Ganna Onysko	12/15/2025		+43 1 26026 3647	g.onysko@unido.org

Record of Endorsement of GEF Operational Focal Point (s) on Behalf of the Government(s):

Name	Position	Ministry	Date (MM/DD/YYYY)
Lisbet Font Vila	Director of International Affairs	Ministry of Science, Technology, and Environment	9/4/2025

ANNEX C: PROJECT LOCATION

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

Havana, Cuba 23° 6' 48.9312" N and 82° 21' 59.7312" W. During PPG phase the specific locations for interventions will be determined.

ANNEX D: ENVIRONMENTAL AND SOCIAL SAFEGUARDS SCREEN AND RATING

(PIF level) Attach agency safeguard screen form including rating of risk types and overall risk rating.

Title
ESS UNIDO Cuba

ANNEX E: RIO MARKERS

Climate Change Mitigation	Climate Change Adaptation	Biodiversity	Land Degradation
Principal Objective 2	No Contribution 0	No Contribution 0	No Contribution 0

ANNEX F: TAXONOMY WORKSHEET

Level 1	Level 2	Level 3	Level 4
Influencing Models	Transform policy and regulatory environments	Development of enabling laws/regulations	
	Strengthen institutional capacity	Training and technical assistance to institutions	
	Economic/financial instruments	Green public procurement, climate finance	
	Innovation platforms	Support innovation challenges/accelerators	
Stakeholders	Governmental institutions	Ministries/agencies	
	Non-state actors	MSMEs, cooperatives	
	Academia	Universities/research centers	
	Civil Society	Communities, ONGs	
	Internacional	Agencies	
Capacity, Knowledge and Research	Institutional capacity	Energy audits, regulatory compliance	
	Technical training & technology transfer	Training workshops, learning-by-doing	
	Research & innovation	Applied research, development of prototypes	
	Knowledge management	Market/Technology Observatory, Communities of Practice	
Gender Equality	Gender analysis	Gender participatory mapping	
	Empowerment and training	Gender-sensitive capacity-building	
	Participation and leadership	Women's representation in decision-making bodies	
	Policy mainstreaming	Gender in institutional frameworks and indicators	
Focal Area/Theme	Climate Change Mitigation	Renewable energy, energy efficiency, circular economy	
	Cross-cutting themes	Private sector engagement,	