Needs-based Climate Finance Project

Technical Assessment of Climate Finance in Cuba

Annex to the Climate Finance Access and Mobilization Strategy for Cuba 2022–2030

United Nations
Climate Change

Contents

List of tables

List of figures

List of boxes

Abbreviations and acronyms

AECID	Spanish Agency for International Development Cooperation
AFD	French Development Agency
AFOLU	agriculture, forestry, and other land use
ANPP	National Assembly of People's Power
BANDEC	Credit and Trade Bank of Cuba
BCC	Central Bank of Cuba
BUR	biennial update report
CABEI	Central American Bank for Economic Integration
CDM	clean development mechanism
CEPA	Classification of Environmental Protection Activities
CITMA	Ministry of Science, Technology and Environment
CO_2 eq	carbon dioxide equivalent
COVID-19	coronavirus disease 2019
CRS	Common Reporting Standard
CTCN	Climate Technology Centre and Network
CUC	Cuban convertible peso
CUP	Cuban peso
DTU	Technical University of Denmark
FAO	Food and Agriculture Organization
GCCA+	Global Climate Change Alliance Plus
GCF	Green Climate Fund
GDP	gross domestic product
GEF	Global Environmental Facility
GHG	greenhouse gas
ICC-GCF	Inter-Ministerial Coordination Committee for GCF Issues
IFAD	International Fund for Agricultural Development
INRH	National Institute of Hydraulic Resources
IRES	Increased climate resilience of rural households and communities through the rehabilitation of production landscapes in selected localities of the Republic of Cuba (GCF project)
LAIF	Latin America Investment Facility
MEP	Ministry of Economy and Planning
MFP	Ministry of Finance and Prices
MI COSTA	Coastal resilience to climate change in Cuba through ecosystem-based adaptation (GCF project)
MINAG	Ministry of Agriculture
MINCEX	Ministry of Foreign Trade and Foreign Investment
MINEM	Ministry of Energy and Mines
MRV	measurement, reporting and verification
NAMA	nationally appropriate mitigation ction
NAP	national adaptation plan
NC	national communication
NDA	national designated authority

Abbreviations and acronyms

NDC	nationally determined contribution
NEP	National Annual Economic Plan
OECD	Organisation for Economic Co-operation and Development
ONEI	National Office of Statistics and Information
PNDES	National Economic and Social Development Plan
REDD+	reducing emissions from deforestation; reducing emissions from forest degradation; conservation of forest carbon stocks; sustainable management of forests; and enhancement of forest carbon stocks (decision 1/CP.16, para. 70)
SA	Strategic Action
SIEN	National Statistics Information System
SWOT	strengths, weaknesses, opportunities and threats
Tarea Vida	State Plan to Confront Climate Change
TNA	technology needs assessment
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change

Executive summary

This technical assessment starts by recognizing that effective mobilization and management of international financial resources is essential for Cuba to address climate change. The purpose of the assessment is therefore to provide a solid data and knowledge basis for the development of a climate access and mobilization strategy for Cuba.

The assessment is structured as follows:

- **Chapter 1** presents the general regulatory and policy context, including the key public policies and the ways in which they connect with climate policies. Particular attention is paid to the State Plan to Confront Climate Change, *Tarea Vida*, and to Task 11 of the Plan,[1] namely international financing, as the basis from which the process of identifying climate finance resources started in the country. The chapter considers financial and banking policies as part of the general economic and social context, including the particularities of the national planning system, and the institutional arrangements relating to climate finance, where key actors and mechanisms are identified.

- **Chapter 2** covers climate finance needs, starting with the scope of policies for considering climate finance and referring to the financial needs identified in *Tarea Vida* and other relevant national documents and instruments (NCs, BURs, and the NDC) where priorities for mitigation and adaptation are considered. The analysis includes other sources for setting climate finance priorities (TNAs, NAPs and NAMAs). Particular needs for establishing the Enhanced Transparency Framework under the Paris Agreement are also identified, as well as the results of the TNA carried out in 2013. Finally, the chapter highlights the priorities lacking any identified investment projects.

- **Chapter 3** focuses on climate finance flows and includes an attempt to introduce a definition of climate finance that may be nationally appropriate. Both domestic and international sources are considered when determining financial flows, including details of funding channels, instruments and sectors. The chapter also considers the implementation of the CDM under the Kyoto Protocol in Cuba, and the perspectives for green funding. Domestic analysis of financial flows includes the consideration of national funds and programmes as sources of support for climate financing.

- **Chapter 4** analyses the gap between the financing needs declared in the NDC and the international financing received. The year 2019 is analysed as a benchmark of the imbalance between climate needs and investment of national co-financing dedicated to climate actions.

- **Chapter 5** presents the challenges and opportunities for strengthening the national climate finance framework. The chapter is based on a SWOT exercise and subsequent analysis that considers the constraints and challenges in scaling up climate finance. The analysis includes an assessment of the capacity-building needs, barriers and difficulties; the potential role of financial institutions responsible for climate finance (banks and funds); and the opportunities to enhance the monitoring and reporting aspects of climate finance.

[1] See table 1 in chap. II.A.

I. Introduction

1. The effective mobilization and management of international financial resources are essential for Cuba to address climate change. Cuba requires climate finance to enable its transition to a low emission-intensive economy and to achieve climate change resilient development. These aims as enshrined within The PNDES are to be achieved by 2030,[2] and within the State Plan for Confronting Climate Change, adopted by the Government in April 2017, (also known as *Tarea Vida*).[3] These aims are articulated in the country's international commitments, in particular the NDC.[4] At the same time, it is recognized that the international architecture of climate finance is highly complex, and Cuba faces several challenges, gaps and barriers in this regard.[5]

2. The purpose of this technical assessment is to provide a solid data and knowledge basis for developing a domestic financial climate strategy to strengthen national capacities for the access to and mobilization of climate funding. Such funding is required for the implementation of the country's NDC and other relevant climate and development agendas.

3. In order to reach these goals, this technical assessment:

(a) Assesses Cuba's climate finance needs and priorities;

(b) Assesses the level of climate finance (both nationally and internationally) provided to the country in recent years;

(c) Analyses the national policy context and enabling environment that allows domestic and international investment to finance the implementation of the *Tarea Vida*, the NDC and other national climate priorities;

(d) Provides a preliminary identification of a Portfolio of Priority investments and projects;

(e) Provides an outline of a Climate Finance Access and Mobilization Strategy 2022–2030 for Cuba, developed in collaboration with the Government of Cuba and national experts, for the implementation of the *Tarea Vida* and the NDC.

4. In addition to in-depth discussions with national experts and relevant stakeholders of the processes for accessing and mobilizing climate finance, a desk review was undertaken in support of this technical assessment which includes:

(a) An analysis of the available data on public and private financial flows in support of climate projects from national, regional and international sources;

---

[2] MEP. 2019. Plan nacional de desarrollo económico y social hasta el 2030 [National development plan economic and social until 2030]. Available at https://www.mep.gob.cu/sites/default/files/Documentos/Archivos/FOLLETO%20PNDES%20%20FINAL%20est%C3%A1%20en%20planificaci%C3%B3n.pdf.

[3] CITMA. 2017. Enfrentamiento al cambio climático en la República de Cuba [Facing climate change in the Republic of Cuba] .Ministerio de Ciencia Tecnologia y Medio Ambiente Available at http://repositorio.geotech.cu/jspui/bitstream/1234/2864/1/Plan%20de%20Estado%20para%20el%20Enfrentamiento%20al%20Cambio%20Clim%C3%A1tico%20en%20la%20Rep%C3%BAblica%20de%20Cuba%20%28Tarea%20Vida%29.pdf.

[4] CITMA. 2020a. Primera Contribucion Nacionalmente Determinada (actualizada) República de Cuba 2020–2030 [First Nationally Determined Contribution (updated) Republic of Cuba 2020–2030]. Ministerio de Ciencia Tecnologia y Medio Ambiente Available at https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Cuba%20First/Cuban%20First%20NDC%20(Updated%20submission).pdf.

[5] Carrera Doral, W., Rey Santos, O., Perez Hernandez, J., Gonzalez Roque, C., and Carballo Concepcion, J. A. 2020. Elaboración, evaluación y aprobación de proyectos al Fondo Verde de Clima en Cuba [Preparation, evaluation and approval of projects to the Green Climate Fund in Cuba]. La Habana: Cubaenergia. Available at http://financiamientoclimatico.cubaenergia.cu/index.php/descargas/1-guia-general-metologica-publicada/file.

(b) A review of official national reports and plans, including the intended NDC (2015), updated NDC (2020), TNA, NC2 (2015), NC3 (2020) and the first BUR (2020). Several projects associated with the development of NAPs were also considered.

5. It is hoped that this technical assessment, in conjunction with other Needs-based Finance Project documents, may contribute to:

(a) Promoting better identification of access to and mobilization of climate finance in Cuba through the assessment of the needs and flows of such finance;

(b) Strengthening the alignment of climate finance with the implementation needs of the NDC, *Tarea Vida* and the 2030 PNDES;

(c) Accelerating the implementation of strategies and national policy frameworks associated with climate change and development, including (in addition to those mentioned above) BURs, NAMAs, low-emission development strategies, technology action plans and TNAs;

(d) Strengthening country ownership through the articulation of climate finance needs and the harmonization of approaches to mitigate and adapt to climate change among diverse actors and sectors;

(e) Improving and building on synergies with other mandates and processes under the UNFCCC and the Paris Agreement; and

(f) Enabling capacity-building (including peer learning) to contribute to a better understanding of the needs, sources, available instruments, barriers and enabling environments for climate finance in Cuba.

II. Regulatory and policy context

A. Climate policies

6. Climate policies have been systematically adopted in Cuba by the Central Government, which affords them strong authority. These climate policies are also reflected in the main public policies.

Table 1
The correlation between key public policies and climate change objectives

Key public policy	*Connection with climate policies*
Guidelines of the Economic and Social Policy of the State and the Revolution	Emphasises the need to accelerate the implementation of directives and programmes in science, technology and innovation aimed at combating climate change.
2030 PNDES	One of the principles of adaptation (including risk management) provides a detailed treatment of adaptation and mitigation under the strategic action ‘natural resources and environment’. It introduces the concept of low carbon-intensive economic development into public policy.

Source: Adapted from national documents.

7. *Tarea Vida* is the main climate policy tool. Under this, each economic sector, province and municipality implements its own climate plan, including the associated financial planning. Task 11 of *Tarea Vida* is the starting point for identifying climate finance resources. Task 11 calls for the *management and use available international financial resources, from both global and regional climate funds and from bilateral sources to carry out investments, projects and actions derived from each of the tasks of this State plan*. While this task focuses on international financial resources, it also acts as the trigger for identification of financial resources at the national level.

8. Implementing Task 11 involves the organization, development, design and coordination of the project via suitable approval processes for submission to the GCF and other climate funds. Created in 2018, the ICC-GCF is a coordination mechanism that was established by Agreement 8379 of the Council of Ministers (25 May 2018).

B. Economic and financial policies

9. A summary of key elements of policies providing an economic and financial policy context for Cuba is presented below:

(a) The **Constitution of the Republic**:[6] Article 18 declares that there is a socialist economic system within the Republic of Cuba. It is based upon the primary ownership of the fundamental means of production by all people and a planned economy which takes into account, regulates and controls the market in accordance with the interests of the society.

(b) The **Conceptualization of the Cuban Economic and Social Model of Socialist Development**[7] explains that the economic and social development management system combines its centralized character with the decentralization and autonomy required in provinces and municipalities. The model uses direct and indirect management instruments, which implies the integral redesign of the monetary, exchange rate, tax, credit, price, salary and other citizen income subsystems.

(c) The **2030 PNDES** seeks to guarantee a stable and sustainable financial macroeconomic environment that allows the efficient and effective use of resources and the successful operation at the microeconomic level. It also aims to achieve more efficient participation in international financial markets, thereby ensuring a sustainable debt level. Further, it aims to implement economic incentives such as taxes, tariffs and credits. This seeks to achieve financial sustainability in the use and conservation of natural resources, the support efforts to lessen associated with pollution and climate change. Finally, it aims to make significant progress in the establishment of environmental accounting.

(d) Cuba and its economic and social challenges: A synthesis of the Socio-economic Strategy to boost the economy and confront the world crisis caused by COVID-19.[8] This recovery strategy for the financial system is based upon the following four elements: fiscal sustainability, sustainability of external accounts,[9] monetary and exchange rate stability, and the institutionalization of macroeconomic management.

10. Improving the current banking and financial system is an important element of the post-COVID-19 strategy. The system aims at structuring finance for companies at various

[6] Government of Cuba. 2019. Constitución de la República [Constitution of the Republic], Gaceta Oficial No.5 Extraordinaria. [Official Gazette of the Republic of Cuba.] (10 April 2019). Available at http://www.gacetaoficial.gob.cu/es/constitucion-de-la-republica-de-cuba-proclamada-el-10-de-abril-de-2019.

