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Collaboration for Climate Action

Roadmap for Implementing Panama's National Carbon Market in the context of the Paris Agreement

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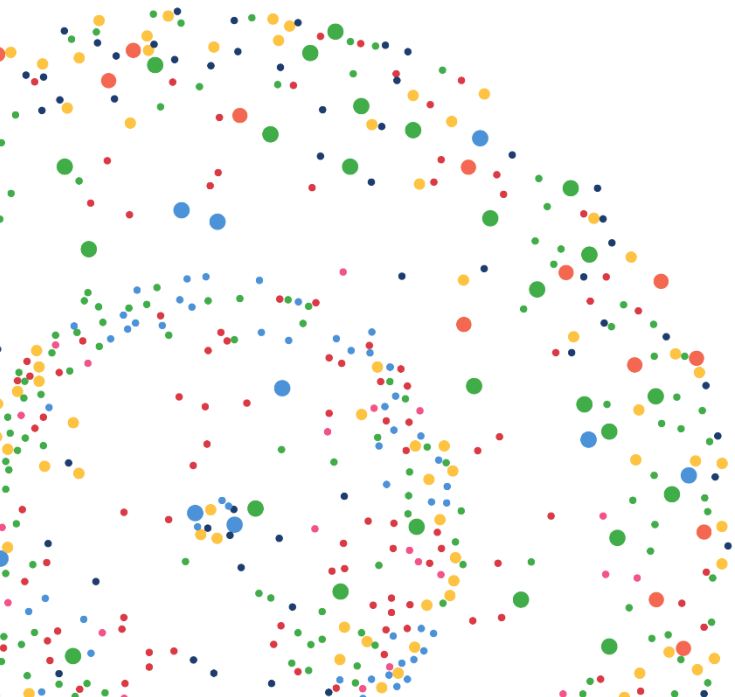
ABOUT THIS REPORT AND the CiACA INITIATIVE

This report has been prepared under the Collaborative Instruments for Ambitious Climate Action (CiACA) Initiative, launched during the COP22 Climate Change Conference in Marrakech in 2016. CiACA aims to support countries around the world in adopting carbon markets and carbon pricing instruments to align with the goals of the Paris Agreement. The initiative is implemented by the United Nations Framework Convention on Climate Change (UNFCCC) through its Regional Collaboration Centres (RCCs) and is supported by the German Federal Government through the Federal Ministry for Economic Affairs and Climate Action (BMWK).

The Government of Panama through the CiACA initiative, implemented by the Regional Collaboration Centre for Latin America, seeks to design and develop a detailed Roadmap to implement the National Carbon Market in the context of the Paris Agreement. This Roadmap will enable the compilation of information on the actions required in the different phases and across all components of Panama's National Carbon Market, as well as the linkages with other international mitigation targets under the Paris Agreement.

The final document represents a crucial step in a process that seeks to clarify how the National Carbon Market in Panama could function and what would be the environmental, economic, and social impacts associated with its implementation aligned with the different opportunities framed under Article 6 of the Paris Agreement.



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ACRONYMS AND ABBREVIATIONS

AAC	Civil Aviation Authority, for its acronym in Spanish
ACP	Panama Canal Authority, for its acronym in Spanish
AMP	Panama Maritime Authority, for its acronym in Spanish
ANATI	National Land Administration Authority, for its acronym in Spanish
ARAP	Aquatic Resources Authority of Panama, for its acronym in Spanish
ASEP	National Public Service Authority, for its acronym in Spanish
ATE	Energy Transition Agenda, for its acronym in Spanish
ATP	Tourism Authority of Panama, for its acronym in Spanish
ATTT	Transit and Land Transportation Authority, for its acronym in Spanish
BAU	Business as Usual
BTR	Biennial Transparency Report
CARB	California Air Resources Board
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CiACA	Collaborative Instruments for Ambitious Climate Action
CONACCP	National Climate Change Committee of Panama, for its acronym in Spanish
CORSIA	Carbon Offset and Reduction Scheme for International Aviation
DCC	Climate Change Directorate, for its acronym in Spanish
DGNTI	General Directorate of Standards and Industrial Technology, for its acronym in Spanish
DNA	Designated National Authority
LTS Panama	Long-Term Strategy, or National Strategy for Socioeconomic, Inclusive, Low Emission and Climate Change Resilient Development 2050
FONACC	National Climate Change Adaptation Fund, for its acronym in Spanish
GDP	Gross Domestic Product
GHG	Greenhouse Gas
HFC	Hydrofluorocarbons
IDAAN	Institute of Aqueducts and Sewers, for its acronym in Spanish
IDB	Inter-American Development Bank
IDIAP	Panama's Institute for Agricultural Innovation, for its acronym in Spanish
IICA	Inter-American Institute for Cooperation on Agriculture
IMHPA	Panama's Institute of Meteorology and Hydrology, for its acronym in Spanish
INGEI	National Greenhouse Gas Inventory, for its acronym in Spanish
IPPU	Industrial Processes and Product Use
ITMO	Internationally Transferred Mitigation Outcome
LT-LEDS	Long-term Low Greenhouse Gas Emission Development Strategy
LULUCF	Land Use, Land Use Change, and Forestry

MEDUCA	Ministry of Education, for its acronym in Spanish
MEF	Ministry of Economy and Finance, for its acronym in Spanish
MiAMBIENTE	Ministry of Environment of Panama, for its acronym in Spanish
MICI	Ministry of Commerce and Industries of Panama, for its acronym in Spanish
MIDA	Ministry of Agricultural Development, for its acronym in Spanish
MIDES	Ministry of Social Development, for its acronym in Spanish
MINREX	Ministry of Foreign Affairs, for its acronym in Spanish
MINSA	Ministry of Health, for its acronym in Spanish
MIVIOT	Ministry of Housing and Land Management, for its acronym in Spanish
MNCP	Panama National Carbon Market, for its acronym in Spanish
MOP	Ministry of Public Works, for its acronym in Spanish
MoU	Memorandum of Understanding
NAMA	Nationally Appropriate Mitigation Actions
NDC	Nationally Determined Contribution
NDC1	First Nationally Determined Contribution
NDC2	Second Nationally Determined Contribution
PACM	Paris Agreement Crediting Mechanism
PNRF	National Forest Restoration Program, for its acronym in Spanish
PNRTH	National Reduce Your Footprint Program, for its acronym in Spanish
PNTC	National Climate Transparency Platform, for its acronym in Spanish
RAC	Refrigeration and Air Conditioning
RCC Latin America	Regional Collaboration Centre for Latin America
ReNAM	National Registry of Mitigation Actions, for its acronym in Spanish
ReNE	National Emissions Registry, for its acronym in Spanish
RTH C-C	Reduce Your Footprint Corporate – Carbon, for its acronym in Spanish
SENACYT	National Secretariat of Science, Technology, and Innovation, for its acronym in Spanish
SINAPROC	National Civil Protection System, for its acronym in Spanish
SINIA	National Environmental Information System, for its acronym in Spanish
SNCP	National GHG Emissions Offsetting System of Panama, for its acronym in Spanish
UNFCCC	United Nations Framework Convention on Climate Change
UNRE	National Emissions Reduction Unit, for its acronym in Spanish
UP	University of Panama, for its acronym in Spanish
Updated NDC1	First Update to the Nationally Determined Contribution
UTP	Technological University of Panama, for its acronym in Spanish
VCM	Voluntary Carbon Market
VVB	Validation and Verification Bodies

EXECUTIVE SUMMARY

This report presents a Roadmap for Panama's National Carbon Market (MNCP) in the context of the Paris Agreement. This tool provides a clear framework to visualize the activities needed to implement the market, its interaction with other international carbon markets, and the steps required for its development. The document is divided into 3 sections:

- **The first two sections (*Sections 1 and 2*)** provide an understanding of the national context, focusing on existing data about the country and the progress made toward the MNCP.
- **The third section (*Section 3*)** analyzes the current information and translates it into specific, actionable steps for operationalizing the market, grouped by theme, implementation time, and priority.

Section 1. National Context and Background

Panama is a country with great natural resources, including a forest cover that occupies 61.42% of its territory. Much of this forested area coincides with comarcas, which are indigenous territories with semi-autonomous political systems. The country has a predominantly service-based economy, and its emissions' profile reveals that the Land Use, Land Use Change, and Forestry (LULUCF) sector accounts for 57.1% of total emissions, followed by the energy sector (28.1%), agriculture (8.7%), industrial processes and product use (IPPU) (3.4%) and waste (2.7%).

These data serve as a basis for the development of the MNCP Roadmap, providing an overview of Panama's circumstances. The forest coverage and emissions' profile identify priority sectors for mitigation and align them with the commitments included under the Paris Agreement, particularly for leveraging cooperative approaches under Article 6. The relevance of indigenous peoples and the characteristics of the national economy will significantly influence the design and operation of the National Carbon Market.

The development of a carbon market requires a strong regulatory and political framework. In Panama, the following key instruments exist:

- **Law No. 41 (July 1, 1998):** Establishes the basis for climate change management;
- **Executive Decree No. 100 (October 20, 2020):** Grants the Ministry of Environment the legal mandate to develop a carbon market; and
- **Executive Decree No. 142 (December 9, 2021):** Defines the components of the carbon market.

In addition, public policies such as the Nationally Determined Contributions (NDCs), Panama's Long-Term Strategy (LT-LEDS) and the National Strategy for Reducing Emissions from Deforestation and Forest Degradation (National REDD+ Strategy), offer valuable guidelines for the implementation of the MNCP.

Panama's previous participation in the Clean Development Mechanism (CDM), and the voluntary carbon market (VCM), provides lessons learned that can inform the MNCP development.

This section also includes a mapping of the international support that Panama has received during the development of the MNCP, including 10 initiatives spread over the 2018 - 2024 period. The total

sum of these initiatives amounts to 3,780,902.52 USD; however, it is necessary to highlight that some of these initiatives include other activities not related to the market. The 10

initiatives are summarized as follows (detailed descriptions of the activities are found in *Section 1):*

- **Partnership for Market Implementation**, Panama - World Bank – USD 2,000,000.00.
- **Second Round of the Euroclima+ Country Dialogue RE3**: Developed and Accessible Carbon Market – USD 174,721.77.
- **Capacity building to prepare for implementation of carbon markets and Article 6 at Latin America** - Green Climate Fund – USD 281,202.00.
- **Develop a detailed Roadmap for implementing the National Carbon Market in the context of the Paris Agreement** - Collaborative Instruments for Ambitious Climate Action (CiACA) – UN Climate Change Secretariat-RCC LatAm – USD 50,000.00.
- **Action 2: establish a regulatory framework for the distribution of blue carbon benefits in the context of the National Carbon Market** - Euroclima+ - USD 250,000.00.
- **Support for the development of the National Offsetting System of Panama's National Carbon Market** - Development Bank for Latin America and the Caribbean – USD 200,000.00.
- **Consultancy for the development of the new registration and reporting platform for the Reduce Your Footprint National Program** - Inter-American Development Bank - USD 250,000.00.
- **Operationalize the National Carbon Market to integrate emission reductions** - Nationally Determined Contributions Partnership – USD 74,978.75.
- **Partnership for Market Readiness**, Panama - World Bank – USD 500,000.00.
- **Blue Natural Heritage Project** - Inter-American Development Bank and National Audubon Society-Audubon Americas.

The country also received a great amount of support from the Inter-American Development Bank (IDB) in the form of specialized technical assistance to legally strengthen and implement Panama's National Carbon Market through the analysis of gaps in the legal framework for its effective implementation and concrete proposals and recommendations. More details on this support can be found in *Section 1*.

Section 2. Panama's National Carbon Market

Panama began developing its MNCP in 2020 with Executive Decree No. 100. At the time of this Roadmap, the market consists of three components, one of which is operational while the other two are under development.

1. **Greenhouse Gas Management Programs:**
    - This includes the Reduce Your Footprint Corporate - Carbon program, which focuses on managing the footprint at an organizational level and represents the market demand.
    - Status: Led by the Ministry of Environment of Panama (MiAMBIENTE). This is the only operational component.
2. **National GHG Emissions Offsetting System of Panama (SNCP):**

- This system includes a standardized process for registering carbon projects and issuing national carbon credits that can be traded under the national scheme and other international schemes.
- Status: Led by MiAMBIENTE and currently under development.

3. **Panamanian Carbon Exchange:**
    - A virtual platform for trading national and approved carbon credits.
    - Status: Led by an external entity to MiAMBIENTE and currently under development.

This Roadmap outlines the key actions required to advance the development and operationalization of these three components.

Section 3. Proposed Roadmap for the National Carbon Market

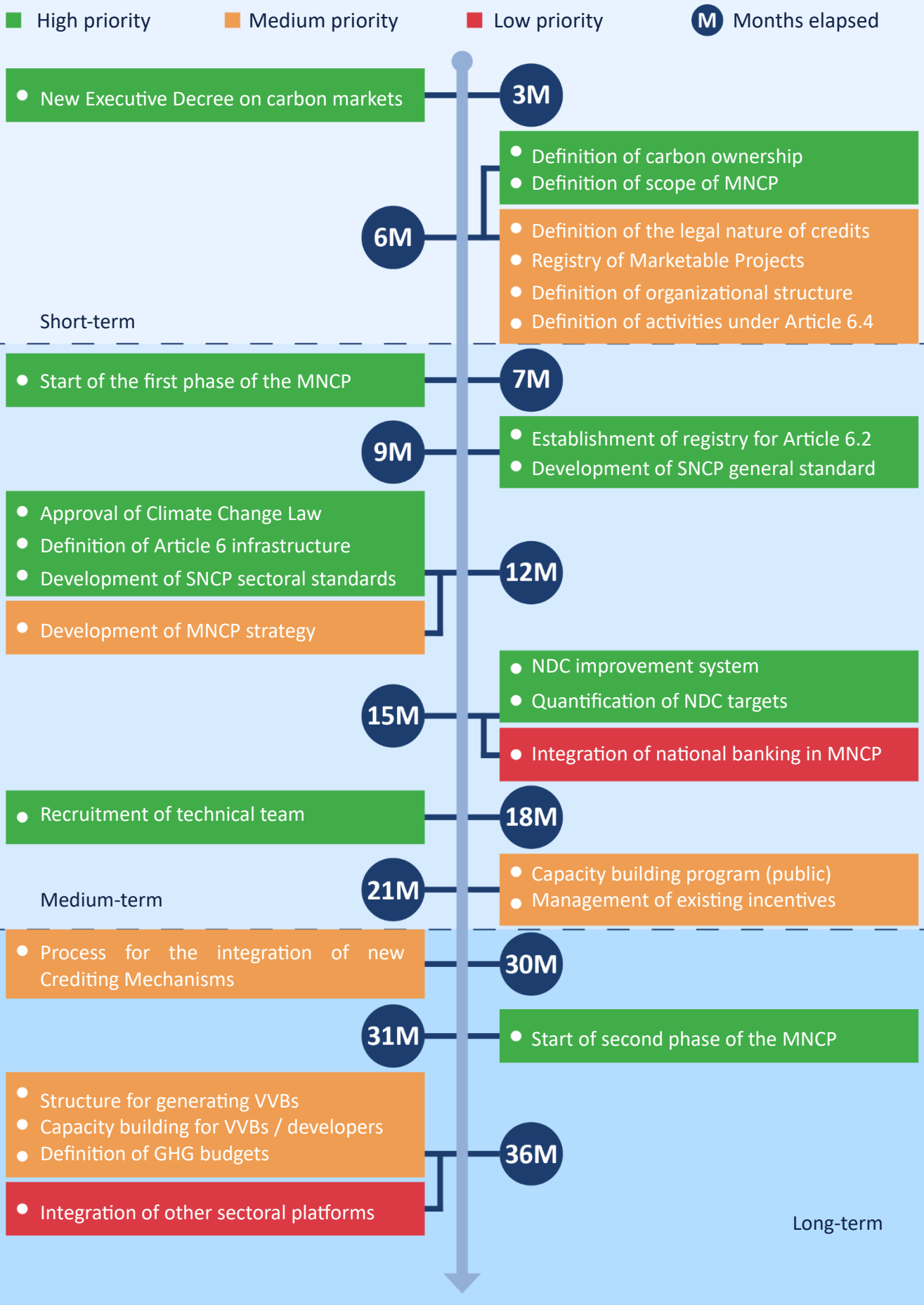
With clarity on the current state of the MNCP, the necessary activities to operationalize the market are identified and organized in a **Roadmap**.

These activities are classified according to three variables:

- **Theme**: focuses on regulations, strategic approaches, operational issues, organizational structure, capacity building and sectoral approach.
- **Implementation time**:
    - Short term: within 6 months or less
    - Medium term: between 6 months and 2 years
    - Long term: more than 2 years
- **Priority**: High, medium or low, depending on the impact and urgency of each activity.

Figure *1* provides a visual representation of the Roadmap, dividing activities according to implementation time. A central descending line indicates the elapsed time with numbers marking specific number of months. *Section 3* includes more detailed diagrams regarding the activities included in the Roadmap.

Figure 1. Roadmap summary diagram.



National Context and Background

01

1. NATIONAL CONTEXT AND BACKGROUND

This section covers four topics, as follows:

- Section 1.1 - **General Information about Panama.** It includes a snapshot of the most relevant data of the country in the context of carbon markets.
- Section 1.2 - **Climate change management tools relevant to carbon markets.** Includes an overview of the main management tools, including regulations and policy instruments.
- Section 1.3 - **Panama's participation in international carbon markets.** Includes an overview of the country's previous experience in international carbon markets, such as the Clean Development Mechanism and the voluntary carbon market.
- Section 1.4 – **Support received for the National Carbon Market.** Includes a summary of the international financial support received to advance the development and operationalization of the MNCP.

1.1. General Information about Panama

The following is information on Panama's territory, political-administrative division, economy, and greenhouse gas (GHG) emissions.

Territory: The Republic of Panama is located in Central America and has a **territorial extension of 75,517km^2,** including its continental and insular territory.

Forest cover: Of the total continental territory, approximately **61.42% has forest cover** (excluding stubble), highlighting the country's significant potential for forestry projects in carbon markets. This represents an opportunity to develop projects that align with Panama's climate objectives under the Paris Agreement, particularly in leveraging Article 6 mechanisms for international cooperation.

Political-administrative division: The country is divided into 10 provinces, 21 districts or municipalities, 3 comarcas with the category of province (Guna Yala, Emberá-Wounaan, Ngäbe-Buglé), and 2 comarcas with the category of corregimiento (Guna de Madugandí in the district of Chepo and Guna de Wargandí in the district of Pinogana) (MiAMBIENTE, 2024). A significant portion of the forested areas overlaps with the comarcas, making it essential to consider the existing regulatory frameworks related to indigenous peoples to ensure their effective integration into the MNCP.

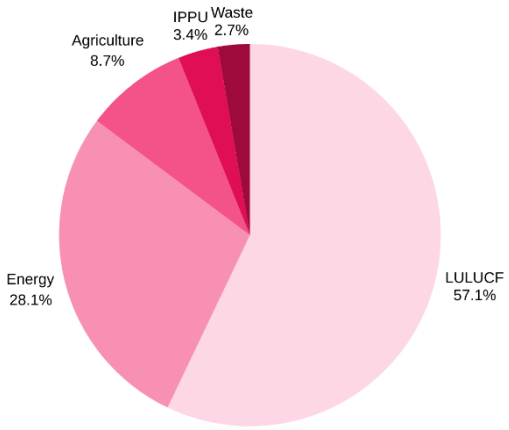
Economic profile: Panama's growing economy is **predominantly service-based**. According to the Ministry of Economy and Finance (MEF), gross domestic product (GDP) reached USD 83,382.4 million in nominal terms, with a 7.3% growth rate in 2023. Key sectors include construction (with a 36.7% increase in construction permits), wholesale and retail trade (7.3% growth driven by fuel sales), and the manufacturing industry (17.7% increase in concrete production) (MEF, 2024). The limited presence of heavy industry suggests that the MNCP's demand will be shaped primarily by service-based sectors, requiring tailored strategies to ensure robust market activity.

Emissions profile: According to the National Greenhouse Gas Inventory (INGEI) for 2021, the country's total emissions in CO_2eq were 20,683.29 kilotonnes, with total removals of 27,324.6 kilotonnes, resulting in a **balance of -6,805.3 kilotonnes**. This allows Panama to qualify as a carbon-negative country. However, as per estimates in the Biennial Transparency Report (BTR) 2024, this status could be lost between 2025 and 2030 unless decarbonization efforts are accelerated.

The emissions profile provides a basis to identify sectors with the highest mitigation potential, such as:

- **LULUCF sector:** 57.1% of total emissions, representing the largest share.
- **Energy sector:** 28.1%, with considerable potential for renewable energy and efficiency improvements.
- **Agriculture sector:** 8.7%, offering opportunities for mitigation through sustainable practices.
- **IPPU sector:** 3.4%, with special attention to refrigeration systems.
- **Waste sector:** 2.7%, where mitigation can focus on waste-to-energy initiatives and improved recycling systems.

Graphic 1. Share by sector in the national GHG balance 2000-2021.



Source: Biennial Transparency Report, MiAMBIENTE 2024.

Previous data points will guide the prioritization of sectors, inform regulatory policies, and shape public-private collaboration strategies to enhance the operationalization of the MNCP. By leveraging this contextual information, Panama can position its carbon market as a tool for driving economic growth, achieving mitigation goals, and maintaining its carbon-negative status.

The information presented in the national context is relevant to the MNCP. The data on forest cover highlights the significant potential of Panama's forestry sector in the context of carbon markets, with great opportunities for project development and the achievement of climate objectives. Regarding the political-administrative division, a large part of the territory with forest cover overlaps with the comarcas, making it essential to incorporate the existing regulatory framework related to indigenous peoples into the MNCP to ensure inclusivity and alignment with local context.

Box 1 - Relevance to the Paris Agreement and the Panama's National Carbon Market Roadmap: These data points serve as the foundation for developing a roadmap to operationalize the MNCP. The forest cover and emissions profiles align directly with Panama's commitments under the Paris Agreement, particularly in leveraging cooperative approaches outlined in Article 6. For example, Panama establishes its most ambitious commitments in the energy and forestry sectors, which are the two sectors with the largest share in the emissions balance. By identifying high-priority sectors and addressing regulatory gaps, the roadmap will guide the design and implementation of carbon pricing policies and mechanisms. Integrating indigenous peoples' frameworks and public-private collaboration strategies will further ensure the MNCP supports both national economic growth and international climate goals.

In terms of the economic profile, Panama's service-based economy, with a less dominant industrial sector, suggests that the MNCP's demand will be relatively moderate, requiring tailored strategies to optimize its impact. Finally, the emissions profile provides a clear roadmap for identifying sectors with the highest mitigation potential, enabling prioritization within the MNCP to maximize effectiveness and align with national climate goals.

1.2. Climate Change Management Tools Relevant to Carbon Markets

The implementation of a carbon market requires that the jurisdiction in question has climate change management tools that frame the development of such a market. The following is a description of existing tools related to carbon markets in Panama.

1.2.1. Mandate and Regulatory Background

This section presents *Table 1*, which includes a non-exhaustive list of the main existing regulatory instruments in Panama related to carbon markets. A more complete version of this table is presented in the *Annexes* section of this report.

Table 1. Regulatory instruments in Panama related to carbon markets.

Regulatory instruments related to carbon markets	
International treaties	
Title	**Description**
Law No. 10 of April 12, 1995.	Ratification of the UNFCCC, which seeks to stabilize GHG concentrations in the atmosphere and encourages countries to reduce greenhouse gas emissions, cooperate on research and technology, and protect greenhouse gas sinks.
Law No. 88 of November 30, 1998	Approves the Kyoto Protocol, which seeks to reduce GHG emissions and promote sustainable growth in developing countries. Establishes flexible market mechanisms, specifically the CDM, applied in Panama.
Law No. 38 of June 3, 2015.	Approves the Doha Amendment to the Kyoto Protocol, which establishes a second commitment period to reduce GHG emissions until 2020.
Law No. 40 of September 12, 2016.	Approves the Paris Agreement, which seeks to limit global warming to 2°C, preferably to below 1.5°C, compared to pre-industrial levels. Introduces the cooperative market and non-market approaches of Article 6.
Laws, Executive Decrees and general Resolutions	
Title	**Description**
Law No. 41 of July 1, 1998.	General Environmental Law that creates the basis for climate change management at the national level. It mentions the inventory of the State's forest patrimony and

	carbon capture as an environmental service of the forest. Establishes coastal marine resources as part of the national patrimony of the State and under the administration of MiAMBIENTE. It recognizes the right of comarcas and indigenous peoples to the management of renewable natural resources in their territories, in coordination with MiAMBIENTE. It establishes that the protected areas are goods of public domain of the State and will be regulated by MiAMBIENTE.
Resolution AG-0155-2011 of April 5, 2011.	Regulates the national approval process for CDM projects.
Executive Decree No. 100 of October 20, 2020.	Creates the PNRTH, which includes the Registry of Emissions and the Registry of Mitigation Actions, related to the National Carbon Market. In addition, it grants legal mandate to MiAMBIENTE to establish the MNCP (Article 50).
Executive Decree No. 142 of December 9, 2021.	Establishes the National Carbon Market and its three components.
Ministerial Resolution DM-0207-2022 of Friday, December 02, 2022.	Establishes the board of directors of the Panamanian Carbon Exchange (BPC), the third component of the MNCP.

Source: prepared by the author based on information from National Environmental Information System (SINIA, for its acronym in Spanish) of MiAMBIENTE.

Panama has several regulatory instruments related to climate change as seen in *Table 1* and the *Annexes* section. However, few explicitly reference carbon markets. While Executive Decree No. 100 grants MiAMBIENTE the legal authority to develop the MNCP, and Executive Decree No. 142 outlines its components, there is currently no regulatory framework that governs the processes under the MNCP. Critical aspects, such as defining the roles and key actors and addressing other sensitive issues for the effective operation of the MNCP, remain unregulated.

1.2.2. Public policies and international commitments

This section presents *Table 2*, which includes a non-exhaustive list of the main public policy instruments and international commitments existing in Panama that refer to carbon markets or have an impact on their implementation. A more complete version of this table is presented in the *Annexes* of this report.

Table 2. Panama's public policies and international commitments related to carbon markets.

Public policies and international commitments		
Instruments related to Climate Change		
Title	**Date**	**Description**
First Nationally Determined Contribution (NDC1).	April 1, 2016.	Panama's intention to design a carbon market and participate in international emissions trading, including the maritime and aviation sectors is mentioned.
Updated First Nationally Determined Contribution (Updated NDC1) of Panama.	December 14, 2020.	It details the intention to use voluntary cooperation under Article 6 of the Paris Agreement to ensure global climate integrity and accelerate climate action. Panama is committed to using the three cooperation mechanisms of the Paris Agreement.
Fourth National Communication on Climate Change (4CN) of Panama.	August 3, 2023.	Describes the MNCP as one of the measures to mitigate climate change at the national level, and details Panama's participation in international carbon markets, including the voluntary market and the CDM.

Second Nationally Determined Contribution (NDC2).	May 31, 2024.	Includes a commitment directly related to RTH C-C program. It is expected to build capacity among participating companies for their participation in the MNCP. Establishes the intention to resort to voluntary cooperation under Article 6 of the Paris Agreement and reiterates Panama's participation in the three mechanisms.
National Strategy for Socioeconomic Development, Inclusive, Low Emissions and Resilient to Climate Change 2050 (LTS Panama).	June 18, 2024.	Carbon credits are mentioned as a financing mechanism option for climate action.
First Biennial Climate Transparency Report (1BTR).	June 30, 2024.	Describes the MNCP as a national mitigation initiative. Reviews the progress of the NDC targets and establishes their relationship to the cooperative approaches of Article 6 of the Paris Agreement.
Main Sectoral Instruments		
Forestry Sector		
Title	**Date**	**Description**
National Strategy for Reducing Emissions from Deforestation and Forest Degradation (ENREDD+).	July 1, 2022.	Mentions the MNCP as an enabling condition. It seeks to establish regulations governing carbon ownership and the right to the usufruct of carbon benefits and to establish procedures for actions under the REDD+ mechanism enter the voluntary and regulated carbon market.
Energy Sector		
Title	**Date**	**Description**
Energy Transition Agenda (ATE).	November 24, 2020.	It constitutes the roadmap for climate action in the energy sector. The activities included in the ATE form the basis for achieving the sector's climate commitments.
Agriculture Sector		
Title	**Date**	**Description**
Project: Rice NAMA in Panama: innovation through blockchain and precision.	October 21, 2022 (project approval).	Financed by SENACYT and the IDB, and executed by IICA, it consists of a "precision" production pilot project with 100 rice producers to increase profitability, reduce GHG emissions by 40% and capture 13,200 tCO_2 equivalent that can be transformed into carbon credits as additional income for producers.

Source: prepared by the author based on information from MiAMBIENTE's National Environmental Information System (SINIA).

The table above groups the policy instruments according to whether they focus on climate change or on a specific sector.

For the most part, climate change policy instruments highlight carbon markets as a measure to mitigate climate change and generate financing, and/or point to possible country interactions with international markets including the Kyoto Protocol's flexibility mechanisms such as the CDM, the International Civil Aviation Organization's (ICAO) Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), and the Voluntary Carbon Market (VCM).

The sectoral policy instruments included in the table detail the main sectoral actions contemplated to reduce emissions, and some indicate the possible uses of the market at the sectoral level, as in the case of the forestry and energy sectors.

Three of the instruments listed in *Table 2* deserve special attention: **(1) Panama's NDCs, (2) Panama's LTS (Panama's long-term strategy) and (3) the ENREDD+.**

NDC

The NDCs include the country's intended national climate commitments. Panama has submitted three NDCs, all of them with references to carbon markets and the country's participation in the cooperative approaches contemplated in Article 6 of the Paris Agreement.

Table 3 includes a summary of the mitigation commitments included in Panama's NDC1, Updated NDC1 and NDC2. The table does not include those commitments related to climate change adaptation.

Table 3. Summary of mitigation commitments included in Panama's NDCs.