[7] IPCC. 2021. Conceptualización del modelo económico y social cubano de desarrollo socialista [Conceptualization of the Cuban economic and social model of socialist development]. Vol.8 Congreso del Partido Comunista de Cuba-PCC. Available at https://www.pcc.cu/sites/default/files/tesis-resoluciones/2021-06/CONCEPTUALIZACI%C3%93N%20DEL%20MODELO%20ECON%C3%93MICO%20Y%20SOCIAL%20CUBANO%20DE%20DESARROLLO%20SOCIALISTA%20y%20LINEAMIENTOS%20DE%20LA%20POL%C3%8DTICA%20ECON%C3%93MICA%20Y%20SOCIAL%20DEL%20PARTIDO%20Y%20LA%20REVOLUCI%C3%93N%20PARA%20EL%20PER%C3%8DODO%202021.pdf.

[8] MEP. 2020. Cuba y su desafío economico y social. Síntesis de la Estrategia Económico-Social para el impulso de la economía y el enfrentamiento a la crisis mundial provocada por la COVID-19. [Cuba and its economic and social challenge. A synthesis of the Socioeconomic Strategy to Boost the economy and confront the world crisis caused by COVID-19] Ministerio de Economía y Planificación. Available at https://www.mep.gob.cu/sites/default/files/Documentos/Archivos/tabloide_estrategia.pdf.

[9] External accounts correspond to foreign currency income and expenses. Therefore, the sustainability of external accounts refers to their adequate balance over time. The main measures that comprise the sustainability of external accounts in the strategy refer, among others, to increasing exports and substituting imports.

stages of evolution thereby support their development and meeting the demands of new micro-, small- and medium-sized enterprises. Other useful measures under the financial system in the post-COVID-19 recovery period which are worth exploring in relation to climate finance include:

(a) Instrumentalizing the public debt market, authorizing companies with temporary excess liquidity to acquire government bonds, amortizable in the long term; as well as monitoring the gradual incorporation of naturalized persons;

(b) Designing and establishing fiscal incentives that will invigorate the economy and prioritize the development of high technology entities, agricultural production, renewable energy sources and other sectors involved in the strategic focuses of the 2030 PNDES;

(c) Enhancing productivity, competitiveness, innovation, technological change and efficiency in companies, by promoting greater autonomy;

(d) Establishing micro-, small- and-medium-sized enterprises, which may be private, State-owned or a combination of both. These entities may have access to various sources of financing, such as their own funds, banking credit or via public-private partnerships in developing a particular initiative; and

(e) Providing administration for budgetary funds which will allow more efficient use of local government resources.

C. Economic and social context

11. Cuba is a socialist country with a planned based economy characterized by the public ownership of the means of production within a regulated market. The country is undergoing a dynamic transformation in light of various economic and structural challenges. In recent years, Cuba has been promoting the gradual opening up of its economy and has therefore attracted trade, tourism and investment flows.

12. Cuba's main strengths for attracting investment include the following facts:

(a) The country has the highest literacy rates, life expectancy, average years of schooling and health coverage in Latin America and the Caribbean. Its human development index (0.777), places Cuba in the group of countries characterized by high human development;

(b) In 2019, life expectancy at birth was 78.45 years, the maternal mortality rate was 37.4 per 100,000 live births and the infant mortality rate was 5 per 1,000 live births.

(c) Coverage of basic services is high. In 2018, the proportion of the total population with access to drinking water and sanitation reached 95.6% and 97.1%, respectively).[10] The national grid currently reaches 100% percent of the population.[11]

13. Recent increases in economic performance have been led by the service sector. The GDP grew at an average rate of 2.2% from 2012 to 2017. This growth was higher than the 1.3% average observed across Latin America and the Caribbean. Services, represented by 73.1% of the nominal GDP, were led by exports of health services and tourism-related activities. In 2019, Cuba's economic activity showed less growth, mainly owing to the intensification of the blockade.[12] This action has negatively affected tourism, investment and international financing as well as other relevant variables in the country's economic development.

[10] ONEI. 2019. Panorama Ambiental de Cuba 2018 [Environmental Overview of Cuba 2018]. Oficina Nacional de Estadisticas e Informacion. Available at http://www.onei.gob.cu/sites/default/files/panorama_medioamb2018_0.pdf

[11] See footnote 10.

[12] The blockade includes numerous regulations and provisions issued by the Government of the United States of America against Cuba. These coercive actions reflect the intention of intervening in Cuba’s internal affairs and contravene international law. The impact of the blockade on national climate policies is recognized most recently in the NDC, NC3 and BUR.

14. The average rate of investment to GDP was 9.2%. This rate was low when compared with other emerging economies with similar growth rates. This rate was also the lowest of all Latin American and Caribbean countries during the period 2012- 2017.

15. Growing social spending requirements resulted in an average fiscal deficit of 4.7%. This trend that has increased over the previously specified period until it attained 8.6% in 2017. The main source of financing for social services has been the issuance of 20-year bonds in the State's banking system.

16. At constant prices, Cuba's GDP decreased by 11% owing to the tightening of the blockade under the Trump Administration in the United States of America and the subsequent impact of the COVID-19 pandemic. Despite this, the GDP is expected to range between 6 and 7% in 2021 when compared to its 2020 estimates). [13]

17. The private sector in Cuba consists predominantly of small, service-based companies, although large and foreign-owned companies dominate in the tourism and utilities sectors. Small-scale actors, mostly common in the agricultural sector, frequently participate in various climate-related projects. Small-scale under the GEF Small Grant Programme but also in larger projects like the Environmental Bases for Local Food Sustainability project.[14] There are also private producers in the fishing sector, although their participation in climate projects is negligible.

18. At the local level, the farming, fishing and tourism sectors are becoming increasingly aware of the adverse climate change impacts and risks. This is largely due to the extensive hurricane impacts that they have encountered within these sectors. Droughts and heavy rain have also had a significant impact in the agriculture sector. As a result, the private sector has become more involved in climate-related projects. In fact, one of the key contributions within the updated version of Cuba's NDC (2020) highlighted the treatment of 100% of wastewater in the swine sector. This action led to a reduction in emissions by 8 million kt CO_2 eq annually from 2020–2030 with the private sector accounting for an important share of this action.

19. In the future, there is great potential for increased levels of innovation as business schemes allow for development via private or cooperative schemes. The involvement of all these sectors in accessing and managing climate finance is therefore a priority for Cuba. This approach has been widely accepted and acknowledged within the development model and the 2019 Constitution.

D. Planning as a main component of the management system for socioeconomic development in Cuba

20. Cuba is based on a centrally planned economy that is implemented through two planning cycles: one long-term and one short-term. Over the long-term, the 2030 PNDES is used as a reference. To date, it is under development. Over the short-term tool, the National Economic Plan is used as a reference. It is prepared on an annual basis. This plan is often accompanied by the State budget and both are passed as legislation after approval is given by the ANPP.

21. The MEP is the coordinating body responsible for the preparation of the National Economic Plan. The MEP also establishes methodological guidelines for approval by the Council of Ministers. Once the National Annual Economic Plan[15] has been drafted by the

[13] Figueredo, O., Izquierdo Ferrer, L., and Carmona Tamayo, E. 2020. Cinco datos claves de la economía cubana en 2020 y proyecciones para el próximo año [Five key data of the Cuban economy in 2020 and projections for]. Available at https://www.mep.gob.cu/sites/default/files/tarea_ordenamiento/2021-01/30.12.Cinco%20datos%20claves%20de%20la%20econom%C3%ADa%20cubana%20en%202020%20y%20proyecciones%20para%20el%20pr%C3%B3ximo%20a%C3%B1o.pdf.

[14] This project supported the process of adaptation to climate change in the agricultural sector and had the support of the European Union and the Swiss Agency for Development and Cooperation. It was implemented under the UNDP.

[15] Since 2018, the national planning system incorporates the needs of *Tarea Vida*, which is referred to in more detail below.

MEP, the Council of Ministers defines priorities according to the availability of existing resources on the country. The plan is later submitted to the ANPP for approval, after which the estimates are disaggregated from the national level to the local level.

22. The State budget acts as the main national fiscal policy instrument as it regulates financial resources and public expenditure. It also presents the total influx of financial resources during the year and the total expenditure necessary to conduct operations across all relevant sectors. The extent of financial resources identified within the State budget guarantee the provision of basic services in education, health, culture, sport, community services and defence. It also supports the implementation of approved social policies.

23. The MFP is the governing body for the budgetary system. The agency manages the preparation, implementation, control and settlement of the State budget. It aids in the preparation of the Preliminary Draft of the State budget for submission to the Council of Ministers and ANPP. The State budget's Settlement report is later analysed and approved at a session of the ANPP. Key details, associated with the implementation of the budget, are published by the ONEI through the SIEN. The State budget is an important source of income for various environmental funds.

E. Institutional arrangements relating to climate finance

24. Institutional arrangements for climate finance have been significantly strengthened during 2017–2020, particularly under the GCF Readiness Project:[16]

(a) The ICC-GCF was established to support the NDA. The ICC-GCF was approved by the Council of Ministers;

(b) A technical unit for supporting the work of the NDA was created. Personnel were hired and trained;

(c) Around 170 officials and specialists from across the country's various sectors and provinces were trained (between 2018 and 2020) in the general aspects of GCF operations, opportunities for financing adaptation and mitigation projects; and

(d) A 'no-objection' procedure for GCF projects was established and the general methodological guide: *'Preparation, evaluation, and approval of projects to the Green Climate Fund in Cuba'*[17] was adopted and published. Other publications were prepared, published and disseminated. These include operational manuals for the national coordination and consultation mechanisms developed on the basis of GCF guidelines and standards.

(a) Key actors and mechanisms in coordinating climate finance

25. The ICC-GCF is chaired by the BCC, with the CITMA acting as its secretariat. It is integrated by MEP, the MINCEX, the MFP, the MINAG and the INRH. The ICC-GCF, CITMA and the technical units are key elements for coordinating climate financing in Cuba. Their key functions are presented in table 2 below.

Table 2
Key functions of the bodies coordinating climate financing in Cuba

Coordinating bodies	*Key functions*
ICC-GCF	a) Evaluating and approving actions, at a high level, aimed at implementing projects in the country that are consistent with the results framework and strategic guidelines of the GCF; b) Evaluating project proposals and approving their submission to the GCF; c) Carrying out, when required, consultations with national entities involved in the project proposal;

[16] A project was implemented in Cuba under the Readiness and Preparatory Support Programme of the Green Climate Fund to strengthen institutional capacities and governance mechanisms for accessing climate finance.

[17] See footnote 5.

Coordinating bodies	*Key functions*
	d) Approving the accredited entities and the negotiation requirements for the presentation of reimbursable projects to the GCF; e) Presenting to the Executive Committee of the Council of Ministers for approval any reimbursable projects to be presented to the GCF; and f) Requesting, where required, a report on the progress of projects approved by ICC-GCF from the implementing entities.
NDA	a) Representing the Government before the GCF and maintaining coordination with the GCF; b) Issuing 'no-objection letters', where appropriate; c) Serving as the secretariat to ICC-GCF and ensuring that those entities submitting a project proposal are updated on the approval status of their project; d) Requesting and evaluating reports on the progress of projects; e) Providing periodic reports to the Government on the progress of work with the GCF; f) Disseminating information on projects and programmes within the relevant forums; g) Managing, where appropriate and after evaluation by ICC-GCF, the withdrawal or cancellation of the implementation of a project or programme previously presented to the GCF and the validity of an implementing entity; and h) Executing any other actions required to fulfil the responsibilities of an NDA and to ensure the proper functioning of GCF activities in the country.
Functions of the technical unit	a) Promoting work with the GCF in the various sectors and provinces and identifying suitable proposals for GCF projects; b) Evaluating the project ideas presented and recommending their approval or not, as required by the NDA; c) Contributing to the alignment of projects with national development strategies and plans; d) Promoting the technical training of relevant personnel involved in the formulation and evaluation of GCF projects; e) Proposing criteria and mechanisms for the evaluation and approval of project activities to ICC-GCF and the NDA; f) Formulating proposals for specific procedures for the presentation, evaluation, approval, registration, execution and follow-up of GCF project activities; g) Maintaining the official record of the current status of GCF projects in the country on behalf of the NDA; and h) Preparing reports and documentation requested by the NDA and ICC-GCF.

Source: Adapted from the key information retained within national documents.