Sector	**Energy**		
NDC	**NDC1**	**Updated NDC1**	**NDC2**
Description of the commitment	Electricity subsector: By 2050, 30% of the installed capacity of the electricity matrix should come from other types of renewable energy sources, such as solar, wind and biomass.	By 2050, Panama will achieve a reduction in total emissions from the country's energy sector of at least 24% by 2050 and at least 11.5% by 2030, compared to the baseline scenario, representing an estimated 60 million tCO_2eq accumulated between 2022-2050 and up to 10 million tCO_2eq accumulated between 2022-2030.	Updated NDC1 commitment is maintained.
Baseline Year	2014.	BAU	Updated NDC1 commitment is maintained.
Target Year	2050.	2030; 2050.	Updated NDC1 commitment is maintained.
Target Value	30% of installed capacity from renewable energies (unconditional).	24% reduction in total emissions from the country's energy sector by 2050 and 11.5% by 2030, with respect to the BAU scenario (unconditional).	Updated NDC1 commitment is maintained.
Target Type	Relative emissions reduction.	Relative emissions reduction.	Updated NDC1 commitment is maintained.
Indicator	Percentage of installed capacity from renewable energies.	Percentage of CO_2 equivalent emissions reduced from the energy sector by 2050.	Updated NDC1 commitment is maintained.
Sector	**LULUCF**		
NDC	**NDC1**	**Updated NDC1**	**NDC2**
Description of the commitment	• Unilateral contribution to increase carbon sequestration capacity by 10%, through reforestation and restoration activities in protected areas, with respect to the 2050 reference scenario. • Supported contribution of 80% increase in carbon sequestration capacity with respect to the 2050 reference scenario.	Panama is committed to forest restoration of 50,000 hectares nationwide, which will contribute to carbon sequestration of approximately 2.6 million tCO_2eq by 2050.	Updated NDC1 commitment is maintained.
Baseline Year	BAU	NA	Updated NDC1 commitment is maintained.

Target Year	2050.	2050.	Updated NDC1 commitment is maintained.
Target Value	Increase of carbon sequestration capacity by 10% (unconditional); Increase of carbon sequestration capacity by 80% (conditional).	Forest restoration of 50,000 hectares (unconditional).	Updated NDC1 commitment is maintained.
Target Type	Relative emissions reduction.	Relative emissions reduction.	Updated NDC1 commitment is maintained.
Indicator	Percentage increase in absorption capacity.	Number of hectares restored in the forestry sector.	Updated NDC1 commitment is maintained.
Sector	**Agriculture**		
NDC	**NDC1**	**Updated NDC1**	**NDC2**
Description of the commitment	Not included	By 2050, 130,000 hectares of degraded land will have been restored under agroforestry and silvopastoral systems, to the extent of international support received.	Updated NDC1 commitment is maintained.
Baseline Year		2020.	Updated NDC1 commitment is maintained.
Target Year		2050.	Updated NDC1 commitment is maintained.
Target Value		Restoration of 130,000 hectares of degraded land (conditional).	Updated NDC1 commitment is maintained.
Target Type		Relative emissions reduction.	Updated NDC1 commitment is maintained.
Indicator		Number of hectares restored under agroforestry and silvopastoral modalities.	Updated NDC1 commitment is maintained.
Sector	**Coastal and Marine Systems**		
NDC	**NDC1**	**Updated NDC1**	**NDC2**
Description of the commitment	Not included	Not included	By 2028, Panama will have increased mangrove cover and/or restored 1,800 hectares nationwide, representing 210 $ktCO_2eq$ sequestered (based on financial support received).
Baseline Year			2024.
Target Year			2028.
Target Value			Increased coverage and/or restoration of 1,800 hectares of mangrove cover (conditional).
Target Type			Relative emissions reduction.
Indicator			Number of hectares of mangrove restored.

Source: prepared by the author based on information from Panama's NDC1, Updated NDC1 and NDC2.

LTS Panama

In 2024 the country presented its LTS, which includes the study of 3 possible scenarios regarding the balance of GHG emissions to 2050, including the evolution of emission reduction policies implemented in the national territory. The three scenarios evaluated are described in *Figure 2.*

Figure 2. Scenarios proposed by the ELP Panama.

Trend scenario (E1): emissions and energy consumption increase at the rate of economic growth in the country. Considers existing actions already implemented before 2022.

Net-zero emissions scenario in 2050 (E2): considers that the transition and decarbonization policies and strategies decided or adopted by 2024 (but not yet implemented) are applied.

Carbon Negative Scenario with additional actions (E3): considers additional measures implemented by 2050. E3 is the most ambitious of the study and seeks to identify possible decarbonization options that will maintain Panama as a carbon negative country. This scenario is based on E2 and differs from it in the timetable for implementing the measures, rather than their scopes.

Source: prepared by the author based on information from Panama's LTS, 2024.

The study concludes that it is possible to reach 2050 as a carbon negative country; however, in the three scenarios resulting from the study, this condition is lost by 2027 at the latest, which translates into the need to accelerate the implementation of decarbonization actions.

The main conclusions of Panama's LTS are as follows:

It is possible to meet scenarios E2 and E3 only under a sharp reduction in energy consumption relative to BAU[1].

Electricity generation as the electrification of end uses plays a key role in decarbonization. Removing fossil fuels from electricity generation is not only a necessity for decarbonization but also allows increasing the energy independence of the Republic of Panama.

A reduction of GHG emissions not linked to energy consumption is required as soon as possible.

The transport sector needs to make a major transformation in the electrification of fleets and the organization of more efficient transport. The development of electromobility is key to decarbonization.

The LULUCF sector is key to achieving both carbon neutrality and carbon negativity. There is a need to increase the level of knowledge regarding emissions from the LULUCF sector, ideally through a robust information system to reduce the level of uncertainty about forest carbon sinks. Such a system should assess carbon sequestration in biomass, but also in soils that have a high sequestration potential.

It will be necessary to increase the ambition of the upcoming NDCs to achieve the decarbonization targets.

[1] BAU = *Business as Usual*. The term has been used to describe a scenario that assumes that there are no additional policies beyond current ones and that socioeconomic development patterns are consistent with recent trends (IPCC, 2023).

Other relevant measures to achieve decarbonization include raising awareness among the population, businesses and policy makers, early transforming actions and the implementation of financial mechanisms.

ENREDD+

The development of a National REDD+ Strategy is one of the necessary requirements for countries to be eligible for results-based payments in the framework of REDD+ under the UNFCCC. Panama's progress in meeting these requirements is detailed as follows: (1) the ENREDD+ was developed and submitted on July 1, 2022, but implementation has not started; (2) the Forest Reference Level (FREL) is under development and is expected to be ready in early 2025; (3) the National Multipurpose Forest Monitoring System is already in place and is awaiting formalization; (4) and the Safeguards Information System (SIS) has a report on the SIS Update for REDD+ in Panama, but its implementation has not yet begun. Additionally, the country is defining the possible relationship between REDD+ under the UNFCCC and carbon markets.

Box 2 - Relevance to the Paris Agreement and the Panama's National Carbon Market Roadmap:

The MNCP seeks to facilitate compliance with the country's climate commitments established through the NDC and Panama's LTS. In this sense, the MNCP should promote mitigation actions in the most ambitious sectors, favoring the implementation of these commitments. In addition, it is expected that the MNCP will facilitate the development of those mitigation actions that require greater effort through the use of international carbon markets such as the cooperative approaches of Article 6. Meanwhile, the ENREDD+ should be taken into consideration when defining the rules of participation of the forestry sector under the carbon market, especially for conservation and sustainable management activities.

1.3. Panama's participation and experience in international carbon markets

The following section presents an overview of Panama's participation in international carbon markets, specifically in the CDM and the VCM.

1.3.1. Kyoto Protocol's Clean Development Mechanism

Panama ratified the Kyoto Protocol through Law 88 of November 30, 1998, accepting the implementation of the flexibility mechanisms included in said Protocol, specifically the CDM, the only one applicable to developing countries.

The introduction of Article 6.4 mechanism of the Paris Agreement seeks to provide continuity to the CDM by building on existing structures and lessons learned. This mechanism allows for the transition of CDM projects under certain conditions, including by submitting a transition request before December 31, 2023. In the case of Panama, out of a total of 10 projects eligible for transition, 6 made the request and are detailed in *Table 4*.

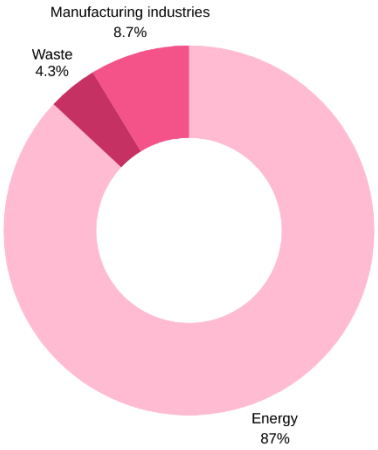
Box 3 - CDM in Panama

The country has other regulations that promote CDM participation, such as Law No. 45 of August 4, 2004, and Executive Decree No. 45 of June 10, 2009, which establish a system of incentives for the promotion of renewable energy projects.

In this context, a total of 23 projects were registered under the CDM Executive Board, distributed among the energy industry, waste management and disposal, and manufacturing industries.

Graphic 2 shows the distribution of projects according to the sector to which they belong.

Graphic 2. Projects in Panama participating in the CDM by sector.



Source: prepared by the author based on information from the CDM registry.

The Government of Panama, through its Designated National Authority (DNA) for the A6.4M, shall issue a transition approval for each of these 6 projects before December 31st, 2025, to make it effective.

Further details regarding the transition process from CDM to Article 6.4 mechanism will be presented in *Section 3* of this document.

Table 4. Eligible projects in Panama that submitted CDM transition request to Article 6.4.

Project number	Project name	Methodology	CDM estimated annual GHG emission reductions	Sector
8364	Toabré Wind Farm	Current CDM	372,657 tCO_2eq	Energy
0133	Project for the Refurbishment and Upgrading of Macho de Monte Hydropower Plant	Replace CDM with Methodology 6.4	4,931 tCO_2eq	Energy
0135	Project for the Refurbishment and Upgrading of Dolega Hydropower Plant	Replace CDM with Methodology 6.4	7,715 tCO_2eq	Energy
10329	Pando and Monte Lirio Hydroelectric Plants	Current CDM	232,627 tCO_2eq	Energy
0081	Los Algarrobos Hydroelectric Project	Replace CDM with Methodology 6.4	16,953 tCO_2eq	Energy
5960	Bajo Frío Hydro Power Project	Current CDM	151,560 tCO_2eq	Energy

Source: prepared by the author based on the list of CDM activities requested for the transition to the Article 6.4 mechanism, UN Climate Change Secretariat.

In addition, the Article 6.4 mechanism allows those interested in participating to request "prior consideration", whereby they demonstrate that they have considered the potential benefits of the mechanism before proceeding. To do so, they must submit a notice of prior consideration within 180 days from the date of commencement of the project activity determined in accordance with Article 6.4 activity standard for projects. In the case of Panama, 4 projects submitted the notification, detailed in *Table 5*.

Table 5. Notifications of prior consideration in Panama.

Host country	Date of presentation	Project title	Sector	Estimated GHG reductions / removals
Panama	June 25, 2024	Chupampa Solar	Energy	13,000 tCO_2 eq
Panama	June 13, 2024	Green Engineering - Ecological and sustainable wastewater treatment with CO_2 sequestration	Waste	214 tCO_2 eq
Panama	April 22, 2024	Hydroelectric Hidro Burica Project	Energy	120,000 tCO_2 eq
Panama	April 3 2024	Cattlemen seeking to conserve	Forestry	1,000 tCO_2 eq

Source: prepared by the author based on the list of projects that have submitted the notification of prior consideration under the mechanism of Article 6.4, UN Climate Change Secretariat.

1.3.2. Voluntary Carbon Market

Panama, through the Climate Change Directorate (DCC, for its acronym in Spanish) of MiAMBIENTE, formally initiates the development of the MNCP in 2020. During this development, the need to establish a regulatory framework with clear rules and procedures to legislate carbon and its commercialization has become evident.

While the country advances in the establishment of such regulatory framework, there are projects developed in the national territory that participate or have participated in the VCM, regardless of any decision of the State. *Table 6* shows a non-exhaustive list of the projects participating in the VCM mapped by MiAMBIENTE. A more detailed version of this table can be found in the *Annexes* section.

Table 6. Projects developed in Panama participating in the VCM.

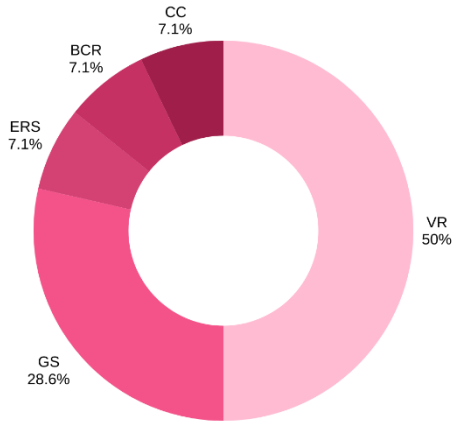
Name	ICM	ID	Location	Issued	Retired	Type
REDD+ Emberá Wounaan	BCR	PA – 22 – 14 - 001	Darién (Comarca Emberá Wounaan)	-	-	AFOLU
Waste handling and disposal	CC	92	Panamá	**518,237**	**6,449**	Waste handling and disposal
Las Delicias	ERS	002	Bocas del Toro	-	-	Reforestation
ACP Sustainable Forest Cover Establishment Project	GS	3421	Panamá	-	-	A/R
CO2OL Tropical Mix	GS	2940	Veraguas, Darién, Chiriquí, Bocas del Toro, Panamá	**3,189,791**	**1,874,376**	A/R
Panama Reforestation Services ARR	GS	11899	Darién, Panamá Oeste	**455,670**	**14,495**	A/R
Panasolar Photovoltaic Project	GS	3556	Coclé	-	-	Electricity – Solar Therm

Azuero Reforestación Colectiva (ARC)	VR	5059	Los Santos	-	-	AFOLU
Conservation of Panama Forests - Reduction of GHG Emissions from Deforestation. Grouped Project	VR	1881	Bocas del Toro, Chiriquí, Coclé, Colón, Panamá, Los Santos, Veraguas	-	-	AFOLU
Cuango Farm, Afforestation Colon, Panama	VR	4632	Colón	-	-	ARR
Forest Landscape Restoration in Panama	VR	4884	Veraguas	-	-	AFOLU
Ganaderos Y Bosques Azuero: Reforestation of Riparian Areas and Rotational Grazing on Cattle Farms in the Azuero Peninsula, Panama	VR	5180	Los Santos	-	-	ALM; ARR
Generation Forest Group Project	VR	2481	Darién, Colón	**51,317**	**20,936**	AFOLU
Panama Forests Conservation Project Reduction of GHG Emissions Through Deforestation and Avoided Degradation.	VR	2578	Coclé	-	-	AFOLU

Source: prepared by the author, based on information from the Climate Change Directorate of MiAMBIENTE.

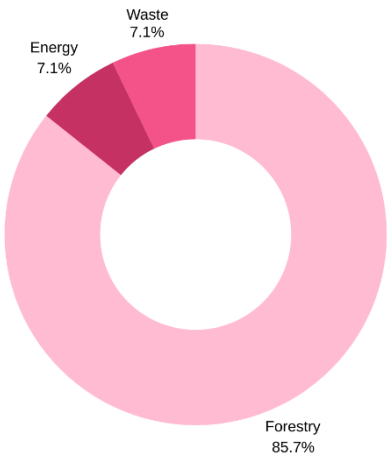
According to the data presented in the previous table, the country has 14 ongoing projects in the VCM, mostly registered under Verra, and belonging to the forestry sector. *Graphic 3* and *Graphic 4* show the summary by crediting mechanism and by sector.

Graphic 3. Projects in Panama participating in the VCM according to Crediting Mechanism.



Source: prepared by the author based on information from MiAMBIENTE.

Graphic 4. Projects in Panama participating in the VCM by sector.



Source: prepared by the author based on information from MiAMBIENTE.

The projects listed are certified or in the process of certification under various independent crediting mechanisms (ICM). Below is a brief description of each of the 5 mechanisms listed in the table.