(b) Measurement, reporting and verification as a system for tracking climate finance

26. To strengthen the monitoring of climate finance, Cuba has decided to incorporate a subsystem into its MRV system. The subsystem will therefore track support received whilst considering national climate finance flows for domestic purposes. Currently, the MRV system is being developed to meet the requirements of the Paris Agreement. To fulfil that objective, a general scheme and timeline have been established. It is estimated that, if the necessary support were received, the country would have an Enhanced Transparency Framework implemented by 2025 inclusive of a financial tracking component.[18]

F. Monetary restructuring process

27. Within this document, the amounts of the domestically provided climate finance are expressed in CUP.[19] One of the great challenges facing the country - yet an essential step in

[18] CITMA. 2020b. Primer Informe Bienal de Actualización de la República de Cuba ante la CMNUCC [First Biennial Update Report of the Republic of Cuba to the UNFCCC]. (W. Carrera Doral, and E. R. Landa Burgos, Eds.) La Habana, Cuba: AMA. Available at https://unfccc.int/documents/266605.

[19] The official exchange rate of both CUP and CUC to the USD was 1 to 1 (1 CUP = 1 CUC = 1 USD) until 31 December 2020, except for natural persons, for whom the exchange rate was 1 CUC = 24 CUP.

advancing its economic strategy, is the change in its monetary structure. The implementation of the monetary restructuring process was achieved via an Executive order of the Government.[20] It involves the unification of the current exchange rates, removal of the CUC from circulation, and general reforms in wages and prices (with the gradual elimination of excessive subsidies and unwarranted gratuities).

28. The restructuring process officially began on 1 January 2021, when the BCC declared the official exchange rate as 1 USD to 24 CUP. This ended the circulation of CUC, which had an exchange rate of 1 USD to 1 CUC. This action therefore caused distortions in the economic and financial performance of the overall economy and individual enterprises - concealing inefficiencies at both levels. Domestic prices for various goods and services have been increased, reflecting more accurately production and import costs.

29. The restructuring process allows Cubans and non-nationals within Cuba to make payments in CUP or any foreign currency. Currently, the national market is open to private vendors. Services to local suppliers could be paid in either CUP or USD, as stipulated by the vendor. However, this devaluation does not entail a free market fluctuation of the CUP against the USD. The restructuring process should contribute to the achievement of better economic and enterprise performances in the country. It should also level the playing field between public enterprises and the private sector.

G. Impact of the blockade

30. Generally, any analysis of finance for Cuba, particularly climate finance, requires a differentiated consideration of the impact of the blockade. For almost six decades, the economic, commercial and financial blockade imposed on Cuba by the Government of the United States of America on Cuba constitutes as the main obstacle to the country's development. The blockade has had a negative impact on all spheres and sectors of Cuban life and society - including policies, programmes and actions to face climate change and its effects.

31. The prevailing blockade issue is addressed by Cuba within its most recent climate reports: NC3, BUR1 and the NDC. In the latter document, Cuba emphasized that in exercising of its sovereign rights, it reserves the right to adjust its level of contributions. This is due to the implications posed by the intensification of the economic, commercial and financial blockade on the Cuban economy; and therefore, the fulfilment of climate commitments.

32. As a consequence of the blockade, Cuba is not a member of the International Bank for Reconstruction and Development, nor does it receive any contributions from multilateral development banks. These limitations on access to international financing sources[21] includes new investments, supplies of spare parts and raw materials, access to state-of-the-art technologies;[22] all of which have a detrimental effect on the Cuban economy.

III. Climate finance needs

A. Scope of policies in consideration of climate finance

33. The common thread when considering finance for adaptation and mitigation is the *Tarea Vida*. However, in terms of mitigation, the main source used for this Technical Assessment is the updated NDC of 2020. The updated NDC focuses on five major mitigation actions which reflect the core of the national work in this area. The updated NDC also

[20] Government of Cuba. 2020. Decreto Ley 17. De la Implementación del Proceso de Ordenamiento Monetario [Decree Law 17. On the Implementation of the Monetary Ordering Process]. Gaceta Oficial No. 68 Extraordinaria [Official Gazette of the Republic of Cuba] (10 December 2020). Available at https://www.gacetaoficial.gob.cu/es/decreto-ley-17-de-2020-de-consejo-de-estado.

[21] This includes bank credits and aid from international organizations.

[22] Many materials, software packages, and patents associated with state-of-the-art technologies originate in the United States of America.

highlights the majority of the spending that occurs in the country related to the implementation of mitigation actions. Each of these lines is analysed from the perspective of national and international financing, including current and prospective flows and the identification of needs.

B. Financial needs identified in the *Tarea Vida*

34. Under the *Tarea Vida*, CITMA started a process to identify the financial resources needed for implementation. Meetings were held with MEP to specify the methodological aspects and the corresponding adjustments to the annual figures from the National Economic Plan.

35. In the first year, an ambitious exercise was undertaken to define the funding required to implement the *Tarea Vida* in its entirety. This included a very long time-horizon (up to 2100). The exercise involved a forecast of the total funding needs in the range of CUP billions, although these estimates have since been recognized as imprecise.

36. On the basis of this background information and in recognition of the fact that estimates required extend well beyond the specified short term of 2020, they should only be considered as general estimates. The work focused on clarifying the extent to which funding for 2018 was possible and defined the financing needs for the two subsequent years (2019–2020), which comprised the short-term work period under *Tarea Vida*. In addition to this, and where possible, these projections were extended to 2030.

C. Climate finance needs in the national communications

37. Despite its limitations, some information on climate finance needs were identified within the NCs. This information is presented in table 3 below.

Table 3
Climate finance needs in national communications

National communications	*Needs identified*
First[a]	General needs: The acquisition of necessary equipment to maintain and to expand the climate observation system; methods of introducing and implementing new technologies to develop national capacities. This is primarily important regarding the management of sources from international climate finance.
Second[b]	• To acquire the necessary equipment to maintain and expand the climate observation systems; • To introduce and implement new techniques for measuring and analysing parameters related to the chemical composition of the atmosphere; • To acquire equipment for sampling and laboratory analysis. This will be done to determine the coefficients of GHG that are typically for national climate conditions; • To develop national capacities to access and effectively use information from global surveillance systems. Such systems will be generated via the use of state-of-the-art technology; • To enable Cuba's participation in global observation systems. Such action requires advanced knowledge of techniques and methodologies; and • To promote institutional strengthening amongst various teams preparing NCs.
Third[c]	• To acquire the necessary equipment to maintain and expand the climate observation systems; • To introduce and implement new techniques for measuring and analysing parameters related to the chemical composition of the atmosphere; • To acquire equipment for sampling and laboratory analysis. This will be done to determine the coefficients of GHG that are typically for national climate conditions;

National communications	*Needs identified*
	• To develop national capacities to access and effectively use information from global surveillance systems. Such systems will be generated via the use of state-of-the-art technology; • To enable Cuba's participation in global observation systems. Such action requires advanced knowledge of techniques and methodologies; and • To promote institutional strengthening amongst various teams preparing NCs.

Source: Adapted from the Cuba's National Communications to the UNFCCC and Biennial Update Report
[a] CITMA. 2000.
[b] CITMA. 2015.
[c] CITMA. 2020.

D. Climate finance needs in the first biennial update report

38. Cuba's first BUR[23] provides an initial yet substantial analysis of its climate finance. However, the needs and support reportedly received, as stated in the BUR, result from a compilation of information provided by various institutions. It is therefore neither complete nor based upon an MRV system for support.[24]

39. Within the BUR, funding requirements to aid in capacity-building efforts with respect to transparency (USD 3.9 million), climate investment projects (USD 45 million) and technical assistance (USD 43.5 million) were provided.

40. While providing valuable information on climate finance needs, the BUR warns that the capacity and updated information required to differentiate between the needs for financial support, technology transfer and capacity-building is not yet available.

E. Mitigation finance needs in the nationally determined contributions

41. Updated in 2020, the first NDC provides estimates for the implementation of mitigation projects and activities disaggregated by funding source – domestic or international. This information is shown in table 4. With regards to adaptation, there are no financial estimations within the current NDC.

Table 4
Estimated costs for Nationally Determined Contribution mitigation implementation

Sector	*Subsector*	*Full mitigation contribution for implementation (USD million)*	*From domestic sources only (USD million)*	*From international sources only (USD million)*
Energy	Electricity generation	7 723	3 010	4 713
	Efficiency	–	–	–
	Transport	1 479	218	1 261
AFOLU	Forestry	4 251	1 960	2 291
	Agriculture	335	230	105

Source: Cuba's 2020 NDC submission to the UNFCCC.

42. According to the current NDC, the total finance needed for mitigation is USD 13.8 billion, with USD 8.4 billion (61%) being sourced internationally and USD 5.4 billion (39%) domestically.

[23] See footnote 4.
[24] The projects referred to in the BUR are presented later in this assessment (see table 6 and tables 11 and 12, and chap. VI).

F. Priority areas for investments for adaptation in the nationally determined contributions

43. Within the updated NDC, priorities for adaptation were identified. As seen in table 5, each priority is linked to a subcomponent under the *Tarea Vida* as well as main sources of financial support. While the national funding dedicated to these priorities can be indirectly gleaned from the ONEI reports, as referred to in chapter III.C and table 14, there is no basis to support an estimation of such investments for 2022-2030. Priority adaptation areas include infrastructure, coastal zone management, agriculture, settlements, water, marine ecosystems, forests, early warning systems and public awareness.

Table 5
Adaptation priority actions: links with other priorities and investments

Priority action (as identified in the nationally determined contributions)	*Link with Tarea Vida SA and/or task*	*Main sources of financial support*
Reducing population density in low-lying coastal areas by prohibiting the construction of new buildings in coastal settlements that are highly vulnerable to severe flooding	SA1;[25] Tasks 1 and 7	This action will involve possible amendments to legal and regulatory frameworks. No specific budget has been assigned for this priority action.
Developing construction concepts in infrastructure adapted to coastal flooding in low-lying areas.	SA2; Tasks 2 and 8	This action will involve possible amendments to legal and regulatory frameworks. No specific budget has been assigned for this priority action. Such action I deemed as a regular activity under the purview of the Ministry of Construction.
Safeguarding agricultural activities, namely those with a higher impact on food security; adapting to the consequences of sea level rise or drought; minimising the development of plantation areas close to coasts or areas affected by saline intrusion; diversifying crops; enhancing soils; and introducing and developing plant-resistant varieties to increased temperatures.	SA3 and SA4; Task 8	This action is comprised a set of agricultural promotion and development activities, where the climate element is not easily distinguishable in technical and financial terms. Financing is mainly through the State budget and channelled through MINAG to the various activities.
Re-developing the urban landscape in particular threatened settlements and infrastructures whilst considering nature-based solutions.	SA5; Tasks 1 and 7	This consists mainly of planning measures. Once actions are implemented, several financial sources are required. According to the overall estimates of the governing body (Institute of Physical Planning), the cost of replacing the housing stock is USD 782.7 million. However, these costs do not include earthworks, water supply and integrated sanitation and

[25] *Tarea Vida* contains five points, or SAs, which represent areas of high priority for the country.

Priority action (as identified in the nationally determined contributions)	*Link with Tarea Vida SA and/or task*	*Main sources of financial support*
		treatment solutions, or asphalting road as individual projects tend to vary.
Ensuring the conservation, maintenance and restoration of sandy beaches in the Cuban archipelago; prioritizing beaches within urban areas for tourist use; and reducing the vulnerability of the built infrastructure.	Tasks 1 and 3	Financing derived via tourism (overseen by the Ministry of Tourism), which supports programmes geared towards the improvement and restoration of sandy beaches.
Guaranteeing the availability and efficient use of water as proactive measures against drought; promoting the application of water-saving technologies thereby satisfying local demand; increasing the stock of hydraulic infrastructure and its maintenance; and implementing actions to measure productivity and efficiency of water use.	Task 4	Financing derived via the State budget through INRH, which manages the National Hydraulic Programme.
Using reforestation as the best method to protect soils and the quantity and quality of water by restoring the most affected mangrove,	Task 5	Cuba Forestry Development Program.
Ending the deterioration of and promote the rehabilitation and preservation of the coral reefs in the archipelago (specifically the ridges around the insular shelf which protect urban beaches for tourist use); and Avoiding overfishing of marine species that favour reefs.	Task 6	No specific financial assignment appears for the protection of coral reefs. The main resources required at this stage are related to scientific research and the definition of action plans for the improvement of coastal ecosystems from beaches or mangroves to coral reefs.
Planning, maintaining and introducing provincial and urban restructuring using the scientific results from the macro-project entitled 'Hazard and Vulnerability Scenarios for the Cuban Coastal Zone'. (Such results are associated with mean sea level rise by 2050 and 2100); and introducing results from the hazard, vulnerability and risk assessment in the disaster reduction cycle and using this information as an early warning system in decision-making.	Task 7	No specific budget has been identified. These are essentially planning actions for the introduction of scientific results in land-use planning.
Implementing and controlling adaptation measures derived from the sectoral policies in programmes,	Task 8	This is a broad programme that covers 12 sectors so an integrated financial

Priority action (as identified in the nationally determined contributions)	*Link with Tarea Vida SA and/or task*	*Main sources of financial support*
plans and projects linked to food security, provincial and urban planning, fishing, agriculture, health, tourism, construction, transport, industry and the comprehensive management of forests.		estimate cannot be derived for this task. In some areas, there are more details available than in others. There is also some overlap with other priority areas identified elsewhere in this table, such as forests, which are linked to task 5.
Strengthening the monitoring, surveillance and early warning systems to systematically assess the status and quality of coastal areas, water, forests, human and vegetation health.	Task 9	An integrated system is still at the design stage. The figures for the sectoral systems (water, forests and health) appear under the budgets of the responsible agencies.
Prioritizing measures and actions required to increase risk perception and knowledge; increasing stakeholder participation in support of climate action; and fostering agriculture that promotes water conservation methods.	Task 10	This task is carried out under the budgets of the Ministry of Education, Higher Education and the Cuban Institute of Radio and Television. No viable formula has been established to separate climate finance from overall financing of these public bodies.