BioCarbon Registry (BCR) is an independent crediting mechanism belonging to the VCM. The carbon credits generated under this scheme are known as Verified Carbon Credits (VCCs), and it has 87

projects registered and in process. Most of these projects are in the Agriculture, Forestry and Other Land Use (AFOLU) sectors.

Cercarbono (CC) is an independent crediting mechanism belonging to the VCM. The carbon credits generated under this scheme are known as Carboncer, and it has 224 projects registered and in process. Most of these projects belong to the AFOLU and energy sectors.

Ecosystem Restoration Standard (ERS) is an independent crediting mechanism belonging to VCM. The carbon credits generated under this scheme are known as Verified Restoration Unit (VRU), and there are 7 projects registered and in process. All projects belong to the forestry sector.

Gold Standard (GS) is one of the independent crediting mechanisms with the largest participation in the VCM. The carbon credits generated under this scheme are known as Verified Emission Reductions (VER), and there are more than 2,000 registered projects, mostly in the energy sector.

Finally, **Verra (VR)** is another independent crediting mechanism with greater participation in the VCM. The carbon credits generated under this scheme are known as Verified Carbon Unit (VCU), and it has more than 3,000 projects registered and in process, mostly belonging to the forestry sector.

Box 4 - Relevance to the Paris Agreement and the Panama's National Carbon Market Roadmap:

Panama's participation in the CDM generated lessons learned that can be applied to the implementation of the MNCP, such as the importance of having document management processes, the importance of having a work team with installed capacities and the importance of establishing strategic incentives to promote the tool. Regarding the country's participation in the VCM, the number of forestry projects demonstrates the mitigation potential of the sector and reaffirms the need for the government to define clear rules of participation for the forestry sector under the MNCP and international markets.

1.4. Support Received for the MNCP

This section presents information related to international support received by Panama for the development of actions related to the MNCP. It includes projects with a start date in the period 2018 - 2024, for a total of 10 initiatives. The sum of these initiatives yields a total amount of 3,780,902.52 USD, although it should be noted that some of these initiatives include additional activities not related to the MNCP. This information can be seen in more detail in the *Table 7*.

The country also received a great amount of support from the Inter-American Development Bank (IDB) in the form of specialized technical assistance to legally strengthen and implement Panama's National Carbon Market through the analysis of gaps in the legal framework for its effective implementation and concrete proposals and recommendations. This support made it possible to analyze existing legislation, identify gaps, develop regulatory proposals, carry out inter-institutional coordination and respond to consultations on forest carbon ownership.

Table 7. International financial support received for the MNCP.

#	Initiative	Description	Source of financing	Channel	Total in USD	Date	Financial instrument	Status
1	Partnership for Market Implementation (PMI) Panama[2].	Support in implementation of carbon pricing instruments and (1) implementation of the ATE; (2) implementation of the PNRTH; (3) development of MNCP components.	World Bank	Multilateral	2,000,000.00	2024 – 2027 (36 months)	Non-refundable	Has not started execution
2	Second round of Country Dialogue EUROCLIMA+ RE3: Developed and accessible National Carbon Market[3].	Work with national banks and MiAMBIENTE to develop financial schemes that support the development of carbon projects (supply) and the implementation of clean technologies (demand).	Euroclima+	Multilateral	174,721.77	2024 – 2025 (12 months)	Non-refundable	Has not started execution
3	Capacity building for the preparation of the implementation of carbon markets and Article 6 in Latin America[4].	Regional project that seeks to improve technical, institutional and operational capacities for the implementation of Article 6 in Latin America.	Readiness (GCF)	Multilateral	281,202.00	2023 – 2025 (30 months)	Non-refundable	In progress
4	Develop a detailed roadmap for implementing the MNCP in the context of the Paris Agreement.	Develop a roadmap for the implementation of the MNCP in the context of Article 6 of the Paris Agreement and facilitate the development of a Carbon Market Strategy for Panama.	CiACA	Multilateral	50,000.00	2024 – 2025 (9 months)	Non-refundable	In progress
5	Action 2: Establish the regulatory framework for the distribution of blue carbon in the context of the National Carbon Market.	It will allow the country to have a mechanism that provides guidelines for the management of blue carbon and the fair and equitable distribution of its benefits.	Euroclima+	Multilateral	250,000.00	2022 – 2024 (18 months)	Non-refundable	Completed
6	Support for the development of the National Greenhouse Gas Emissions	Adaptation of the Mexico Forestry Protocol to Panama, obtaining the first protocol adapted to	CAF	Multilateral	200,000.000	2023 – 2024 (12 months)	Non-refundable	Completed

[2] The grant includes a total amount of US$2,000,000.00, of which US$1,615,000.00 will be executed directly by the Government of Panama and the remaining US$385,000.00 will be executed by the World Bank.

[3] The total amount of the project is 166,500.00 euros, and the conversion date of December 2, 2024, was used (1 euro = 1.05 USD).

[4] The project has a total amount of US$2,249,616.00, distributed among the countries included in the proposal: Argentina, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua and Panama. The amount was estimated by dividing the total amount of the project among the 8 countries to obtain an estimate.

	Offsetting System of Panama's National Carbon Market.	Panama's national circumstances (Panama's Forestry Protocol for carbon credits from offset).						
7	Consultancy for the development of the new registration and reporting platform for the National Programs Reduce Your Footprint Corporate and Municipal in its Carbon and Water components.	Structure, develop and make available the registration and reporting platform for the Corporate and Municipal RTH Programs in their Carbon and Water components, within the PNTC.	IDB	Multilateral	250,000.00	2023 – 2024 (12 months)	Non-refundable	Completed
8	Operationalize the MNCP to integrate emission reductions and the National Climate Finance Plan.	Support the country in the operationalization of the MNCP, through the hiring of experts for the study of emissions intensity and the development of an emissions index related to the economic sectors, which facilitates the identification of potential demand for the MNCP.	NDC Partnership (PAF - Partnership Action Fund)	Multilateral	74,978.75	2024 (8 months)	Non-refundable	Completed
9	Project for Policy Analysis of Carbon Pricing Instruments (PMR - Partnership for Market Readiness).	Provide support to the government of Panama to explore the different options available to decarbonize the economy through explicit and implicit carbon pricing instruments.	World Bank	Multilateral	500,000.00	2018 – 2021 (36 months)	Non-refundable	Completed
10	Blue Natural Heritage Project	Provide technical support and expertise to the government of Panama to help develop and manage a sustainable national carbon market.	IDB	Multilateral	N/A	2024 (6 months)	Non-refundable	Completed

Source: prepared by the author based on information from the Climate Change Directorate of MiAMBIENTE.

Panama's National Carbon Market

02

2. NATIONAL CARBON MARKET OF PANAMA

Panama has demonstrated a high degree of commitment to climate action through the introduction of instruments and policies, including the development and implementation of the MNCP.

The objective of the MNCP is to drive GHG emission reductions in a measurable, reportable, and verifiable manner to contribute to the fulfillment of the country's climate commitments.

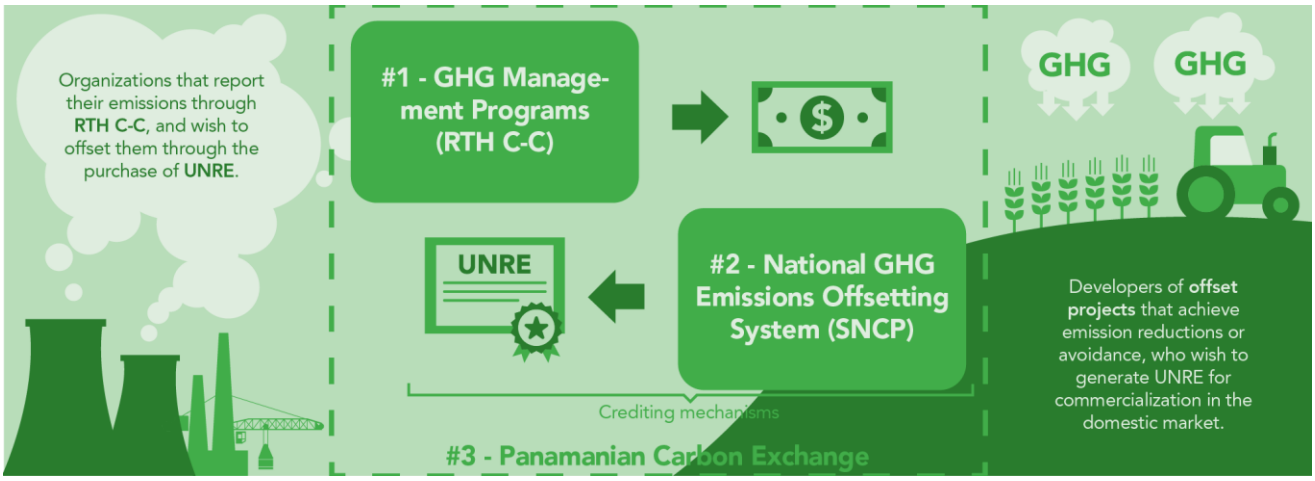
2.1. Functioning of the MNCP

The functioning of the MNCP is based on the interaction of 3 components:

- **National GHG Management Programs** under the framework of the Reduce Your Footprint - Carbon Program. Status: operational.
- **National GHG Emissions Offsetting System of Panama** (SNCP). Status: under development.
- **The Panamanian Carbon Exchange** (BPC). Status: under development.

Figure 3 shows how the 3 components mentioned above are expected to interact.

Figure 3. Scheme of operation of the MNCP.



Source: prepared by the author based on information from the Climate Change Directorate of MiAMBIENTE.

First component: GHG management programs

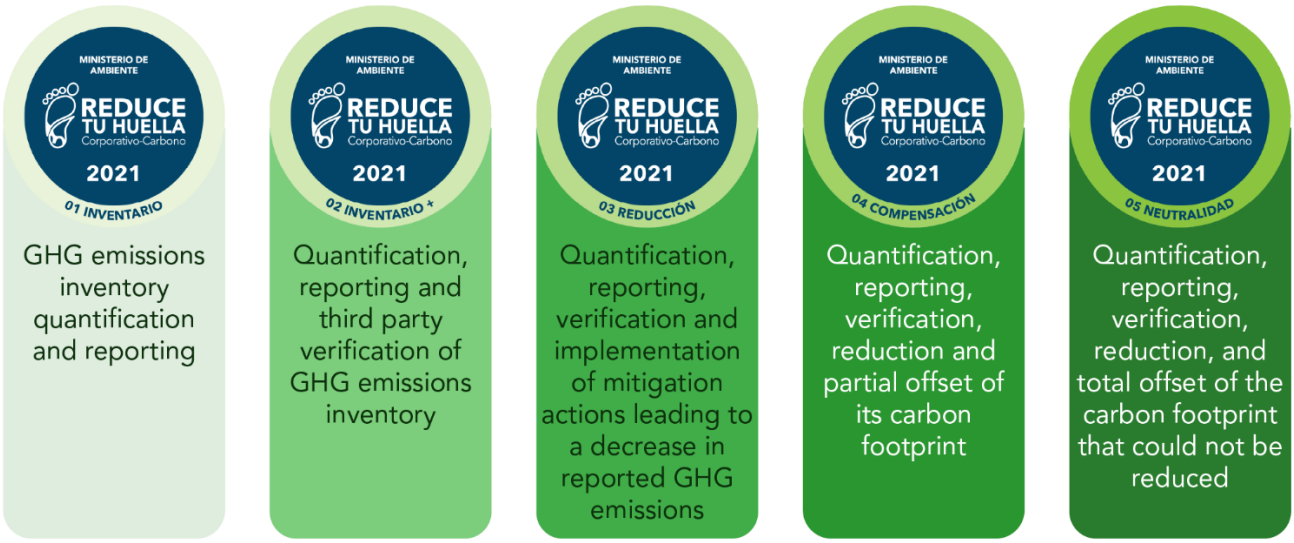
The GHG management programs seek to generate a culture of carbon footprint quantification at a national level and are framed under the Reduce Your Footprint (RTH) Carbon Program. Currently, MiAMBIENTE has three state GHG management programs:

- **RTH Corporate - Carbon (RTH C-C):** voluntary program for carbon footprint management at the organizational level in the Republic of Panama.
- **RTH Municipal - Carbon:** program for the management of the carbon footprint in the municipalities of the Republic of Panama.
- **RTH Products - Carbon:** program for the management of the carbon footprint of products at the national level.

Of the three GHG management programs mentioned above, **RTH C-C becomes the most relevant in the context of the MNCP, as it is considered that this program will represent the initial demand for domestic carbon credits** to be generated under the MNCP. Currently, RTH Municipal - Carbon or RTH Products - Carbon are not considered to be part of the demand component of the MNCP.

Following a standardized process, RTH C-C participating organizations register in the program and gain access to tools that will facilitate the fulfillment of the requirements necessary to obtain the organization's desired recognition. *Figure 4* shows the recognitions in order and some of their requirements.

Figure 4. RTH C-C recognition system.



Source: prepared by the author based on information from the Climate Change Directorate of MiAMBIENTE.

The program also has a "**Top 50 Declaration**", which represents an additional voluntary commitment to harmonize their economic activities with GHG reduction in order to achieve carbon neutrality by 2050.

In this sense, those RTH C-C organizations that aspire to obtain either the recognition of **offsetting, neutrality or compliance with the Declaration**, must do so through the MNCP, formalizing the market demand.

RTH C-C began its implementation in 2021 and is currently in its fourth cycle. In its third cycle (2023) the program had 224 registered organizations, of which 138 had an approved report, accounting for a total of **2,306,684.36 tons of CO_2 equivalent reported.**

Second component: National GHG Emissions Offsetting System of Panama

The SNCP is a system that seeks to meet the demand for carbon credits required by the actors participating in the RTH C-C program and other international actors once the national demand is met.

The SNCP includes all the procedures, rules, and tools necessary for the system to function as planned, among which are:

- The **general SNCP standard**, including the regulatory framework and the definition of rules of participation and operation.
- The **SNCP sectoral standards**, including the rules of participation and approved methodologies for each participating sector of the SNCP.
- The **Registry of Marketable Offset Projects**, including manuals and user guides.
- **Mechanisms for safeguards, grievances, benefit sharing**, and others that comply with the provisions of the Free, Prior and Informed Consent Law.
- Other tools generated to facilitate the operation of the system, such as formats and checklists.

The SNCP is expected to have a standardized process that allows those interested in developing a project for the sale of carbon credits to: (1) register their project, (2) certify it under one of the crediting mechanisms approved under the MNCP, (3) receive approval from MiAMBIENTE, and (4) issue national carbon credits, known as UNRE[5], to be traded under the MNCP or in international markets when applicable.

At the moment, the SNCP has not started its operation, and its step-by-step process has not been formally defined. However, as previously indicated, MiAMBIENTE has selected some international carbon market crediting mechanisms to operate in coordination with the MNCP. Thus, projects aspiring to participate in the MNCP must be certified using methodologies approved by MiAMBIENTE, belonging to one of the following mechanisms:

Figure 5. Crediting Mechanisms prioritized by MiAMBIENTE.

Source: prepared by the authors based on information from the Climate Change Directorate of MiAMBIENTE.

In order to advance in the development of the SNCP, MiAMBIENTE has relied on technical exchanges with international entities, including technical exchanges with the California Air Resources Board (CARB) team. These exchanges with CARB allowed MiAMBIENTE to select the crediting mechanisms listed above, based on CARB's experience and the participation of these mechanisms in the VCM.

Third component: Panamanian Carbon Exchange (BPC)

The BPC is envisioned as a trading platform for the purchase and sale of GHG emission reduction units generated by projects under the SNCP and other approved international market schemes.

The BPC shall generate a link between the supply and demand of the carbon market in question, allowing: (1) the registration of such actors, (2) the visualization of project information and the

[5] UNRE = National Emission Reduction Units. These are the carbon credits issued under the MNCP scheme.

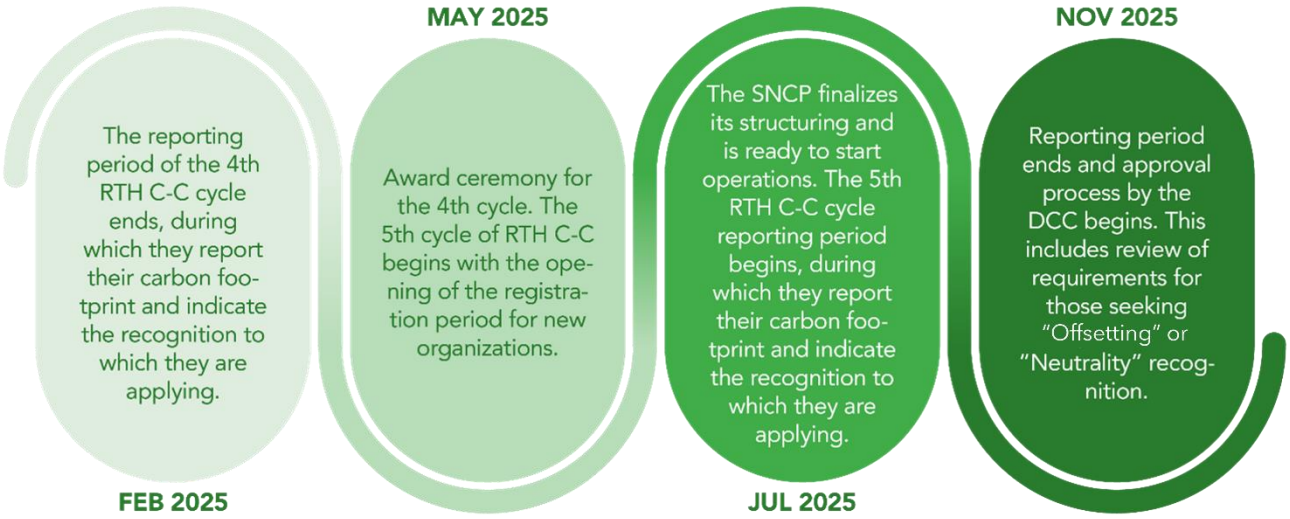
amount of carbon credits or UNRE available for sale, and (3) other functionalities that allow the purchase and sale process to be carried out with the greatest transparency and security possible.

The operation and processes of the BPC have not yet been formally defined. Currently, the BPC is under development by an entity external to MiAMBIENTE.

2.2. Start of operations of the MNCP

Of the three components of the MNCP, only RTH C-C is operational, while the SNCP and the BPC have not started operations. *Figure 6* shows a timeline with estimated dates for the operationalization of the SNCP and the advancement of some aspects of RTH C-C. The timeline does not include the BPC because its development is being led by an external entity, but it is expected to start operations as soon as possible. The *Section 3* includes more details regarding the activities necessary for the operationalization of the MNCP.

Figure 6. Timeline of operationalization of MNCP components.



Source: prepared by the author based on information based on information from the Climate Change Directorate of MiAMBIENTE.

Proposed Roadmap for the MNCP

03

3. PROPOSED ROADMAP FOR THE MNCP

This section of the document aims to present a series of recommended activities to advance the implementation of the MNCP. These activities will be classified according to 3 variables:

- The **theme** on which the activity is based.
- The estimated **implementation time** for the activity.
- The recommended priority level to be assigned to each activity, whether **high**, **medium,** or **low**.

The themes under which the activities will be classified are:

Regulations: include all activities related to the creation, updating and modification of regulatory instruments to facilitate the implementation of the MNCP.

Strategic approaches: include all activities related to MNCP strategic planning and high-level decision making.

Operational issues: include all activities related to the elements that will facilitate the implementation and operationalization of the MNCP.

Organizational structure: includes all activities related to the distribution of roles and responsibilities in the work team leading the MNCP.

Capacities: include all activities related to capacity building of stakeholders related to the MNCP.

Sectoral approach: includes all activities related to Panama's INGEI sectors and their relationship with the MNCP.

Depending on the implementation time, they will be divided into **short-term activities**, i.e., those to be carried out in **6 months or less**; **medium-term activities**, i.e., those to be carried out in **more than 6 months, but in equal or less than 2 years**; **long-term activities**, i.e., those to be carried out in **more than 2 years.**

As for the classification according to priority, the *Table 8* sets out the criteria used.

Table 8. Classification according to priority.

Prioritization	What does it imply?
High	The action has a significant impact on the main objectives of the MNCP. It is technically and financially feasible with current or available resources in the short term. Immediate implementation is recommended to take advantage of time-limited opportunities.
Medium	The action has a medium impact on the objectives of the MNCP. May require adjustments or additional preparation for implementation. Implementation is recommended but does not compromise the success of the project.
Low	The action has a low impact on the main objectives of the MNCP. May face technical, financial or administrative challenges. Does not require immediate action.

Source: prepared by the author.

3.1. Activities included in the MNCP Roadmap

Figure *1*, included in the executive summary, shows a summary of the activities proposed in the Roadmap. *Table 9* shows these activities in more detail, classified according to the criteria described above.

Table 9. Activities included in the MNCP Roadmap.

High priority **Medium priority** **Low priority**

Subject	Deadlines					
	Short term **Less than or = 6 months**		**Medium term** **More than 6 months and less than or = 2 years**		**Long term** **Greater than or = 2 years**	
	Includes preparatory activities for the establishment of the MNCP.		**Includes start of operations of the MNCP and other strategic activities.**		**Includes activities for the improvement and specialization of the MNCP.**	
	Activities	**Actor**	**Activities**	**Actor**	**Activities**	**Actor**
5.1.1. Regulations	Establishment of carbon ownership and the right to its enjoyment and use.	Forestry Directorate (DIFOR, for its acronym in Spanish)	Approval of the Framework Law on Climate Change, including market issues.	DCC	Review and update of the MNCP regulations (if necessary).	DCC
	Development of a new Executive Decree for markets to unify concepts, clarify structure and processes of the MNCP.	DCC				
	Repeal of Executive Decree No. 142 of December 9, 2021.	DCC				
	Define the legal nature and treatment of carbon credits as a financial instrument.	DCC + MEF				
5.1.2. Strategic approaches	Definition of the scope of the MNCP and alignment with national and international policies (VCM, NDC, Article 6, CORSIA).	DCC + high level	Definition of registry to be used for Article 6.2.	DCC	Other strategic definitions for the proper functioning of the MNCP (if necessary).	DCC
			Development of National Market Strategy	DCC		
5.1.3. Operational Issues	Enable the Registry of Marketable Offset Projects	DCC	Start of the first phase of the MNCP focused on domestic commercialization.	DCC	Start of the second and third phase of the MNCP, focused on the introduction of mandatory demand and international commercialization, respectively.	DCC
	The preparatory phase of the MNCP continues, focusing on capacity building, establishment of structure, regulatory framework, and governance.	DCC	Development of SNCP standard with processes and system rules.	DCC	Definition of rules to prioritize new crediting mechanisms under the MNCP.	DCC
			Definition of infrastructure for implementation of Article 6.	DCC		
			Establishment of Panama's NDC	DCC		

			improvement process for mitigation goals.			
			Integration of the National Banks to promote the development of carbon projects.	DCC		
			Review existing virtual sector platforms and evaluate opportunities for interaction.	DCC + key actors: DIFOR, National Energy Secretariat (SNE, for its acronym in Spanish), Ministry of Agricultural Development (MIDA, for its acronym in Spanish)		
5.1.4. Organizational structure	Establish a formal organizational structure that clarifies roles and responsibilities.	DCC	Strengthen the technical team by hiring human resources.	DCC		
	Continued training of the technical team.	DCC				
5.1.5. Capabilities			Establish a capacity building program for MNCP participants.	DCC + Academia	Establish a structure for the creation of national VVBs.	DCC + General Directorate of Standards and Industrial Technology (DGNTI, for its acronym in Spanish)
					Capacity building for VVBs and project developers.	DCC + Academia
5.1.6. Sectoral approach	Define processes and infrastructure for the implementation of A6.4.	DCC + key actors	Quantification of NDC goals to facilitate alignment with MNCP.	DCC + key actors	Establish through a regulatory instrument to be defined, sectoral GHG budgets allocated to relevant sectors, such as the energy sector and others.	MiAMBIENTE + key actors
			Development of sectoral standards to define rules for sectoral participation.	DCC		
			Define the approach to energy incentives within the framework of the MNCP.	DCC + SNE, National Public Services Authority (ASEP, for its acronym in Spanish)		
			Define the approach to forestry incentives within the framework of the MNCP.	DCC + DIFOR		

Source: prepared by the author.

The following section presents a detailed description of each of these activities included in the previous table.

3.1.1. Activities related to Regulations

Activity #1 - Establish carbon ownership - short term - high priority

Clarity regarding the ownership of carbon credits can impact the perception of the integrity of these credits and possibly their value in the market, even compromising investment possibilities in the market (ABD, 2023). In Panama, the ownership of carbon and, therefore, the ownership of credits is not clearly defined.

For this reason, MiAMBIENTE submitted a formal consultation to the office of the Solicitor General in February 2024 regarding whether forest carbon is property of the State and whether it can be harvested through the harvesting modalities included in Law No. 1 of February 3, 1994. The summary of the answers obtained is presented in *Table 10*.

Table 10. Summary of responses on carbon ownership, Administrative Solicitor General.

Summary of Relevant Points - Carbon Ownership Response by Solicitor General Rigoberto Gonzalez, March 2024
Question: Is the carbon captured, absorbed and removed by forests the property of the State?
Answer: Regarding the ownership of carbon, the accessory follows the principal, which allows the assertion that the carbon reduced or fixed by the forest resource also corresponds to the State's patrimony.
Question: Can this carbon be used under the modalities established in Article 27 of Law 1 of February 3, 1994, for the purpose of capturing resources?
Answer: An administrative concession granted for forest exploitation does not grant the right to generate carbon credits allowing the exploitation of carbon sequestration.
Other observations: It is up to MiAMBIENTE to recognize that forests are State heritage, as well as to recognize carbon fixation and sequestration as an environmental service of the natural forest resource, which also corresponds to State heritage.
Other observations: It is recommended that MiAMBIENTE promote a law in this regard, establishing the procedure for granting concessions for this natural forest asset, with the State being able to reserve the right to grant these, other than those authorized directly for forest harvesting.

Source: Solicitor General's Office, 2024.

As indicated in the previous table, **it will be the responsibility of MiAMBIENTE to recognize, by means of a formal legal instrument, forest carbon as part of the State's patrimony, and it will also have to formally establish the procedure for forest carbon harvesting**. Specifically, this responsibility will be led by the Forestry Directorate of MiAMBIENTE, the entity in charge of administering the national forest patrimony.

The result of this will be a consensual and public legal instrument that clearly establishes carbon ownership and enables the establishment of processes for the development of forestry projects on lands with different types of tenure. To date, the Forestry Directorate and the DCC have advanced with some technical meetings to discuss the issue, and it is expected to have results before the end of the first half of 2025.

This activity is a high priority since the definition of carbon ownership and the processes for its use are essential for integrating the forest sector into the MNCP.

Activity #2 - Develop a new MNCP Executive Decree - short term - high priority

For the implementation of the MNCP, it will be necessary to generate a solid legal basis that provides certainty to stakeholders and interested parties.

Although there is an existing Executive Decree No. 100 and Executive Decree No. 142, the need to generate a new regulatory tool that clarifies processes, unifies concepts and establishes the level of involvement of relevant stakeholders has been identified. To this end, the creation of a new Executive Decree is proposed, and includes:

Unified technical definitions for the MNCP, including concepts such as carbon credits, international crediting mechanisms, Validation and Verification Bodies (VVBs), and UNRE.

Clarification of the MNCP's operational structure, including its interaction with the National Reduce Your Footprint Program (PNRTH) and the registries included in the National Climate Transparency Platform (PNTC), such as the National Registry of Actions (ReNA) and the National Emissions Registry (ReNE).

Definition of mandatory RTH C-C as part of the MNCP demand, establishing the transition from voluntary to mandatory program.

Definition of mandatory registration in the Registry of Marketable Offset Projects for those projects aspiring to issue carbon credits to be traded in the national or international carbon market.

Establishment of an SNCP standard through which guidelines for participation in the SNCP and/or other markets are defined, including the processes necessary to participate in Article 6 cooperative approaches.

Establishment of sectoral standards under the SNCP, which define the sectoral guidelines for the participation of projects under the MNCP.

Creation of working teams within the framework of the MNCP, including the elimination of the Committee of Experts (created by ED No. 142), replacing it with a technical team from MiAMBIENTE and other related entities.

Establishment of roles and functions of actors under the MNCP, including actors under RTH, SNCP and BPC.

Define carbon markets as a tool to comply with the NDC and the Panama's LTS. Additionally, establish MiAMBIENTE as the leading entity in carbon market issues and Article 6.

In addition, with the development of the new Executive Decree, it is proposed to repeal Executive Decree No. 142 of December 9, 2021, which will be replaced by the new decree.

It is expected that this new regulation will provide greater clarity regarding the MNCP, promoting transparency and reliability, and ensuring that stakeholders understand their role, processes and participation requirements. There is currently some progress regarding the possible content of this Decree, but it will be necessary to finalize its preparation and complete the approval process, consultation period and publication. MiAMBIENTE is expected to have an approved draft Decree before the end of the first quarter of 2025. This activity has a high priority, as it is an essential activity to move forward with the MNCP.

Activity #3 - Define the legal nature and treatment of carbon credits in Panama - short term - medium priority

Carbon credits can take a variety of legal forms and can be defined as intangible property, private property, financial instruments or contractual rights, among others. The nature of the credits defines the rights to generate, own and use the credits, and may even define how they are accounted for and taxed (ADB, 2023).

In Panama the legal nature of carbon credits has not been defined, but approaches have been made with the Ministry of Economy and Finances (MEF) in order to define it. One of the possibilities is that they could be recognized as commodities, which would have implications such as higher taxes at the time of commercialization. It is recommended to resume discussions with the MEF in the short term (first half of 2025), as the definition of the nature of carbon credits will be necessary when establishing contracts for the development of carbon projects. It is also recommended that the Superintendency of the Stock Market of Panama be included in these conversations.

Activity #4 - Approve the Framework Law on Climate Change - medium term - high priority

Currently, MiAMBIENTE, through the DCC, is in the process of drafting a proposed Framework Law on Climate Change to be submitted to the National Assembly of Panama for approval. This proposed law has among its objectives to contribute to climate change mitigation, and includes a specific chapter on carbon pricing instruments, which is expected to serve as a legal basis for the MNCP. The chapter on carbon pricing instruments includes two articles described as follows:

Article 36. The Ministry of Environment is empowered to promote measurable, reportable, and verifiable greenhouse gases emission reductions to contribute to the fulfillment of the long-term National Strategy and green transition and the Nationally Determined Contributions. The Ministry will be in charge of regulating standards, norms and procedures necessary for the registration and management of market-based carbon pricing instruments.

Article 37. The Ministry of the Environment shall be the competent authority to administer, establish and manage the National Carbon Market, promote its linkage with international mechanisms, including those established in Article 6 of the Paris Agreement, and processes for reporting operations in the Voluntary Carbon Market, reserving the power to update them according to international best practices and the priorities of the country.