Source: Adapted from several national documents.

G. Financial needs for establishing the Enhanced Transparency Framework under the Paris Agreement.

44. Table 6 below shows the results of a preliminary exercise on the support required for the needs identified over the period 2020–2025. Such needs will aid in the establishment of the Enhanced Transparency Framework under the Paris Agreement.[26]

Table 6
Support needs identified relating to transparency, 2020–2025

Identified needs for support	*Estimated financial support (USD thousand)*
Establishing a system that allows for periodic training (specifically in climate change, on mitigate). Targeting different audiences with priority given to specialists and officials of the Central State Administration agencies, national entities and provinces. This seeks to promote climate change awareness in the country.	500
Elaborating baselines and mitigation scenarios by sector and province, taking into account synergies and prioritization for implementation, which will allow the establishment and evaluation, both qualitatively and quantitatively, of less carbon-intensive development pathways in the country.	700
Establishing MRV systems to account for financial support received at the international level with a greater focus on mitigation.	1 500

[26] CITMA. 2020a. Primera Contribucion Nacionalmente Determinada (actualizada) República de Cuba 2020–2030 [First Nationally Determined Contribution (updated) Republic of Cuba 2020–2030]. Ministerio de Ciencia Tecnologia y Medio Ambiente. Available at https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Cuba%20First/Cuban%20First%20NDC%20(Updated%20submission).pdf.

Identified needs for support	*Estimated financial support (USD thousand)*
Preparation of reports to the UNFCCC (BUR2, BTR1)	704
Preparation of NC4	550
Total	**3 954**

Source: Adapted from the first Biennial Update Report

H. Other sources for identifying climate finance priorities

45. In general, Cuba's main climate change priorities are reflected in *Tarea Vida* as well as the NDC. However, other components of national climate action, as shown below, provide a more comprehensive overview of national efforts.

(a) Technology needs assessment

46. In 2013, Cuba developed a TNA. The TNA project was funded by the GEF and implemented by UNEP/UNEP DTU Partnership, in collaboration with the Bariloche Foundation (Argentina) and the Libélula Regional Centre (Peru). The project focused on identifying the most appropriate technologies for climate change adaptation and mitigation. The sectoral analysis involved the agricultural, water resource, energy and health sectors. It also included cross-cutting elements such as coastal areas and infrastructure. The main results obtained are shown in table 7 below.

Table 7
Priorities identified in Cuba's Technology Needs Assessment

Priority sector	*Priority subsector*	*Priority technology*
Water	Water supply	Drilling, coating, and design of shallow wells for extracting water or recharging the aquifers
Agriculture	Crops, grains, and rice cultivation	Water management in rice cultivation systems
	Forestry production	Intensive silviculture with the use of high-value genetic material adapted to flat areas
Physical planning	Coastal zone management	Construction of houses above the flood level
Energy	Electricity generation	Combined cycle power plant with natural gas
		Gasification of sawmill waste
	Transportation	Technology to increase the use of railways in transporting freight

Source: Adapted from Cuba's Technology Needs Assessment.

47. The main practicality of the project was the identification of technologies by sectors and subsectors. These were later re-introduced within the country's climate policies during 2015-2020. Cost–benefit analyses were conducted for certain technologies; however, no financial needs assessments were conducted to support their introduction at the country level. In spite of this, technology options not included in the NDC or other evaluations; yet, have an associated cost declared in the TNA for mitigation (USD 214 million) and adaptation (approx. USD 1.022 million) as shown in table 8 and table 9, respectively.

Table 8
Technology and estimated costs for mitigation actions

Sector	*Mitigation technology*	*Cost (USD million)*
Energy	Natural gas thermoelectric power plant	90
	Gasification of rice husk plant	86
	Gasification of sawmill waste plant	38
Total		**214**

Source: Adapted from Cuba's Technology Needs Assessment.

Table 9
Technology and estimated costs for adaptation action

Sector	*Adaptation technology*	*Cost (USD million)*
Water resources	Drilling for water supply	0.147
	Wastewater treatment techniques	0.875
Total		**1.022**

Source: Adapted from Cuba's Technology Needs Assessment.

(b) Nationally appropriate mitigation actions

48. The development of NAMAs did not gain significant momentum within the country. Notwithstanding this, a GHG reduction NAMA in Cuban pork production was submitted into the UNFCCC registry as a means of seeking greater support for NAMAs on a wider scale.[27] For the Cuban swine industry, this planned NAMA may be one possible action under the GHG emission reduction contributions listed in the updated NDC.

49. There is currently a project being prepared for consideration by the GCF with the CABEI acting as the accredited entity. The project is entitled, 'Waste-to-Energy Recovery: Accelerating the transition to low emissions and Climate-Resilient Pig Supply Chains in Cuba' (see table 11).

(c) National adaptation plan

50. Currently, Cuba does not have a NAP and there is no immediate intention of developing one. However, several subnational projects have been identified (either currently underway or in preparation). For instance, there is an on-going project under the GCF Readiness window that provides an adaptation plan for the North coast of Havana (see table 11). Similarly, there are projects under development with AFD, for provincial adaptation plans in specific areas.[28] None have been deemed as new priorities, but rather areas already prioritized under the *Tarea Vida*.

I. Priorities without identified investment projects

51. When referring to adaptation priorities for which no investment projects have yet been identified, it is important to take the following into account: "The adaptation actions […], in accordance with public policies, are presented to indicate Cuban priorities according to the country's circumstances and do not indicate whatsoever an international obligation of the country."[29]

52. Several sectoral experts[30] were interviewed to identify sources of finance to implement the *Tarea Vida*. For the main priority areas detailed within the *Tarea Vida*, some information was obtained - particularly on investment projects have not yet been identified. These priority areas are shown in table 10 below.

[27] More information is available at https://www4.unfccc.int/sites/PublicNAMA/_layouts/un/fccc/nama/NamaSeekingSupportForPreparation.aspx?ID=178&viewOnly=1.

[28] Guanahacabibes peninsula in Pinar del Río Province, Cienfuegos in Cienfuegos Province and Santa Lucia in Camagüey Province

[29] See footnote 19.

[30] Representatives of national organizations and entities were consulted in the National Group for the implementation of the *Tarea Vida*.

Table 10
Priority areas without identifiable investment projects

Priority area/contribution	*Projection of needs*
Most vulnerable people, communities and regions	There are already two projects that have been submitted to the GCF that address issues in this area (MI COSTA and IRES, see table 5). However, the needs are not fully covered. According to the criteria of various experts, projects should be explored under financial instruments other than donations such as loans or insurance. Hydrometeorological services or information related to threats related to climate change as cross-cutting elements in projects developed in other areas.
Agriculture and food security	Cuba has provided initial ideas and made some progress in certain projects in these areas (particularly in agriculture)[31] via a sectoral, rather than multifaceted approach. The development of project ideas that combine actions relating to the improvement of health, well-being, food and water security should be assessed with a methodological approach that goes beyond the transformation of specific sectoral practices. Projects of this type should incorporate risk transfer mechanisms through insurance and a greater participation of a variety of economic actors, with innovative approaches. A food security project, for example, could address aspects relating to: • Adapted crops in general production; • Introduction of drought-resistant varieties; • Resilient food chains; and • Management of the carbon reserve pool and carbon neutrality measures in soils with a focus on mitigation.
Health[32]	The first GCF project that Cuba proposed was in this sector, but it has not progressed beyond the conception stage. The AFD has shown its willingness to support a request received from the Ministry of Public Health regarding a project for climate-change- resilient health networks in hospitals in Baracoa, Matanzas and Villa Clara. However, this project is still in its inception stage. Initially formulated by the CITMA, the project seeks to demonstrate the correlation between climate change and health.
Water resources	This sector is covered by a wide portfolio of projects in Cuba which combine investments and credits. However, there are no investments that are recognized as climate finance. In addition to this, financing complexities arose with the addition of water resources to the MI COSTA project scope. From research conducted on climatic scenarios in Cuba[33] and in accordance with the current sectoral policies, some elements that could be considered in the development of project ideas include: • Improved information: updated data on the available hydraulic resources of Cuba; • Improved management: increase in the percentage of available, surface and underground water; increase in the volume of recovered water; • Improvements in water quality: recovery from salinized aquifers; • Use of categories such as virtual water, water footprint, improvements in water productivity; and • Economic instruments and indicators: incentivizing the sustainable use of water resources.

[31] An action, promoted in this sector by MINAG, to increase the use of renewable energy in the livestock sector, in particular the use of solar pumps in agriculture (action declared in the NDC) for, among other reasons, the management of dairy residues and irrigation of small areas of pasture.

[32] Planos, E. G., Gutiérrez Pérez, T., Rivero, O., Pérez Suarez, R., Centella Artola, A., Fernández Richelme, A., Ortiz Bulto, P. 2012. Impacto del Cambio Climático y Medidas de Adaptación en Cuba. [Impact of Climate Change and Measures of]. La Habana. Available at http://www.redciencia.cu/geobiblio/paper/2012_Planos_Impacto%20y%20Adaptacion,%20Libro.pdf.

[33] See footnote 31.

Priority area/contribution	*Projection of needs*
Energy	Project ideas that should be developed in this area include: • Strengthening and transforming the electricity generation system by using technologies with low emissions; and • More efficient transformation and consumption systems. Efforts should also continue to develop the country's enabling framework, for the portfolio of projects up to 2030, including the processes to: • Identify potential to increase the contribution of renewable energy sources to the electricity generation matrix; • Determine current and trend GHG emissions at both, the national and sectoral levels; • Determine national and sectoral emission factors; • Detach GDP growth from energy consumption; develop indicators to monitor any decrease in energy intensity (energy use per GDP unit), national, sectoral, production and processes; and • Prepare an energy transition programme that contributes to the carbon neutrality objective in the second half of the century.
Transport	The main projects for 2021–2023 have already been identified. However, the portfolio needs to be expanded beyond 2023, in line with the ambitions set for 2030 in the NDC to reduce the consumption of fossil fuels by 50%.
Buildings, cities, industries and appliances	Little progress has been made within projects in this area. In the short term, efforts should focus on developing and presenting boiler and heating, ventilation and air-conditioning project ideas. Support should also be sought for the implementation of legislation governing the development of renewable sources and the energy efficiency.
Forests	Although forests are adequately represented in various projects, other approaches can be explored to expand the portfolio further to include submissions to REDD+. As noted in the updated NDC, Cuba has already taken concerted steps to strengthen its mitigation approach regarding forests as sinks.

Source: Adapted from national documents.

IV. Climate finance flows

A. Scope of the assessment

(a) Definition of climate finance

53. There is no agreed definition of climate finance at the international level nor at a national level in Cuba. In the past, the concept was considered as part of general financial flows, or as part of environmental finance. More recently and following the adoption of the *Tarea Vida*, climate finance has been identified as a separate category of financing in Cuba.

54. Conceptualising the terminology of climate finance is important. During its review of climate finance definitions, the Standing Committee on Finance stated that it ‘points to a convergence’ that can be framed in the following manner: “Climate finance aims at reducing emissions and enhancing sinks of GHGs and aims at reducing vulnerability of, and maintaining and increasing the resilience of, human and ecological systems to negative climate change impacts.”

55. This generalized terminology of climate finance has been adopted within the Technical Assessment. A working definition of climate finance can therefore be construed as the set of financial resources that are mobilized to facilitate the implementation of actions for mitigation of, and adaptation to, climate change. This includes both national and international resources.

56. This limited approach did not differentiate between significant and principal climate finance[34] – a common practice of the OECD grouping. The elements proposed for the Climate Finance Access and Mobilization Strategy for Cuba (2022-2030) include the consideration of a more elaborated definition of climate finance. It is expected that this will promote the use of higher quality climatic data and increased information in the future thereby improving the overall quality of reporting on international climatic flows in Cuba.

(b) Identification of financial flows

57. Within this technical assessment, an attempt was made to highlight and analyse all relevant sources of climate finance information. Starting with national sources – the overarching framework for the Cuban development model. The identification and analysis of financial flows in Cuba began from 2017 onwards as the planning and allocation of financial resources to confront climate change were categorized and were in the process of being tracked. Prior to 2017, previous sources have also been tracked (even if they are incomplete) but may not been fully categorized. Following the national analysis, an overview of international financing was conducted. Noting the extensive information retrieved, a longer time horizon of 2010–2018[35] was considered.