These two articles seek to grant MiAMBIENTE competence to manage carbon pricing instruments, including carbon markets. Likewise, it will allow MiAMBIENTE to establish the rules of interaction of the MNCP with international markets.

The objective of having a law that refers to the carbon market is to have a solid legal tool that will serve as a general framework for the rest of the regulations related to the MNCP. Although this activity is a high priority, due to timing and processes, it is likely to be completed in the medium term (last quarter of 2025).

3.1.2. Activities related to strategic approaches

Activity #5 - Define the scope of the MNCP and alignment with other policies - short term - high priority

The MNCP is a complex tool that impacts a wide variety of sectors and stakeholders. For this reason, it is necessary to define its scope in terms of:

Types of organizations that will be required to participate in the MNCP. As previously established, the demand for the MNCP will be composed of RTH C-C participating organizations, but so far, their participation has been voluntary and does not include some of the largest organizations in the country. For the program to meet its climate change mitigation objective and ensure demand for the MNCP, it is proposed to integrate a mandatory demand. This measure would imply that certain organizations that exceed a specific threshold of CO_2 equivalent emissions must register in the program, report their emissions and offset them through the MNCP.

Sectors to be promoted under the SNCP. The supply-side component of the MNCP may include projects developed in various sectors, but each sector has its complexities. For example, in the national context, the forestry sector has great potential for the development of mitigation projects, but the ownership of carbon and the rules of participation for the sector have not yet been defined, which complicates its immediate integration into the SNCP.
On the other hand, the promotion of some sectors under the national scheme and others under international schemes is strategic, since the country can take advantage of international financing to finance those projects with higher implementation barriers and maintain those that are easier to implement for the national market.
In addition, the definition of which sectors will be promoted under the SNCP, and which sectors will be promoted at the international level may impact the fulfillment (or not) of national climate commitments, so it is recommended that this be defined by decision makers related to the MNCP and the impacted sectors.

Role of the BPC. So far, it has been defined that the BPC will be a virtual platform that facilitates the purchase and sale of UNRE; however, it has not been defined how the BPC will function, whether participation in the BPC will be mandatory or how it will be integrated with the rest of the components of the MNCP. The role and scope of the BPC will need to be defined by decision makers.

Interaction with other national policies. Panama has climate policies that influence the MNCP, such as Panama's LTS, the NDC and the ENREDD+. In the case of the LTS and the NDC, both instruments include climate commitments and goals at the country level, so the MNCP can be a means to facilitate compliance, but at the same time, it can put it at risk by commercializing mitigation results necessary for the country.
In the case of the ENREDD+, the MNCP is mentioned as an enabling condition for the strategy; however, it has not been defined in what sense it will enable it. It will be necessary to define how these instruments interact with the MNCP by decision-makers in the related sectors, so that the national climate policy scenario is clarified.

Engagement with other international markets. The MNCP may interact with other international carbon market schemes, such as Article 6 cooperative approaches, CORSIA and VCM. To ensure that the MNCP meets its national objectives, generates economic flows while maintaining high environmental integrity, it will be necessary to define how the MNCP will interact with each of these markets.

Other strategic definitions, such as costs, tariffs, benefit sharing and processes. Currently, the MNCP has only Executive Decree No. 100 and Executive Decree No. 142, which means that none of its processes have been formally defined. The strategic definition of these issues will be necessary to allow the implementation of the MNCP to take place. At the moment, DCC has expressed interest in having complementary processes under the MNCP and is planning to have (1) a grievances and complaints system; (2) a benefit sharing system; (3) and a complementary environmental and social safeguards system. All these systems are still being planned and will need to be defined under this activity.

It is recommended that these decisions be made by MiAMBIENTE in conjunction with other relevant stakeholders. To this end, it is recommended that high-level roundtables be organized in the short

term (first half of 2025), to define the scope of the MNCP and its alignment with other national policies.

Activity #6 - Advance compliance with participation requirements under Article 6.2 and 6.4 - short and medium term - medium and high priority

Participation in Article 6 market-based approaches requires following a national preparation process through which certain participation requirements are met. Panama collaborates on an ongoing basis with the Regional Collaboration Centre for Latin America (RCC Latin America) of the UN Climate Change Secretariat by benefiting from training, taking part in technical exchanges, and coordinating international support to prepare and advance in the corresponding participation requirements. *Table 11* shows the status of Panama in terms of compliance with these requirements.

Table 11. Status of Panama regarding the participation requirements of Articles 6.2 and 6.4.

Requirement	Applicable to	Guiding questions	State of readiness	Comments
Being a Party to the Paris Agreement	A6.2 / A6.4	Has the Paris Agreement been ratified?	Implemented	Law No. 40 of Monday, September 12, 2016, approving the Paris Agreement in Panama. No Actions are required.
Preparation, communication, and maintenance of an NDC	A6.2 / A6.4	Has the latest NDC been communicated? If yes, does your country plan to submit a NDC3.0 by 2025?	Ongoing	Panama submitted both its LTS and its most recent NDC2 in 2024, but neither report specifies how Panama's participation in Article 6 will contribute to the implementation of these instruments. It is currently progressing in the preparation of its NDC3,0 for submission in 2025.
Arrangements in place for authorizing the use of ITMOs towards achievement of NDC2 pursuant to Article 6.3	A6.2 / A6.4	Has an authority been designated to grant ITMO authorization, and has the process for granting such authorization been established, including the relevant procedural, legal or other related provisions?	Not Started	The country has not begun to define authorization processes but is working on regulatory tools to formalize the legal basis of the carbon market.
Arrangements in place that are consistent with this guidance and relevant CMA decisions for tracking use of ITMOs	A6.2	What is your preference for ITMO tracking: a) Use of your National Registry b) Use of the Secretariat's International Registry, or c) Use of another available Registry? Is the use of this registry established by any national regulation?	Not Started	Panama has not yet defined the registry to be used for ITMO monitoring, however, the country has a Registry of Marketable Offset Projects that will operate under the MNCP.
Most recent National Inventory Document	A6.2	Has your country provided the most	Implemented	Panama presented its National Inventory Document in June 2024, as

submitted in accordance with decision 18/CMA.1		recent national inventory?		part of its Biennial Transparency Report.
Contribution to the NDC implementation, LT-LEDS (if submitted) and to the long-term objectives of the Paris Agreement.	A6.2 / A6.4	Has your country identified (including) the intention to use Article 6 in the context of your NDC?	Not Started	Panama is working on its NDC3 and it is recommended that the country include clear information on its intention to use Article 6 mechanisms.
		Have you considered the contribution of Article 6 to the National Low Emission Development Strategy (LT-LEDS) submitted to the UN Climate Change Secretariat?	Not Started	Although Panama submitted its LTS in June 2024, the country needs to describe how it plans to use Article 6 to contribute to its Low Emission Development Strategy during its update process.
		What are the mitigation actions contained in the NDC that are considered a priority and could be implemented under Article 6 and/or national market mechanisms?	Not Started	Panama should clarify what types of mitigation activities (projects and/or programs) will be approved and what mitigation outcomes will be authorized for international transfer, and whether any conditions will be attached to these activities.
Designated National Authority (DNA)	A6.4	Have you designated and communicated a Designated National Authority for the A6.4 Mechanism?	Ongoing	Panama formally notified the Supervisory Body (SBM) of its Designated National Authority (MiAMBIENTE). The development and formalization of an institutional framework defining roles, responsibilities and procedures for approval of activities and other functions to be performed by MiAMBIENTE as Panama's DNA for A6.4 is currently pending.
Types of Mitigation Activities considered to Approve	A6.2 / A6.4	Has your country established an approach for analyzing eligible mitigation activities for A6.2 and A6.4? Are there specific eligibility criteria or conditions for approval? Does your NDC prioritize any sectors or activities?	Not Started	Panama should describe the types of activities (projects or programs) it plans to approve under Article 6.4, including details on their scope, scale, and the sectors they target. These activities should align with national priorities and GHG reduction strategies, contributing to the NDC and/or LT-LEDS.

Source: MiAMBIENTE, 2024.

Of these requirements, two are highlighted by specific actions included in the roadmap, described below.

Define processes and infrastructure for the implementation of Article 6.2 - medium term - high priority

Box 5 - Authorization under Article 6.2

Authorization is one of the key elements of the implementation of Article 6. Authorization is granted by the parties/countries participating in the cooperative approach and allows mitigation outcomes to be used to achieve the NDCs or other international mitigation purposes (OIMP).

The use of OIMPs to achieve the NDCs will be voluntary and authorized by the Parties participating in the Paris Agreement.

One of the requirements for participation in Article 6.2 is to establish arrangements and processes to provide authorization and facilitate monitoring of internationally transferred mitigation outcomes (ITMOs) use under Article 6.2, including implementation of relevant processes, legislative, infrastructure or other provisions.

With respect to authorization, it is necessary for the country to define which authority will be in charge of providing authorization for the use of ITMOs, what processes should be followed to request and provide such authorization, and processes for reporting and applying the corresponding adjustments.

Box 6 – Guidance on authorization under Article 6.2

During COP29, some clarification was provided on the authorization processes under Article 6.2. There is currently a decision text that details relevant information.

It includes information on the 3 components of an authorization (authorization of the cooperative approach, authorization of internationally transferred mitigation outcomes, and authorization of entities). These 3 components may involve a single consolidated authorization process, or sequential processes that fully and collectively address the information requested.

The decision also details specific information to be included in the authorization, such as a unique identifier of the cooperative approach, the names of the Parties or entities covered by the authorization and the uses covered by the authorization, among others.

In addition, it requests the secretariat to develop and publish a voluntary standardized user-friendly template that each participating Party may use to provide the requested information.

Finally, the document also includes decisions related to changes in the authorization of the use of ITMOs in a cooperative approach, and information related to the transparency of information related to the authorization.

More information is available *here*.

In addition, the country should define the registry to be used for the transfer of ITMOs. There are several registry options, including a national registry developed by the country Party, an Article 6.2 international registry developed and operated by the UN Climate Change Secretariat, or a registry developed by a third party. A comparative summary of the three options is shown in *Table 12*.

Table 12. Comparative summary of registry options for Article 6.2.

Key considerations	Registry options - Article 6.2		
	#1 - National Registry (MNCP)	**#2 - Another registry made available by a third party**	**#3 – Article 6.2 International Registry (UN Climate Change Secretariat)**
Support for other domestic carbon pricing instruments	Countries can design their registry to serve other national policies, as in the case of the MNCP.	Varies, depending on each record.	Limited (may not support tracking of unauthorized mitigation results).
Customization	Countries have full control over the design of the registry.	Varies, depending on each record.	Limited (although a specific section is provided for each Party).
Article 6 Report	Countries must ensure that the registration complies with the requirements of Article 6.	Countries must understand how the information is collected and whether it meets the requirements.	It will allow the automatic filling of the relevant information.
Support/capacity	They require technical capacity and resources to operate.	Countries need to understand how it operates, and the services and assistance provided.	Assistance is provided by the UN Climate Change Secretariat.
Cost	The infrastructure will have to be built from scratch, which implies costs.	It will not be necessary to build the infrastructure from scratch, but it may include costs for the use of the platform. Previous agreement with suppliers.	It will not be necessary to build the infrastructure from scratch, but it may include costs for the use of the platform. Under discussion.

Source: prepared by the author based on information from the UN Climate Change Secretariat.

In Panama, the specific registry to be utilized has not yet been determined. However, it is important to note that the country is actively working on implementing the MNCP, which will require a functional registry. Consequently, the establishment of the Registry of Marketable Offset Projects has been initiated to support this operational need.

In order to move forward with these activities, it is advisable that MiAMBIENTE has advanced in the establishment of the MNCP and clarified its interaction with international markets, which is why they are recommended as high priority activities, but in the medium term. At the moment, MiAMBIENTE has not yet defined how the MNCP will interact with international markets but is evaluating the possibilities of using Article 6 cooperative approaches to facilitate the development of those mitigation activities that have the greatest barriers to their development at the national level. In addition, other international markets, such as CORSIA and VCM, are considered as a potential source of demand for domestic carbon credits.

Define processes and infrastructure for the implementation of A6.4 - short term - medium priority

Two of the requirements to participate in Article 6.4 mechanism consist of (1) defining activities to be approved under the Paris Agreement Crediting Mechanism (A6.4), and (2) defining a national process for approval of mitigation activities under A6.4.

The country should provide detailed information on the types of contemplated activities (A6.4 activities) that it will consider approving in accordance with the rules, modalities and procedures, and should explain how these activities and any associated emission reductions or removals will contribute to the achievement of the country's NDC, its long-term low emissions development strategy, and the objectives of the Paris Agreement.

In the case of Panama, the activities to be considered have not yet been defined, nor has the national approval process been defined, but the DCC team has carried out various technical exchanges to learn about the experience of other countries in defining mitigation activities eligible for approval under Article 6.2 and Article 6.4. It is expected that this activity can be finalized in the short term.

Activity #7 - Develop a National Market Strategy - medium term - medium priority

Countries implementing market mechanisms will be able to establish a strategic approach that allows them to strike a balance between accessing climate finance and increasing the ambition of their own climate commitments.

Through a market strategy, national objectives and priorities can be clarified, including all the strategic definitions mentioned above. In addition, a national strategy can provide confidence and clarity to stakeholders, encouraging participation in the mechanism and confirming the robustness of the instrument.

Panama, through the CiACA project implemented by the UN Climate Change Secretariat through its RCC Latin America, prepares this Roadmap for the implementation of the MNCP in the context of Article 6 of the Paris Agreement. This document is intended to be the starting point for the development of an MNCP Implementation Strategy that clearly defines how the carbon market will function in Panama, its environmental, economic, and social impacts, and its alignment with the opportunities offered under Article 6.

3.1.3. Activities related to operational issues

Activity #8 - Enable Registry of Marketable Offset Projects - short term - medium priority

Internationally, carbon markets are usually supported by technological platforms that facilitate the measurement, reporting and verification of mitigation actions, and their certification for the issuance of carbon credits. In the case of Panama, there is a Registry of Marketable Offset Projects, located in the PNTC, ReNA module, ReNAM sub-module, which is expected to be the repository of information regarding offset projects developed in the national territory, which aspire to participate in carbon markets. This registry has already been developed by MiAMBIENTE and its launching to the public is pending.

Currently, the registry has two stages:

(1) Pre-registration, a stage that aims to collect initial information on the mitigation project before the project starts its certification process;

(2) Registration, a stage that aims to collect more detailed information on the mitigation project after the project has gone through its certification process and has received carbon credits.

The section of *Annexes* of this report presents a detailed table with the information included in the Registry of Marketable Offset Projects.

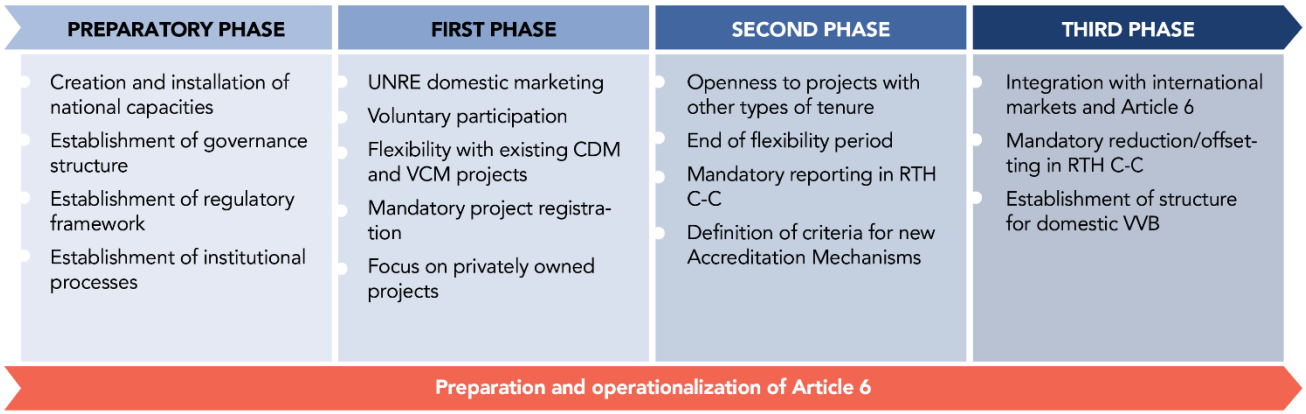
Taking advantage of the existing structure of the Registry of Marketable Offset Projects, it is proposed to undergo some simple modifications that would allow not only for the capture of information regarding MNCP projects, but also projects that aspire to participate in other international carbon markets. These modifications could allow the registry to track projects participating in the VCM or CORSIA, and although the country has not yet formally defined which registry it will use for its participation in Article 6.2 (see activity #6), the modifications could be applied so that the registry could also function under said article.

The adjustments will enable MiAMBIENTE to have an estimate of national projects and their intention to participate in the different market mechanisms.

Activity #9 - Establishment of phases for the implementation of the MNCP - short, medium and long term - medium and high priority

Due to the complexity of the MNCP and its potential impacts on various sectors, a phased implementation is recommended. *Figure 7* shows an example of possible phases, however, in case of applying this recommendation, MiAMBIENTE should align the phases with the priorities of the current administration and define the duration of each phase. Each of the phases is described below.

Figure 7. Example of a phased approach to MNCP.



Source: prepared by the author.

- As its name suggests, the **preparatory phase** would allow the country to analyze what already exists and prepare the necessary structure and capacities for the implementation of the MNCP. Capacity building would be an ongoing process throughout all phases and addressed to all stakeholders. The preparatory phase is expected to be completed in the short term.
- The **first proposed phase** would focus on achieving the first buying and selling activities under the MNCP. For this, it is proposed to start with national demand (voluntary RTH C-C participants) and a national supply, which could admit national private projects that are already active in the VCM, or even national CDM projects that have emission reduction certificates (CERs) available. The objective of this flexibility is to increase supply and incentivize participation in the MNCP. This would also allow capacity building on both the supply and demand sides and identify possible process improvements.

  During this phase it is also proposed, through the new executive decree on markets, to establish as a mandatory requirement the registration of tradable offset projects in the ReNAM, regardless of whether the project seeks to participate in the MNCP or other

international markets. In this way, all mitigation projects developed in national territory with the objective of generating carbon credits ought to be registered in order to facilitate the monitoring of national mitigation actions and guarantee greater transparency. The first phase is expected to begin in the medium term.

- The **second proposed phase** would focus on establishing the necessary guidelines and processes to allow the supply to include other types of land tenure, such as collective or state lands. This may include the generation of new concessions or similar processes. This phase is also expected to have clear requirements for approving or denying the integration of new crediting mechanisms to the list of approved mechanisms under the MNCP and will end the flexibility allowed during the first phase.
  In addition, it is proposed to introduce mandatory RTH C-C at the reporting level, so that selected organizations will be required to report their GHG emissions at the corporate level. The second phase is expected to be implemented in the long term.
- During the proposed **third phase**, the integration of the MNCP with other international markets, including the cooperative approaches of Article 6 of the Paris Agreement, is expected to be achieved. This integration requires prior work at the governance and regulatory level, which is expected to be advanced during the early stages to be completed in the third phase (*Figure 7* symbolizes this prior work as a continuous arrow from the preparatory phase to the third phase).
  In addition, it is proposed to create the necessary structure for the establishment of Panamanian VVBs, which could mean a reduction in certification costs and the generation of new jobs at the national level.
  Finally, it is expected to establish mandatory reduction and offsetting under RTH C-C, so that the selected organizations must reduce a certain number of emissions and offset the remainder through the purchase of UNRE under the MNCP. It is estimated that this third phase will begin once the second phase is completed, in the long term.

Activity #10 - Develop standard for the SNCP - medium term - high priority

The SNCP was established by Executive Decree No. 142 of December 9, 2021, becoming the second component of the MNCP. However, there is no additional documentation establishing its operation.

In this context, MiAMBIENTE has identified the need to develop a technical standard that includes a detailed description of the processes, operating rules, participation procedures, eligible sectors and types of projects, and other aspects that will govern the operation of the SNCP aligned with the rules of Article 6 and other international markets.

The development of this technical standard is planned for the year 2025, so it is assigned a high priority in the medium term.

Activity #11 - Establish a process to improve Panama's NDC - medium term - high priority

The implementation of Article 6 cooperative approaches gives greater relevance to the Parties' NDCs, as one of the objectives of these approaches is to facilitate the fulfillment of these climate commitments.

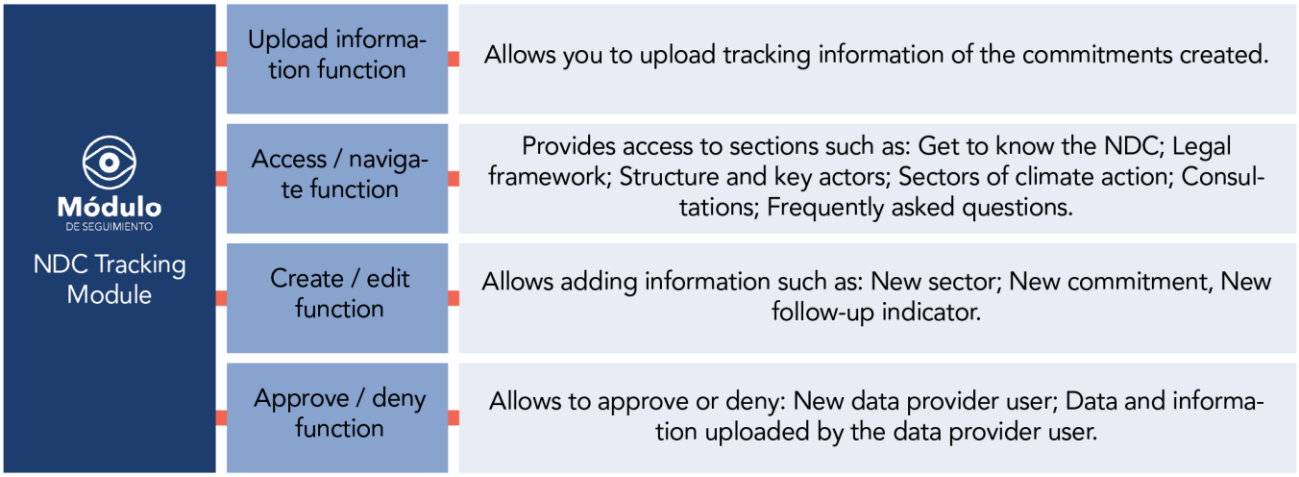
In this sense, the MNCP should take into consideration the national commitments included in the NDCs and their respective updates. To this end, it will be useful to establish an improvement process

for Panama's NDC, specifically for the targets associated with the mitigation component. This will require a review and update of national projections of GHG emissions and removals (including the development of national capacities for this exercise) to reflect the latest available data and forecasts that provide a quantitative basis from which to establish new GHG reduction targets, including the latest GDP growth forecasts, technological and cost assumptions and other national determinants of emissions trends such as impacts of planned mitigation policies under design or implementation, among other assumptions.

Additionally, this exercise contributes to establishing a transparent communication process of mitigation targets in terms of GHG or other non-GHG indicator, sectoral coverage, types of GHGs, assumptions, methodologies used and consistency with the long-term objectives of the Paris Agreement.

MiAMBIENTE has a "Follow-up Module" in its PNTC that seeks to facilitate the systematization of the process to follow up on Panama's NDCs. This module has some basic functions, which should be reviewed and adjusted as required. The *Figure 8* shows the functions currently included in this module.

Figure 8. Functions of the PNTC Follow-up Module.



Source: Climate Change Directorate, MiAMBIENTE, 2024.

Since Panama is in the process of preparing its NDC3, it should be mentioned that as per paragraph 7 of decision 4/CMA.1 (Further guidance in relation to the mitigation section of decision 1/CP.21) and paragraph 5(g) of its Annex I (Information to facilitate clarity, transparency, and understanding of nationally determined contributions, referred to in decision 1/CP.21, paragraph 28; ICTU guidance), it is mandatory for Parties' second and subsequent NDCs to apply the ICTU guidance, including the information on the 'intention to use Article 6.

Activity #12 - Integrate national banking into the MNCP - medium term - medium priority

One of the challenges identified during the development of the MNCP is that the development of offset projects often involves high costs, which can result in a low supply of projects in the MNCP.

To address the challenge, MiAMBIENTE plans to work with national banks to develop financial schemes that support the reduction of emissions in companies participating in the MNCP on the

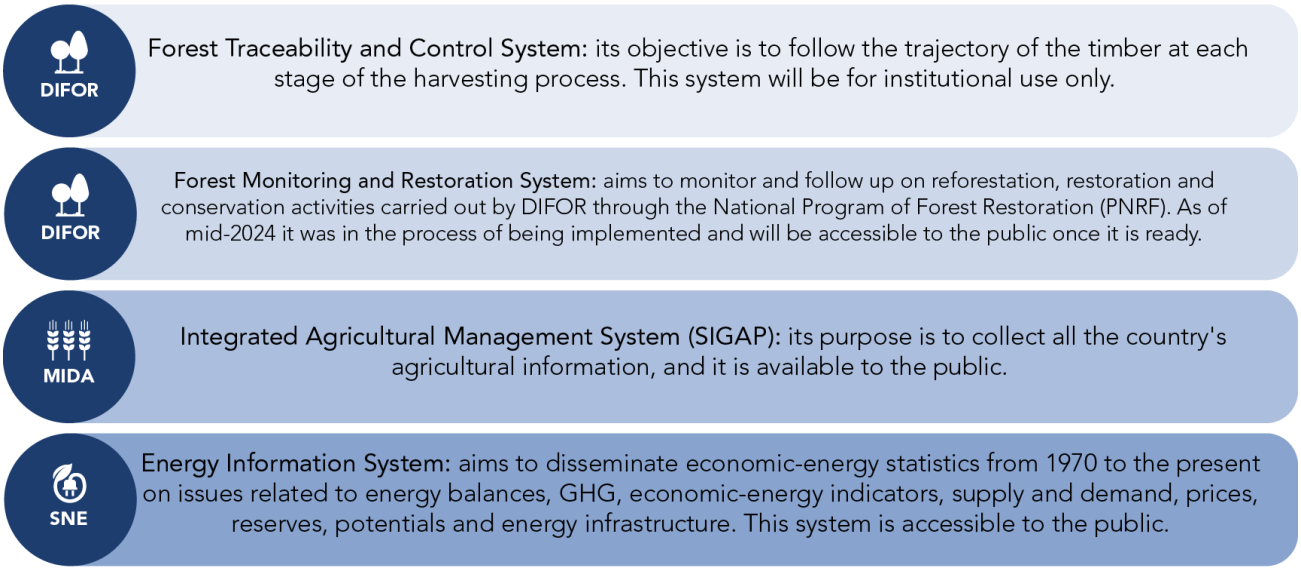
demand side and facilitate the financing of offset projects and their certification for the generation of UNRE (national carbon credits) on the supply side. This will be carried out with the support of Expertise France and Euroclima+ and is projected to materialize in the medium term.

Activity #13 - Review existing sectoral platforms - medium term - low priority

MiAMBIENTE, with support from RCC Latin America, conducted a capacity assessment during 2024 that included the analysis of existing technological capacities in entities such as DIFOR, SNE and MIDA. The results indicated the existence of some data systems and sectoral registries described in *Figure 9*.

Although these systems are usually quite specific to sectoral requirements and do not address carbon market issues, it is recommended that the DCC team, in conjunction with each sectoral lead entity, conduct a review of the requirements, requested information and available data, with the objective of identifying duplications, contradictions or relevant information that will help strengthen the MNCP Registry and simplify governmental processes.

Figure 9. Examples of sectoral data systems in Panama.



Source: prepared by the author based on information from MiAMBIENTE, MIDA and SNE, 2024.

Activity #14 - Define prioritization rules for crediting mechanisms under the MNCP - long term - medium priority

For the operation of the SNCP, MiAMBIENTE has decided to rely on the use of methodologies developed by crediting mechanisms participating in international carbon markets. It is expected that the prioritization of these mechanisms will be formalized through the new Executive Decree and/or the technical standard of the SNCP.

However, it is expected that MiAMBIENTE will establish a process to evaluate other crediting mechanisms that may wish to be considered for prioritization under the MNCP. To this end, it is expected to develop specific criteria and requirements to be met by interested crediting mechanisms. It is expected that this activity can be developed in the long term and allow for an increase in the supply of the MNCP.

3.1.4. Activities related to the organizational structure of the MNCP

Activity #15 - Establish organizational structure under the MNCP - short term - medium priority

Countries or jurisdictions intending to implement market mechanisms will need to create a structure to support the development of such a tool, including the definition of roles and responsibilities and the definition of operational functions.

Currently, the DCC maintains leadership in the development and implementation of the MNCP but does not have a formal structure to manage market issues.

In addition to organizing the structure of the governing entity, it is advisable to establish an intergovernmental support group that can reconcile the perspectives and priorities of the various governmental entities. The participation of other actors from the private sector and civil society is also advisable, to improve alignment and participation at all levels.

It is recommended to establish a formal organizational structure that establishes the roles and responsibilities of each actor involved. Taking into consideration Panamanian governmental entities, an example of an organizational structure made up of different levels and relevant actors is described below.