B. International climate finance flows

58. With regard to access to external financing, resources are channelled to Cuba via foreign direct investment and loans. Multilateral financing streams are severely impacted by the fact that Cuba is not a member of multilateral financial institutions. However, financial resources are received via the cooperation of various specialized agencies, funds and programmes as seen below.

(a) Financing from foreign direct investment

59. A favourable business environment in Cuba was fostered by the approval of Law 118 and the associated regulations.[36] The Law establishes the modalities that can be adopted by businesses with foreign investment which includes mixed enterprise, international economic association contracts and investments with 100% foreign capital.

60. By the end of 2019, the vast amount of businesses with foreign investment conducted via international economic association contracts accounted for 50% of total foreign investment. Within these businesses, hotel management contracts were predominantly found. This is followed by mixed companies with 34%. A total of 54% of active businesses are in the tourism, energy, and mining and industry sectors.[37]

61. Investment opportunities are currently being promoted across eighteen (18) sectors and are largely focused on transportation, construction, agriculture, sugar production and water resources. It should be noted that if and where adaptation and mitigation actions are included, they are currently not explicitly stated or identified. This was a common feature even if the type of investment was explicitly identified such as the potential for GHG reduction or avoidance.

62. One of the investment opportunities promoted in Cuba involved 10 bioelectric projects to increase the production of renewable electricity from biomass at a lower cost than fossil fuel. With an estimated value of each project is USD 120 million, these projects are evidently aimed at fulfilling the policy of achieving 24% electricity generation based on

[34] Differentiating between the types of climate finance: 'Principal' meaning the principal objective of the supported project is climate adaptation or mitigation; 'Significant' meaning the supported project has climate co-benefits).

[35] It should be noted that 2018 is the most recent year for climate finance information on record.

[36] Government of Cuba. 2014. Ley No. 118, Ley de la Inversión Extranjera. [Law No. 118, Foreign Investment Law] Gaceta Oficial No.20 Extraordinaria. [Official Gazette of the Republic of Cuba.]. 16 April 2014. Available at www.gacetaoficial.gob.cu/es/ley-no-118-ley-de-la-inversion-extranjera.

[37] This assessment focuses on investment opportunities reported in 2019, to find the most up-to-date information see: https://inviertaencuba.mincex.gob.cu/es/.

renewable energy sources by 2030. In light of such, the bioelectric projects should be classified as climate mitigation projects.

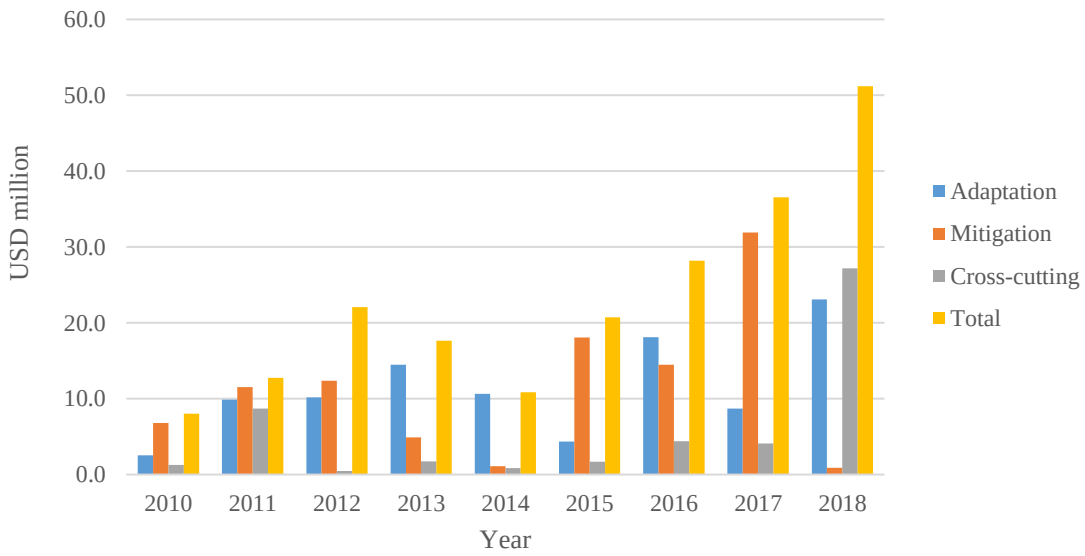
63. Investment-related matters are highlighted within the Cuban Government's 11 October 2014: Decree 327,[38] which establishes the regulation of investment processes applicable to all investments made in Cuba by State-owned legal entities. this regulation also applies to commercial companies with 100% Cuban capital (Article 1). For non-state legal entities or natural persons, permits and full compliance of State regulations are required to make investments.

(b) Financing from international cooperation

64. The financing of actions to combat climate change, through international cooperation, has occurred via two avenues. Through explicit statements/recommendations within the final stages of the projects and via the consideration of climate elements in projects related to biodiversity, forest or land management, among others. According to the OECD CRS database, a total of USD 208 million in public international climate finance was attributed to Cuba from 2010–2018. This estimate, inclusive of significant and principal sources of climate finance (see section 3.1.1), accounted for 51 and 49%, respectively. The average annual inflow during 2010–2018 was USD 23.0 million. As shown in figure 3.1, public international climate finance exhibits an overall positive trend, with the total amount increasing from USD 8.0 million in 2010 to USD 51.2 million in 2018.

65. Of the attributed finances, a total of USD 102.1 million (40%) targeted mitigation activities; and USD 101.9 million (40%) targeted adaptation activities. Approximately USD 50.4 million (20%) targeted both mitigation and adaptation simultaneously in cross-cutting projects.

Figure 1
Public international climate finance attributed to Cuba, 2010–2018
(USD millions)



Source: OECD CRS database.

66. It should be noted that reported estimates reflect amounts approved in the reporting year. However, the transfer of these funds may not be finalized in the same year but over a longer project implementation period.

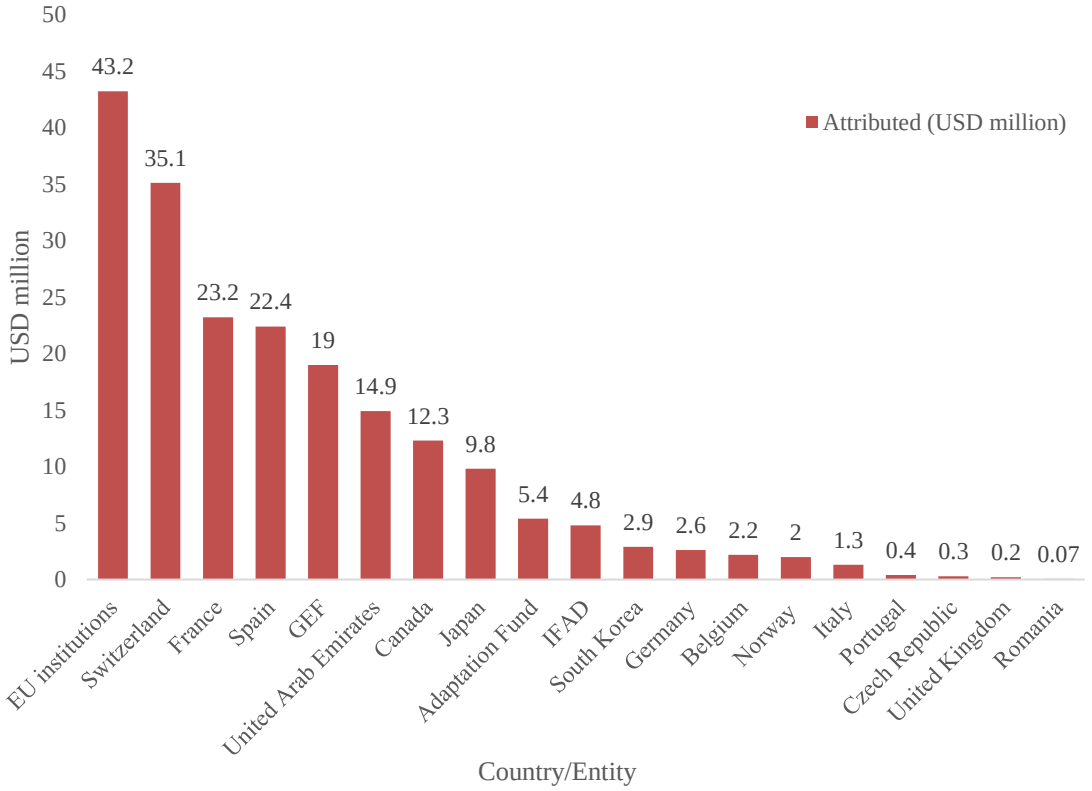
[38] Government of Cuba. 2015. Decreto 327. Aprobacion del reglamento del proceso inversionista. [Decree 327. Approval of the regulation of the investment process] Gaceta Oficial No. 5 Extraordinaria. [Official Gazette of the Republic of Cuba.] 23 January 2015. Available at https://www.gacetaoficial.gob.cu/sites/default/files/goc-2019-ex5_0.pdf.

67. The most common multilateral sources, reflecting a growing trend since 2015, are, for adaptation, the GEF and its Small Grants Programme and the Adaptation Fund; and for mitigation, the environment and energy portfolio of the UNDP, with funds from various sources. Climate finance has also been received from the GCF (see further analysis below) but mainly as regional projects under the Readiness program (see table 11).

Funding channels

68. According to the OECD database, the majority (87.7%) of public international climate finance is provided by bilateral sources, with the remaining 12.3% from multilateral climate funds. From 2010–2018, the main bilateral providers of climate finance in Cuba were the European Union (USD 43.2 million); Switzerland (USD 35.1 million); France (USD 23.2 million); Spain (USD 22.4 million); United Arab Emirates (USD 14.9 million); and Canada (USD 12.3 million). In addition to this, under USD 10 million in funding was received from Japan, Korea, Germany, Belgium, Norway and Italy as seen in figure 2.

Figure 2
Public international climate finance: Bilateral channels to Cuba, 2010–2018

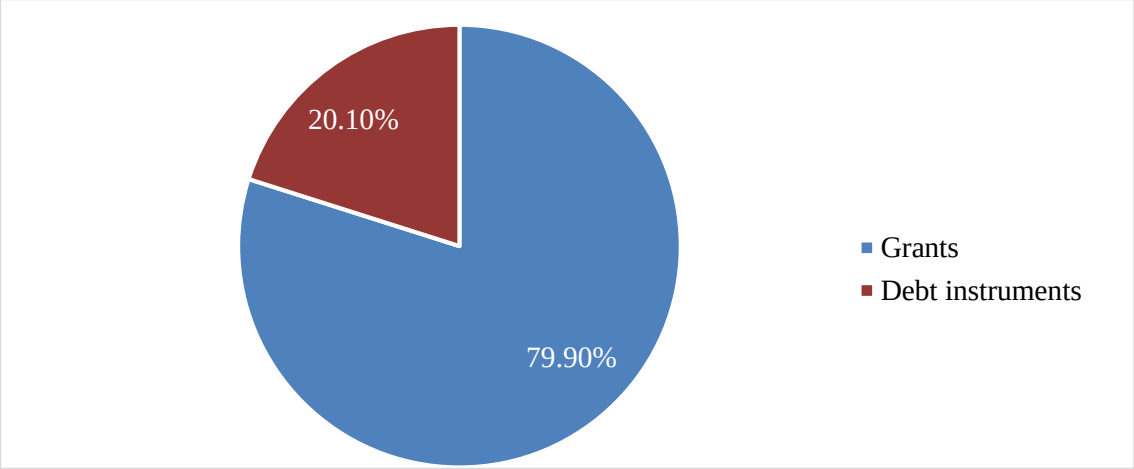


Source: OECD CRS database

Financial instruments

69. International public climate finance is provided primarily through grants (79.9%), with the remaining being debt instruments (20.1%). Both bilateral providers and climate funds mainly use the same type of instruments, namely grants, which make up 76 and 84% of their climate finance, respectively.

Figure 3
Financial instruments by percentage share

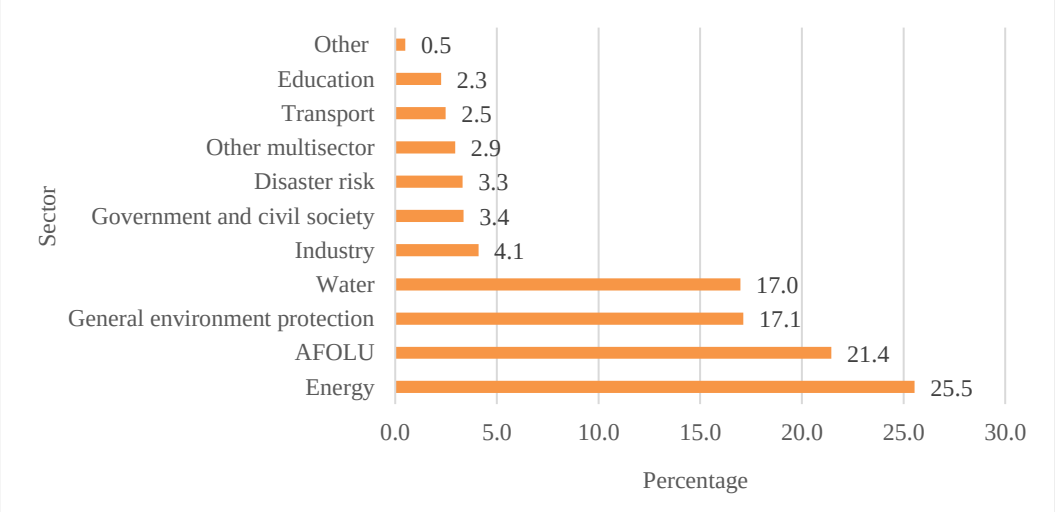


Source: Adapted from OECD CRS database.

Sectors

70. The sectors primarily benefiting from climate finance in Cuba are energy (25.5% of total climate finance, almost exclusively for mitigation projects) and AFOLU (21.4%, mainly for adaptation projects), followed by water supply and sanitation (17.0%). Projects classified under 'general environmental protection' account for 17.1% of all climate finance. Figure 4 below shows the percentage of total contributions of climate finance by sector for 2010–2018.

Figure 4
Percentage of total contributions of climate finance by sector, 2010–2018



Source: Adapted from OECD CRS.

(c) Green Climate Fund

71. From 2015 onwards, the GCF began to play a prevalent role in the country's climate financing strategy. In 2016, the Economic and Financial Commission decided to establish a Working Committee to aid in project preparations for GCF or climate finance sources. In 2017, the Commission became ICC-GCF. The primary objectives of the ICC-GCF are to organize, approve, monitor and implement national projects for the GCF and other similar climate finance considerations (see chap. II above for more information). To date, ICC-GCF has analysed twenty (20) potential GCF projects. To date, two projects and six readiness activities have been approved by the GCF (see table 11). The two projects amount to a total of USD 162.2 million.

(d) Sources of climate finance other than the Green Climate Fund

72. In addition to the GCF projects listed above, there are other projects underway or in progress to access climate finance from other funding sources. To date, Cuba has implemented or within the pipeline projects funded by other climate finance providers totalling USD 597.7 million. A list of these projects is presented in table 12 below.

Table 11
Projects and readiness activities in Cuba approved by the Green Climate Fund

Title/ description	*Total project value (USD million)*	*GCF funding (%)*	*Co-financing (%)*	*Theme*	*Sector*	*Accredited entity*	*Status*
IRES	119.9	31.9	68.1	Cross-cutting	Ecosystems, forest and land use, and livelihood of people and communities	FAO	Under implementation
MI COSTA	44.3	54.0	46.0	Adaptation	Ecosystems, and livelihood of people and communities	UNDP	Under implementation
NDA strengthening, and country programming support	0.3	100	–	Readiness	Climate authority	UNDP	Under implementation
Advancing a regional approach to e-mobility in Latin America	0.2	100	–	Readiness	Transport	UNEP	Under implementation
Enhancing climate finance and investment in the Latin American and Caribbean banking sector	0.2	100	–	Readiness	Banking	–	Approved
Increasing resilience through nature-based solutions in Latin American cities	0.3	100	–	Readiness	Cities	–	Approved
Post-COVID-19 green recovery for food, health, and water security strengthened by financial and technological innovations in Latin American countries	0.3	100	–	Readiness	Health, food and water security	–	Approved
Regional project for leapfrogging to energy-efficient and climate-friendly air conditioners in Cuba, El Salvador and Honduras	0.2	100	–	Readiness	Building, cities, industries and appliances	–	Approved

Source: GCF.

Table 12
Relevant projects approved or under implementation with sources of financing other than the Green Climate Fund

Title/description	*Total project value (USD million)*	*Fund financing*	*Co-financing*	*Theme*	*Sector*	*Implementing entity*	*Fund*	*Status*
Bioelectric Power Plant in sugar mill '*5 de Septiembre'*	120.0	–	–	Cross-cutting	Energy generation and access	AFD	–	Approved
MINEM: 30 MW wind farm	50.0	–	–	Mitigation	Energy generation and access	–	–	Approved
Clean energy technologies for rural areas	22.7	2.7	20	Mitigation	Energy generation and access	UNDP	GEF	Under implementation
Havana Sustainable Urban Mobility Plan	0.7	0.7	0.00	Mitigation	Transport	AFD	EUROCLIMA+	Under implementation
Low-carbon transport systems in the City of La Havana	17.4	1.9	15.4	Mitigation	Transport	UNDP	GEF	Under implementation
Programme for energy efficiency in buildings	1.1	1.1	0.00	Mitigation	Buildings, cities, industries and appliances	AFD	EUROCLIMA	Approved
Building coastal resilience in Cuba through natural adaptation solutions	5.0	5.0	0.00	Adaptation	Disaster risk reduction	UNDP	EU GCCA+	Under implementation
Mainstreaming biodiversity conservation and climate change mitigation in sustainable tourism development in Cuba	34.5	3.6	30.9	Cross-cutting	Biodiversity, climate change	UNDP	GEF	Approved
Disaster risk reduction and adaptation to the effects of climate change against flood and drought hazards in north-central Cuba affected by Hurricane Irma	1.5	1.5	0.00	Adaptation	Disaster risk reduction	UNDP	EUROCLIMA	Approved
Rehabilitation and strengthening of INRH water and wastewater services after Hurricane Irma in Cuba	65.2	6.4	58.8	Adaptation	Reconstruction relief and rehabilitation	AFD	LAIF	Approved

Title/description	*Total project value (USD million)*	*Fund financing*	*Co-financing*	*Theme*	*Sector*	*Implementing Entity*	*Fund*	*Status*
Supporting sustainable investments in the agricultural, energy and food production sector in Cuba's central region	89.3	7.8	81.5	Cross-cutting	Sustainable agriculture	AFD	LAIF	Under implementation
Project Preparation Facility in Cuba	3.1	3.1	0.00	Cross-cutting	Sustainable agriculture	AFD	LAIF	Under implementation
Cooperative rural development project in the Oriental region	45.3	10.7	34.6	Adaptation	Agricultural Development	AECID	IFAD	Under implementation[a]
Livestock cooperatives development project	50.0	11.9	38.1	Adaptation	Agricultural Development	AFD	IFAD	Under implementation
Agroforestry cooperative development project	63.6	15.5	48.1	Adaptation	Agricultural Development	BCIE AFD	IFAD	Under Implementation
Contribution to the sustainable development of the agrifood sector	10.2	NA	NA	Adaptation	Livelihood of people and communities	AFD	–	Approved
Development of baseline GHG emissions from cattle farming	0.1	0.1	0.0	Mitigation	Agriculture	Viresco Solutions	CTCN	Under implementation

Source: GCF.

[a] By the time the assessment was taking place the status project was 'ongoing' (under implementation).

73. To expand this portfolio, work is being carried out with various agencies in the United Nations system such as UNDP, FAO and UNEP. Collaborations are also being established between AFD and CABEI. Both of which have agreed to act as accredited entities for Cuba in the development of GCF climate financing project proposals. Given their linkages with the country's cooperation agenda, other potential accredited entities include the United Nations World Food Programme and the United Nations Industrial Development Organization.

74. One of the purposes of the national work, thus identified under the Readiness Programme project, is to establish an accredited national entity so that direct access to projects can be promoted.

(a) The implementation of the clean development mechanism in Cuba

75. To date, two CDM projects have been registered in Cuba with a reported total capital investment of USD 91.7 million. The projects issued just over 1 million certified emission reductions - of which 225,000 were monetized (cancelled or forwarded). The two projects involve methane capture and destruction on the Calle 100 landfill in Havana and Gascon landfill in Santiago de Cuba as well as the Energás Varadero Conversion from Open Cycle to Combined Cycle.

76. Problems faced with monitoring, reporting and verification aspects of the project on this issue shows that there is a lack of updated and accurate information in the country. CUBAENERGÍA has stated that it will be working to establish full traceability of these completed projects in order to obtain more up-to-date information. It is hoped that this will serve as the basis for future endeavours under Article 6 of the Paris Agreement.

77. The updated NDC states that Cuba intends to use cooperative approaches "in the event that a satisfactory covenant is achieved in the negotiations under Article 6 of the Paris Agreement."[39] Cuba's participation within the international fora is therefore conditional on achieving certain results. As expressed in the NDC, the Cuban vision of the fight against climate change requires strong voluntary cooperation between the Parties and other relevant actors. Such cooperation requires the establishment of mechanisms and approaches that mobilize efforts and resources to achieve ambitious climate action at all levels and, at the same time, achieve sustainable development.

78. Article 6 is viewed as an opportunity to promote higher ambition on a multi-project scale. There is currently no clear strategy at the national level for Article 6 implementation and this should be one of the areas addressed by the climate finance strategy. Several areas are to be considered and would require the use of credit to overcome barriers. According to climate experts, a successful outcome of Article 6 negotiations will allow higher ambition in mitigation and adaptation actions, promote environmental integrity and provide a substantial mitigation impact on global emissions. However, the experts urge caution when considering the risks and limitations that this kind of mechanism entails. It is therefore imperative to support national efforts via the provision of effective rules to ensure transparency and consistency with the objectives of the Paris Agreement. This should also favour centralized supervision on all units generated under Article 6 and a strong mechanism to avoid the instance of double counting. The experts also support the Carbon Border Adjustment Mechanism to ensure the functionality and credibility of the system whilst assigning a share of proceeds to support adaptation.

(b) Green Funds

79. The development of green funds and green banking can be seen as important tools in the climate finance process. An overview of the nature of technical assistance for green and responsible banking in Cuba can be seen in box 1. In this regard, experience has been gained

[39] For more information, see p.9.

through the AFD, which provides technical assistance to the BANDEC - a recognized green and responsible bank.

Box 1
Technical assistance for green and responsible banking in Cuba

This programme includes:

- A green credit line from the AFD (long-term loan) of EUR 25 million for Cuba, represented by MINCEX, to provide finance for a portfolio of climate-smart projects. The technical, administrative and financial management of this credit line will be delegated to BANDEC, as the executing entity;
- A grant of EUR 2.5 million from the European Union, through LAIF, in order to support BANDEC in digitizing and automating its processes and in its transformation strategy towards a green and responsible banking model, increasing the portfolio of green projects, in addition to the AFD credit line; and
- An internal strengthening programme financed by BANDEC's own funds for CUP 3.5 million.

C. Domestic financing flows

80. This section provides an overview of domestic financial flows in terms of its general considerations, national financing as well as national funds and programmes as sources of support for climate finance.

(a) General considerations

81. To determine the extent of investments required to meet Cuba's NDC obligations and other climate priorities up to the year 2030, it is important to emphasize the following certain conditions already detailed within this Technical Assessment:

(a) In general, the drive for public policies to address climate change is very recent even though some older national precedents emphasized the importance of climate action.

(b) In the past, financial resources dedicated to environmental activities were mainly linked to risk management, adaptation and various energy programmes. However, such resources were not categorized and tracked as climate finance but rather merely deemed as a portion of the overall financial inflows to support the country's economic planning and budgetary preparations with the addition of some external funding – particularly for the energy sector.

(c) In national planning, the disaggregation of climate finance from general financing only began from 2018 onwards. This coincided with the emergence of the main climate policy '*Tarea Vida*' which was later treated as a separate category in the National Economic Plan from 2019 onwards.

(d) Based on the information captured in SIEN (see table 13), it is not possible to disaggregate climate finance from general financing especially when it relates to air and climate protection; water management; waste; soil protection and rehabilitation; biodiversity and landscape protection;

(e) Statistical records of investment flows only cover public investments, not the private sector. Under mitigation, an important part of the resources for renewable energy come from foreign direct investment or from credit, neither of which are registered by SIEN.

(b) National financing

82. In Cuba, the levels of domestic savings are insufficient, and the financial system is shallow and underdeveloped with low levels of banking penetration. The credit offered to enterprises is mainly to finance working capital (short term), while credit offered to individuals is even more

limited. This shows that long-term permanent investment options are insufficient even when commercial banks maintain a liquidity cushion.[40] These limitations are influenced by the following pre-existing issues which are generally taken into account at a high level in the new financial policy:[41]

(a) A complex currency situation in the country;

(b) The absence of exchange markets for legal persons which reduces the effectiveness of granting credit in CUP;

(c) Prohibited access to information and communication technologies that encourage the banking by all agents;

(d) Lack of a purely formal concept the constitutes a good bank–business relationship, which determines that the main source of financing for State enterprises is from suppliers and not from the granting of credit;

(e) Weak technical knowledge; and

(f) Conflicts between designers, executors and evaluators of economic policy.

83. Climate financing from internal sources presents its own difficulties, not only in terms of managing the amounts required, but also in accurately identifying needs and monitoring the financial flows when implemented.

84. An initial examination of climate financing revealed that the most important domestic sources of financing since 2017 have been MINAG (for forests and soils), MINEM (for energy) and INRH. The figures specified for 2019 indicated a total allocation of approximately CUP 300 million: CUP 143 million for adaptation activities and CUP 155 million for mitigation activities.

85. In 1998, SIEN began to capture public investment expenditures in environmental protection activities. As of 2005, CEPA[42] has been applied. Information relevant to adaptation and mitigation has been considered under this system of environmental indicators, although it has not been disaggregated to date.

86. The main obstacle to disaggregation is that neither Cuban accounting standards nor the budget settlement structure contains a definition of income or expenditure relating to the environment or climate change. This therefore makes it difficult to identify environmental - particularly climate change-related expenditure.

87. In relation to the SIEN compilation of expenditures on environmental protection activities, information captured in line with CEPA is shown in table 13 below.[43] It is not possible to disaggregate climate finance from general financing especially when it relates to air and climate protection, water management, waste, soil protection and rehabilitation, biodiversity and landscape protection.

[40] Sánchez. 2017. Una mirada a la problemática del financiamiento climático en cuba: entre retos y oportunidades. [An approach to the financial climate in Cuba: challenges and opportunities]. Available at http://www.rcei.uh.cu/index.php/RCEI/article/view/79.

[41] See footnote 40.

[42] Eurostat. 2009. The environmental goods and services sector, 2009 edition, ISBN 978-92-79-13180-6, pp. 49-59 (in EN); Regulation (EU) No 538/2014 of the European Parliament and of the Council of 16 April 2014 amending Regulation (EU) No 691/2011 on European

[43] See footnote 11.

Table 13
Public investment expenditure for environmental protection by sector, 2015–2019
(Thousands of pesos)

Sector	*2015*	*2016*	*2017*	*2018*	*2019*
Water	298 054.3	405 223.1	412 203.7	377 042.4	385 855.9
Soil	11 233.5	11 008.8	6 531.3	7 720.5	11 243.6
Air	36 723.8	40 473.9	46 420.5	46 279.2	26 703.8
Forestry	91 667.5	81 533.1	61 961.7	77 107.6	59 042.9
Waste	17 425.2	18 752.8	22 201.8	13 894.6	23 940.7
Other	79 716.2	66 343.1	93 230.8	106 083.1	80 355.0
Total	**534 820.5**	**623 334.8**	**642 549.8**	**628 127.4**	**587 141.9**

Source: Adapted from ONEI 2020.

88. When the methodological definitions are examined, the relationship between climate change adaptation and mitigation becomes clearer. For example, water management includes investments linked to water quality problems and water use efficiency, water supply systems and their maintenance, establishment and the maintenance of monitoring systems. In the case of soil management, it encompasses measures to ensure soil protection thereby limiting soil erosion and other types of physical degradation (salinization, acidity, desertification, and poor drainage). In both cases, water and soil management techniques are the main aspects of climate change adaptation work within the country.

89. A similar scenario occurs with mitigation projects. For instance, mitigation is included in SIEN under air pollution.[44] It includes measures and activities to reduce air polluting emissions or concentrations of atmospheric pollutants. It also includes measures and activities to control GHGs emissions that negatively affect the stratospheric ozone layer. However, no distinction is made between specific measures targeting GHGs and other atmospheric pollutants in support of the fight against air pollution and the protection of the ozone layer.

90. Currently, the statistical record of investments in Cuba only accounts for public investments by State actors not non-State actors. Under mitigation, particularly for renewable energy, an important part of the resources comes from foreign direct investment or from credits, neither of which are registered by the national statistical system.

91. Since 2017, estimates of the national financing of the *Tarea Vida* have been subject to critical analysis. With regards to the estimates, the following should be taking into consideration:

(a) The actions identified to support the implementation of the *Tarea Vida* include strategic, institutional, legal, planning, capacity-building and organizational measures. Many of which are usually implemented within the budgets of agencies and entities at the national and subnational levels, without being flagged as climate financing flows;

(b) It has become increasingly evident that most of the national financing needs previously identified do not constitute new requests for additional climate financing. Such needs are often associated with previous plans and programmes[45] that are closely related to climate change. It should be noted that such a circumstance also applies to various sectoral actions and hence introduces the risk of double counting.

92. With regards to domestic financial flows, details to consider within key climate-related areas include:

[44] This can be found in the name of the section is air and climate protection within SIEN.
[45] For instance, hydraulic, forestry, soil and renewable energy and energy efficiency programmes.

(a) The National Programme for Soil Improvement and Conservation is funded by the State budget. It allocated CUP 48 million to climate-related activities in 2017 and CUP 58.4 million in 2018;

(b) For the restoration of sandy beaches, the Ministry of Tourism reported expenditure of USD 4,005 million in 2018 and USD 3,893 million in 2019;

(c) Within the framework of the National Hydraulic Program, approximately USD 1,768 million was invested from 2015-2020 in support of climate action; and

(d) From 2015–2019, investment expenditure within the forestry sector amounted to CUP 371,312 million (as seen in table 13).

(c) National funds and programmes as sources of support for climate finance

93. Table 14 below summarizes the fundamental aspects of national funds and programmes. These funds have contributed to climate finance to some degree. They have also played a relevant role as a co-financing source – a role that may increase following the formulation and implementation of international environmental and climate projects. Such projects include recently approved GCF projects like the IRES project and GCF funded projects under preparation like the MI COSTA project.

Table 14
National funds and programmes supporting climate finance

Source of income	*Purpose*	*Destination*	*Administration*
National Fund for the Environment	State budget allocations; income obtained from granting environmental licences and permits; donations; income from environmental fundraising campaigns; and other income from the collection of specific contraventions and fees; associated with income obtained by entities that market products or provide services of an environmental nature or exploitation of a natural resource (approved by the competent authorities)	Financing of environmental projects with a focus on provincial or community scope; support for entities with limited access to finance; co-financing; financing of studies and services necessary for tackling environmental problems; financing environmental education campaigns.	Multisectoral board chaired by CITMA and composed of permanent representatives of MEP, MFP and MINCEX.
Science and Innovation Fund	State budget allocations; other income from the science and technology sector and entities, credits, donations, bank interest and other sources.	Innovation projects; research and development projects; production of experimental or new high-value added goods and services, and scientific and technological services.	Multisectoral board composed of representatives of CITMA (Chair), MFP, MEP, MINCEX and BCC.
National Fund for Forest Development	State budget allocations	Long- and short-cycle forest plantations; protection measures against fire, pests and diseases; measures and actions for the development, conservation and protection of flora and fauna associated with forests; forestry services and development; inventories; protective strips;	MINAG

Source of income	*Purpose*	*Destination*	*Administration*
		and other activities relating to the forest heritage.	
National Programme for Soil Improvement and Conservation	State budget allocations	All activities related to the conservation and rehabilitation of agricultural soils.	MINAG
Landscape Resilience Fund	State budget allocations	Under IRES, Cuba announced the establishment of a Landscape Resilience Fund to support adoption and implementation of agroforestry, silvopastoral and forestry systems in support of landscape resilience through ecosystem service enhancement. MINAG is planning to transform its National Fund for Forest Development and National Programme for Soil Improvement and Conservation, as well as any other funds established to support land use and rural development, into a single Landscape Resilience Fund.	MINAG

Source: Adapted from national documents.

V. Climate finance gaps

A. National financing needs

94. Within the current NDC, the estimated cost of implementing mitigation actions is approximately USD 13.8 billion over the period 2014–2030 (see chap. IV above). This equates to approximately USD 863 million of climate finance per annum from international and domestic funds. Of the USD 13.8 billion reported within the NDC, 61% (USD 8.4 billion) is from international funding whereas 39% (USD 5.4 billion) is from domestic funds. It should be noted that adaptation needs are yet to be quantified.

B. National financial flows

95. According to the OECD CRS database, a total of USD 208 million in public international climate finance was allocated to Cuba from 2010–2018. The average annual inflow for this specified period was USD 23 million. Overall, public international climate finance exhibits a positive trend. Between 2010 and 2018, this total climate finance amount increased from USD 8 million to USD 51.2 million. Of the finances allocated, a total of USD 102.1 million (40%) targeted mitigation activities, USD 101.9 million (40%) targeted adaptation activities and USD 50.4 million (20%) targeted both mitigation and adaptation simultaneously in cross-cutting projects.

C. National financing gaps

96. This is due to the lack of accurate data on domestic and private climate finance as well as the incomplete quantification of adaptation needs. The national climate finance gap is only provided as a broad estimate to indicate the extent of the disparity between climate finance needs and climate investments and not only for mitigation actions.[46]

97. According to the updated NDC, the total estimated costs for mitigation finance needs amounted to USD 863 million annually while the average inflow from public international sources for such action amounted to USD 16.9 million annually from 2010–2018.[47] Noting that additional private and domestic funding is not yet accounted for, Cuba therefore lacks up to 50 times the annual funding required to finance mitigation needs expressed in its updated NDC.

98. In Cuba, climate financing derived from national funds stood at USD 5,400 million. The country has declared that it will allocate USD 337 million annually for mitigation.[48] In 2019, the country invested USD 155 million for mitigation actions.[49] Therefore, that year Cuba lacked up to 2.2 times the annual national financing required for the mitigation needs expressed in its updated NDC.

VI. Challenges and opportunities for strengthening the national climate finance framework

A. Constraints and challenges in scaling up climate finance

99. Throughout this assessment, it was possible to demonstrate the progress achieved in Cuba with regards to the design and implementation of climate-related policies to support adaptation and mitigation efforts. Some progress has also been made to highlight the significant of climate related expenditure within national accounting. However, several gaps and barriers faced in the management of climate finance are also evident.

100. Despite the country's scientific and institutional strengths, capacity gaps exist at the national, sectoral and provincial level. These include a lack of understanding in climate change risks, its impacts and the worsening effects of future scenarios. A lack of knowledge regarding the distinction between natural climate variability and climate change still poses scientifical and methodological challenges. All of these make the climate rationality characterization process required by the GCF and other funds particularly complex.

101. It is imperative to promote greater awareness on the importance of prioritizing adaptation and mitigation measures in the country to avoid devasting consequences. For instance, taking advantage of mitigation opportunities to access more efficient technologies will lead to economic advancement. However, it is currently extremely difficult to access and to allocate climate funding.

102. For public institutions, the ability to directly target climate finance is a relatively new undertaking – dating back only about five years. In the past, projects were primarily based on specific opportunities and isolated efforts than on a countrywide strategy.[50.] The first concerted

[46] Includes cross-cutting actions.

[47] Of attributed finances for the period, a total of USD 102.1 million targeted mitigation activities and USD 50.4 million as “cross-cutting” actions.

[48] To carry out the calculations, the period 2014 to 2030 is taken (year of beginning of the partial implementation of the contribution in energy efficiency).

[49] See section IV.C, paras. 83-93 (Financing)

[50] This is the case of two projects: Environmental Bases for Local Food Sustainability project and Reduction of vulnerability to coastal flooding through ecosystem-based adaptation in the south of Artemisa and Mayabeque provinces project, also known as the Living Mangrove project.

effort to organize the financing of climate projects in Cuba took place with the GCF Readiness Project.[51]

103. There is neither the capacity nor the up-to-date information available to differentiate between the needs for financial support, technology transfer and capacity-building. A major capacity-building effort is therefore required. This should include a refinement of climate change indicators and periodic training of personnel who record, report and evaluate information relating to the financing of climate investments.

104. The updated NDC contains a 'more detailed statement of funding requirements' than its 2015 iteration. However, not all of the requirements stated in the NDC are explicitly detailed – particularly for adaptation priorities.

105. The Readiness Programme project warns that "for the full implementation of its NDC, and further development of adaptation and mitigation actions […] Cuba is required to strengthen its institutional capacities to develop projects and programmes, as well as complying with regulations to guide and to support these efforts".

106. A new readiness support request will be submitted to the GCF. It is currently being prepared to recognize the progress made by Cuba in accessing climate finance during the period 2017–2020. However, there are still significant gaps and barriers that need to be overcome to promote the work with climate funds and the GCF in particular. A participatory review and update of the GCF Country Programme, including the non-State sector, is therefore recommended.

During the compilation of the technical assessment, a brainstorming exercise was carried out with a group of key actors. This was done to ascertain their views on the access to and mobilization of climate finance via a SWOT analysis. Later, capacity-building needs identified from official reports, GCF Readiness reports and the SWOT analysis were summarized as seen in table 15.

[51] CUB-RS-001. 2018.

Table 15
Capacity-building needs

Area	*Challenge/Need*
1. Transparency and data	• Scientific understanding of climate change risks, impacts on assets and future scenarios at the national, sectoral and provincial level; • Harmonizing coverage of sectors, balancing more frequent reporting on sectors such as coastal zone management compared with biodiversity and ecosystem services; • Building and maintaining data archives; forecasting and interpreting climate models; providing predictions and scenarios including validation with reference to on-the-ground historical data and levels of assessment; • Assessing vulnerability and climate risk [a] and determining appropriate adaptation responses for the major development sectors and for all vulnerable groups and ecosystems; • Setting up baselines and indicators for measuring adaptation action; • Identification of the incremental cost attributable to climate change in the development of projects; • Reporting and tracking the support received and needed; • Designing and implementing an MRV system to monitor domestic climate finance flows; • Tracking and reporting private climate finance flows (domestically and internationally); • Identifying and tracking public domestic climate finance, and harmonizing the approaches and methodologies used to identify climate finance; and • Developing a clear methodological framework, which provides effective aggregation of the figures on climate finance allocated that are reported by the various relevant sectors and provinces.
2. Institutional capacity	• Promoting greater understanding of the climate finance channels, how to apply for and access opportunities associated with climate financing; • Increasing the availability of trained human resources; • Promoting greater understanding of climate finance and mobilization capacities amongst financial institutions responsible for, or directly linked to, climate finance (banks and funds); • Strengthening institutional frameworks and coordination among various ministries and national institutions for accessing climate finance; and • Establishing financial management and accountability systems.
3. Access to funds	• Establishing organizational structures and legal instruments that enable the use of climate funds; • Building capacity of national financial institutions in the accreditation and application processes for various climate funds; • Navigating and accessing different funding instruments and mechanisms, including enhanced understanding of eligibility criteria and requirements of the various multilateral and bilateral funds; • Strengthening the mechanism for the interaction of the NDA and ICC-GCF with all stakeholders regarding the identification, preparation and internal approval of project proposals, as well as the monitoring of processes; • Carrying out complementary studies to enable the formulation of projects following GCF requirements (conceptual notes, the project preparation facility, the simplified approval process and funding proposals); and • Using and managing funds, establishing national mechanisms to allocate, disburse and report on funds received, including meeting required accounting standards and spending resources within agreed timespans, compatible with the relevant fund's requirements and also with the national planning, budgeting, programming and monitoring procedures and systems
4. Project development	• Creating economic incentives for the development and funding of climate projects; • Strengthening the gender approach in climate finance programming; • Improving skills in identifying and preparing climate finance projects and the required project documentation; • Increasing capacities for the complex, time- and resource-intensive process of developing and submitting proposals, which entails holding stakeholder consultations, conducting feasibility studies, drafting concept notes, engaging with fund administrations and making regular adjustments; • Carrying out project assessments and evaluations; • Carrying out costing assessments; and • Developing bankable project proposals and providing a return on investment.
5. Carbon markets	• Tracking CDM projects and revenues; • Developing a clear national strategy to manage Article 6 implementation.

Area	*Challenge/Need*
6. Private sector	• Strengthening the role of the private sector in the climate finance architecture, including building awareness, fostering investment, sharing technology and promoting innovation; • Building the capacity of domestic private sector investors to engage with, and invest in, climate action.
7. Other	• Formulating a gender policy for mainstreaming gender considerations and best practices into climate-related issues; • Ensuring environmental and social safeguards; • Strengthening of the non-state sector capacities to confront climate change and for access to climate funds; • Improving English language skills among project proposal developers and addressing the lack of qualified staff and resources for translation services; • Increasing consideration of incentive approaches, stakeholder involvement, and the sectoral and provincial dimension in accessing finance; and • Fostering and strengthening international alliances for climate finance.

Source: Adapted from national documents.

[a] Cuba stands out as having a solid national scientific base but the level of information on climate impacts and scenarios, at a local level, is not of the same quality or accuracy. For example, this has affected the MI COSTA project. It was submitted to the GCF for the first time in 2019. Yet, it is still at the preparation stage because it has been challenging to provide the required climate information for all the areas of intervention.

B. Difficulties in raising climate finance for certain sectors and for adaptation

107. Within national public policy, there is a specific mandate for climate financing as detailed within the *Tarea Vida* (Task 11). However, this is not always explicitly recognized at the sectoral level. This therefore creates a situation which leads to the lack of sectoral strategies to access climate finance.

108. At the sectoral and provincial levels, the implementation of climate projects is displaced by projects that do not include climate actions but rather offer greater benefits in the short term. Such benefits are related to housing construction, transportation development and food production.

109. The cross-cutting and integrated nature of adaptation was emphasized as a constraint to delineating financial flows attached solely to the adaptation component of projects. It is particularly difficult to distinguish development needs from adaptation needs - which in many cases simply cannot be separated. However, this disaggregation appears as a necessary requirement to access funds under the GEF and the GCF.[52]

110. The inability to accurately assess the cost of climate inaction, makes it exceedingly difficult to compare monetary and non-monetary values of such inaction. Also providing an accurate return on a climate-related investment can become very difficult – particularly within the education and social policy sectors. As a result, sectoral authorities and local governments often fail to justify the expense for long-term adaptation compared with other potential short-term budgetary items.

111. Another difficulty identified relates to the timing and timespan of adaptation finance. The expressed need to receive continuous multi-year support for the entire lifespan of a project or programme was highlighted. While natural disasters can lead to significant expenditures from domestic and international resources, the resources usually tend to come all at once. After which, no more funds are forthcoming even immediately after the event. The dissemination of such resources is usually governed by the rules and regulations stipulated within various post-disaster and recovery funds.

112. The limitations on access to international climate finance flows, particularly for adaptation, acts as a developmental barrier. This action is compounded by the slow, complex and highly bureaucratic management of the international funds. Such limitations are noted as common features when interacting with the GCF.

C. Lack of an incentive-based approach

113. The lack of incentives was referred to on several occasions throughout this document. The use of various incentives in environmental policies are recognized at the legal and policy levels in Cuba (as seen in box 2). However, the use of climate-related incentives is still very uncommon. Some instruments such as the reduction or elimination of environmental tariffs may be applied; however, there are currently no specific instruments designed as incentives for climate finance.

[52] However, Cuba has recently had a positive experience with the Adaptation Fund. It recently concluded a project aimed at reducing vulnerability to coastal flooding through Ecosystem-based adaptation in the south of the Artemisa and Mayabeque provinces.

Box 2
2030 National Economic and Social Development Plan

Strategic focus: Natural resources and environment

Strategic goal 15: Implement economic incentives (taxes, tariffs and credits, among others), to achieve financial sustainability in the use and conservation of natural resources and the environment; the fight against pollution; and the fight against climate change and advancements in the establishment of environmental accounting.

D. Potential role of financial institutions responsible for climate finance

114. Given the profound changes and transformations that are taking place in the country,[53] there is great opportunity to strengthen the role of financial institutions in mobilizing climate finance. Within the banking and financial system, the overall objective seeks to complement the wide range of economic transformations inclusive of climate actions. This is seen as an essential dimension for sustainable development within the country. It is therefore deemed as an important element in the improvement and development of the Cuban banking and financial system.

115. The rearrangement of the monetary and foreign exchange is expected to be implemented soon. This, along with the strengthening of the banking and financial system, will impose changes that not only influence the content and form of financial management, but also the classification of climate finance.[54]

116. Financing adaptation and mitigation priorities as detailed within the main development plans, programmes and projects is paramount. Providing access to and the management of credits for these purposes (both from domestic and external sources) should be key elements that have an impact on the development of the banking and financial systems.

117. The country's banking and financial systems lack any experience in the differentiated management of climate funds. There is also no accredited institution to facilitate direct access to international climate funds. It is, therefore, necessary to introduce key elements relating to climate investment projects into the banking system and financial institutions. This will negate a significant challenge for the banking and financial sectors.

E. Strengthened coordination of climate finance

118. The coordination of climate finance has been significantly strengthened during 2017–2020. This is particularly demonstrated under the Readiness Programme project:

(a) ICC-GCF was established to support the NDA and was approved by the Council of Ministers;

(b) A technical unit to support the work of the NDA was created; personnel were hired, premises were established; the required resources and equipment are now installed and utilized;

[53] In the Government's view, the Cuban banking and financial system is undergoing important changes, aimed at the monetary and exchange system. The main objective is to achieve a credit policy that facilitates more trade and investment, and invigorates the credit and microcredit system, which in addition facilitates investment, development, and promotion of the main economic actors, and also favours Cuban nationals. The Government has outlined the role of banks as the driving force behind the country's main economic players and has asked banks to be proactive and review banking services to investigate if other opportunities can be offered to expand the activity of the Cuban banking system.

[54] Tarea Ordenamiento Monetario
https://www.mincex.gob.cu/index.php/site/data/?lang=es&location=Noticia&title=Ordenamiento+monetario%2C+clave+en+la+nueva+estrategia+socioecon%C3%B3mica+de+Cuba
Also see: https://www.mep.gob.cu/es/tarea-ordenamiento

(c) Around 170 officials and specialists from the country's sectors and provinces were trained in the general aspects of the GCF protocols and in identifying opportunities for financing adaptation and mitigation projects;

(d) Regarding the no-objection procedure, the general methodological guide*: Preparation, evaluation and internal approval of the projects to the GCF in Cuba*[55] was adopted and published. Other publications were prepared, published and disseminated. These include operational manuals for the national coordination and consultation mechanisms developed on the basis of GCF guidelines and standards.

119. The implementation of changes in the country's economic model, the quicker pace of this implementation and the new measures derived from post-COVID-19 recovery needs have forced national institutions to coordinate activities more effectively.

120. The role of MFP was highlighted as particularly important in inter-ministerial coordination - particularly regarding the mobilization of finance from national and international sources. In doing so, the MFP addresses the country’s needs by integrating climate expenditure into national budgets and fiscal policies.

F. Fostering international alliances for climate finance

121. The 2030 PNDES promotes international cooperation to deal with the effects of climate change, pollution and environmental degradation. In particular, the plan seeks to promote greater integration across Latin America and the Caribbean in this regard.

122. For Cuba, the Caribbean Community and the Association of Caribbean States are key spaces for the development of international alliances in support of climate finance. Under the GCF, regional projects have been gaining strength. Cuba has been incorporated in two such projects and is in the process of incorporating itself into two additional projects.

G. Enhancing the monitoring and reporting aspects of climate finance

123. As stated in the first BUR, a national MRV system for support has not yet been designed. Therefore, one of the most important challenges is to design and to implement an MRV system. This system will seek to monitor climate finance flows, not only in accordance with the country's needs but also adequately respond to the transparency framework outlined within the Paris Agreement. A highly transparent MRV system will help Cuba provide a clearer outline of its needs to render climate finance support from various Parties.

124. However, the development of a highly transparent MRV system presents its challenges:

(a) Availability of relevant data and information to accurately inform needs assessments (in particular scientific and granular data);

(b) Derivation of estimates on identified needs and actions; and

(c) Promoting greater vertical and horizontal coordination at the provincial level. Owing to the cross-cutting nature of climate change, the system needs to encompass various ministries, departments and institutions at all levels – national, sectoral and provincial.

VII. Conclusions

125. The analysis of climate finance in Cuba is very recent. Within Cuban accounting standards and budget preparations, there is no specific definition of climate change related income and expenditure. As a result, it is currently very difficult to categorize financial flows and to make the distinction between significant and principal climate financial flows.

[55] Carrera, et al. 2020.

126. Other elements of interest resulting from this Technical Assessment are mentioned below:

(a) Climate investment spending available in SIEN is subsumed under environmental spending and does not appear as a separate line item;

(b) Resource planning for funding needs to support the implementation of climate priorities is still insufficient and uneven across sectors;

(c) Many actions[56] to support the implementation of the *Tarea Vida* are executed within the budgets of the various entities and provinces. As a result, they are not always explicitly stated in the climate financing flows;

(d) The country's domestic funding sources do not explicitly identify climate finance – even within national funds and programmes. However, the latter of which have increasingly referenced the term 'climate finance' to date;

(e) There is no differentiation, classification or criteria in place to identify climate finance flows within various financial instruments received via external funding; and

(f) Finally, it must be recognized that the assessment of needs is an iterative process. Therefore, an analysis of this nature needs to be revaluated on a periodic basis.

[56] These include strategic, institutional, legal, organizational, educational and informative measures.

For further information contact

Main office
UNFCCC secretariat
UN Campus
Platz der Vereinten Nationen 1
53113 Bonn Germany

Telephone +49. 228. 815-10 00
Telefax +49. 228. 815-19 99

Email: secretariat@unfccc.int
Website: https://unfccc.int

This page is intended to be blank.

Further information, related to the NBF Project
is available on the UNFCCC webpage

https://unfccc.int/NBF_Project

United Nations
Climate Change