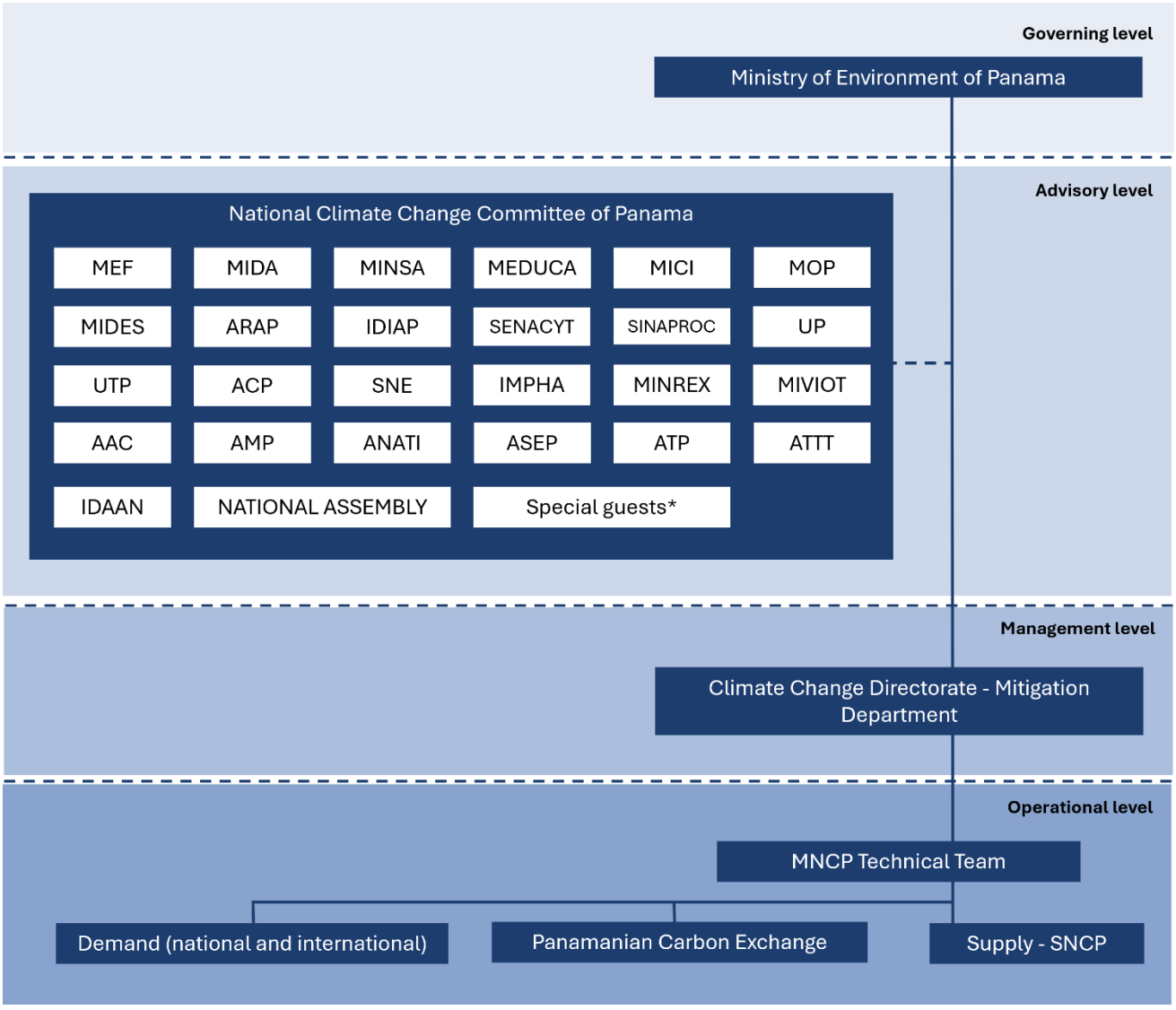
- **Governing level:** Ministerial governing authority, in charge of enforcing national laws and policies related to carbon markets. In the case of Panama, MiAMBIENTE is proposed.
- **Advisory level:** Comprised of various institutions and organizations that provide support and advice to the market implementing entity. It may be made up of various actors from the government sector, private sector, civil society, among others. In the case of Panama, it is recommended to integrate CONACCP. It is recommended that other MiAMBIENTE directorates be included in this committee when addressing carbon market issues, including DIFOR, DICOMAR, Office of Indigenous Peoples, among other relevant directorates.
- **Management level:** Responsible for proposing and coordinating policies related to carbon markets and their relationship with other climate action policies. In the case of Panama, the DCC of MiAMBIENTE is proposed, specifically the Mitigation Department.
- **Operational level:** In charge of executing the necessary activities for the implementation of carbon markets. For Panama, it is proposed to create a technical market team to carry out these tasks, which can be subdivided into work teams to carry out activities related to supply, demand and day-to-day operations. It is also recommended to establish the estimated number of personnel that will be required at this technical level.

Figure 10 shows the organizational structure for the carbon market theme described above.

It should be noted that the proposed Framework Law on Climate Change that is in the process of approval establishes a "**Climate Change and Green Transition Cabinet**", which has among its objectives the integration of climate change issues in a transversal manner, and to be the central instance of deliberation, coordination and decision-making in terms of mitigation policies. If this cabinet becomes a reality, it is recommended that it be added to the organizational structure as an additional level of decision makers.

It is also important to take into consideration that the country is making progress in complying with the requirements for participation in the cooperative approaches of Article 6. As mentioned above, one of these requirements consists of defining the roles and responsibilities related to the authorization processes, and it is therefore recommended that, at the time of establishing the organizational structure, these roles be clearly included.

Figure 10. Proposed organizational structure for carbon markets.



Source: prepared by the author.

Activity #16 - Continue training of MNCP technical team - short term - low priority

The MNCP team has received recurrent training during the development of the market from international entities and experts. Because the subject of carbon markets is in constant change, it is recommended to continue with these trainings as the process of development and implementation of the MNCP continues to advance. Some of the actors that have facilitated these training sessions are:

- **California Air Resources Board** (CARB): CARB is California's lead state agency for protecting public health from air pollution and climate change by developing programs that achieve GHG emissions reductions through California's Cap and Trade system. Panama has maintained recurring exchanges since 2022 to discuss issues related to the development of the MNCP.
- **Independent Crediting Mechanisms of the VCM:** In order to facilitate the exchange of information between MiAMBIENTE and these mechanisms, in 2022 Memoranda of Understanding (MoU) were developed with 4 of them, except for ACR, that does not manage the figure of MoU. These documents were valid for 2 years and are currently being renewed. These MoUs have facilitated the development of recurrent training, focused on existing methodologies and the operation of the registries.
- **RCC Latin America:** is one of the UN Climate Change Secretariat's Regional Collaboration Centers focused on facilitating compliance with the Paris Agreement. Through this center, MiAMBIENTE has received several training sessions focused on the development of the MNCP in alignment with the cooperative approaches of Article 6.

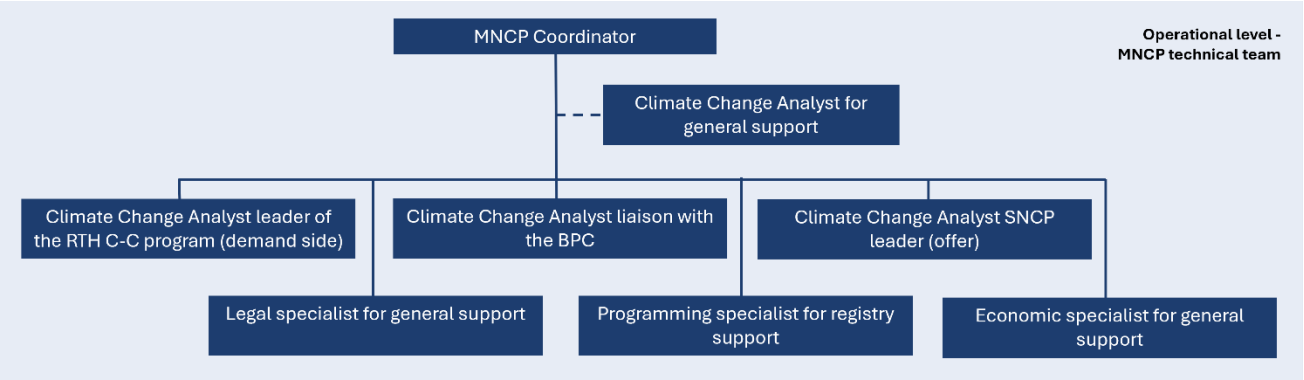
Activity #17 - Strengthen the MNCP technical team - medium term - high priority

Currently, the DCC has 5 specialists that perform tasks related to carbon markets and Article 6. Of this total, 4 specialists are hired through external financing and 1 through investment projects. The carbon markets area does not have permanent staff, which has an impact on the development of capacities and their conservation over time. In addition, the carbon market and Article 6 issues are complex and are constantly being updated, which requires constant training.

In this context, it is recommended to identify possible sources of financing for hiring the work team, ideally integrating permanent positions to ensure that the installed capacity is maintained. The definition and formalization of an organizational structure that includes a technical market team could facilitate this budget procurement.

Figure 11 shows a possible configuration for the MNCP technical team that would work at the operational level. It should be noted that the number of technical staff required for each working group could vary depending on the phase the MNCP is in and the workflow.

Figure 11. Proposed configuration for the MNCP technical team.



Source: prepared by the author.

3.1.5. Capacity-related activities

Activity #18 - Establish capacity building program - medium term - medium priority

Capacity building is necessary at all stages of carbon market implementation. Because the MNCP impacts a wide range of stakeholders, it is unlikely that everyone has a baseline level of technical knowledge to understand the scope of the market and the opportunities it presents.

In addition, many of the participants lack technical knowledge about carbon pricing instruments and Article 6 cooperative approaches. The topic is perceived as highly complex, so it is recommended to develop a capacity-building program that focuses on simplifying the language and developing more didactic material focused on knowledge generation, adapted to different actors from the public sector, private sector and civil society.

Activity #19 - Establish structure for the creation of national VVBs - long term - medium priority

As previously indicated, one of the challenges identified by MiAMBIENTE for the development of offset projects is the high cost of the development and certification processes. VVBs are part of this cost chain since as there are no approved VVBs in Panama to validate and verify projects under the prioritized crediting mechanisms, international VVBs must be used.

In order to create national capacities, generate economic flows and reduce costs, MiAMBIENTE foresees the establishment of the necessary structure for the creation of national VVBs. This work involves coordination with the Ministry of Commerce and Industries (MICI), specifically with the General Directorate of Standards and Industrial Technology (DGNTI), which aims to develop, adopt or adapt standards in the field of industry, commerce and service.

This activity is proposed for the long term, since it is necessary to resume coordination with the DGNTI, in addition to establishing the necessary structure for this task.

Activity #20 - Establish capacity building structure for VVB and project developers - long term - medium priority

To promote the supply of the MNCP, it is proposed to generate capacity-building programs specifically aimed at VVB and project developers, focused on understanding the functioning of the MNCP and the role of each of these actors. This would generate new jobs and economic flows at the national level.

It is proposed that these skills programs be integrated into university curricula, so that professionals can be trained in these areas.

This activity is proposed for the long term, so that the MNCP has already started its implementation.

3.1.6. Activities related to the sectoral approach

Activity #21 - Quantify NDC goals - medium term - high priority

As mentioned above, Panama has submitted 3 NDCs, however, most of the commitments included have been expressed as non-GHG targets, focused on qualitative objectives. The country has quantitative targets in the energy, forestry, marine-coastal systems and agriculture sectors, but these targets have not been expressed in tons of CO_2 equivalent, which makes accounting and monitoring difficult.

In this regard, it is recommended that an analysis of current targets be carried out and that quantification of upcoming targets be sought, ideally expressing them in GHG terms. This will make it possible to align the NDCs with national and international carbon markets, facilitating future stages of implementation.

These recommendations are made in the framework of the upcoming presentation of Panama's NDC3, which is expected to be presented in 2025. It is relevant that, through said update, the MNCP is also connected to the long-term objectives of the Paris Agreement and the NDCs, so that the signals emitted by the carbon markets are aligned with compliance with the NDCs.

Activity #22 - Develop sectoral standards to define rules for sectoral participation under the SNCP - medium term - high priority

Similar to activity #10, MiAMBIENTE has identified the need to develop sectoral standards to define the rules, procedures, methodologies, actors involved and types of eligible activities under each sector aspiring to participate under the MNCP.

This need responds to the diverse characteristics and particularities of each sector, specifically in terms of mitigation potential, additionality, existing regulations and commitments included in the NDCs. Thus, it is expected to have a specific standard for projects in energy, forestry, waste, etc.

The development of these sectoral standards is planned for the year 2025, so it is assigned a high priority in the medium term.

Activity #23 - Define national incentive approach - medium term - medium priority

Panama's regulatory framework includes incentives focused on energy sector projects and forestry projects. These incentives seek to promote the development of sustainable sectoral projects and may influence the sectoral rules of the MNCP.

- **Energy Sector - Law No. 24 of November 23, 1992:** Establishes a regime of incentives for the promotion of hydroelectric generation systems and other new, renewable and clean sources, and establishes other provisions. The law establishes some requirements to qualify for the benefits, and describes the possible benefits, such as direct purchase and sale with distribution companies and tax benefits.
- **Forestry Sector - Law No. 45 of August 4, 2004:** Establishes incentives and regulates reforestation activities in the Republic of Panama. The law promotes reforestation activities through the introduction of tax benefits, credit lines, preferential loans and the promotion of foreign investment.

It is recommended that the existing regulations regarding these incentives receive an evaluation and a definition of how they will be handled under the MNCP, especially on issues such as additionality.

Box 7 - Additionality

As defined by the Integrity Council for the Voluntary Market (ICVCM), additionality means that the GHG reductions or removals from the mitigation activity will be additional, i.e. would not have occurred in the absence of the incentive created by the revenue from carbon credits. However, this definition may vary depending on the entity defining it.

Activity #24 - Establish sectoral GHG budgets - long term - medium priority

According to the definition included in Chile's Framework Law on Climate Change, a national GHG emissions budget expresses the maximum amount of GHG emissions accumulated at the sectoral level in a given period and that represents the sum of the total emissions of such gases in each year included in the respective period, as determined by the Long Term Climate Strategy.

In the case of Panama, a sectoral GHG budget would allow the country to estimate the maximum allowed amount of GHGs in a defined period and sector to meet a climate target included in the NDC or Panama's LTS.

MiAMBIENTE aims to develop sectoral GHG emission budgets for some relevant sectors of Panama's NDC so that the country has a quantified reference guide to evaluate progress and measure the effectiveness of sectoral GHG reduction measures. In addition, these budgets will make it possible to establish the measures needed to reduce or absorb GHG emissions so as not to exceed the sectoral emissions budget.

It should be noted that carbon budgets should be reviewed and updated periodically to ensure that they remain current.

The development of these budgets is intended to be carried out by means of a regulatory instrument yet to be defined, and requires prior work, such as sectoral diagnoses to determine the potential for emission reductions and quantify the sectoral goals of the NDC, for which reason this activity is estimated in the long term.

3.2. Roadmap Timeline

Table 13 shows the proposed schedule for the implementation of the activities included in the roadmap.

Table 13. Timeline of Roadmap activities.

#	Activity	Actor	2025				2026				2027			
			T1	T2	T3	T4	T1	T2	T3	T4	T1	T2	T3	T4
Regulations														
1	Establishment of carbon ownership.	DIFOR												
2	Development of new Executive Decree on markets.	DCC												
3	Repeal of Executive Decree No. 142 of December 9, 2021	DCC												
4	Define the legal nature and treatment of carbon credits.	DCC + MEF												
5	Approval of the Framework Law on Climate Change.	DCC												
6	Review and update the regulatory framework of the MNCP.	DCC												
Strategic approaches														
7	Definition of the scope of the MNCP.	DCC + high level												
8	Definition of registry to be used for Article 6.2.	DCC												
9	Development of National Market Strategy.	DCC												
10	Other strategic definitions for the proper functioning of the MNCP.	DCC												
Operational issues														
11	Enable the Registry of Marketable Offset Projects.	DCC												

12	The preparatory phase of the MNCP continues.	DCC												
13	Start of the first phase of the MNCP.	DCC												
14	Development of SNCP standard.	DCC												
15	Definition of infrastructure for implementation of Article 6.	DCC												
16	Establishment of a process to improve the Panama NDC.	DCC												
17	Integration of the National Banks to promote the development of carbon projects.	DCC												
18	Review and evaluation of existing virtual sectoral platforms.	DCC + key actors (DIFOR, SNE, MIDA)												
19	Start of the second and third phase of the MNCP.	DCC												
20	Definition of rules for new crediting mechanisms under the MNCP.	DCC												
Organizational structure														
21	Establish a formal organizational structure.	DCC												
22	Continued training of the technical team.	DCC												
23	Strengthen the technical team by hiring human resources.	DCC												
Capabilities														
24	Establish a capacity building program for MNCP participants.	DCC + academia												
25	Establish a structure for the creation of national VVBs.	DCC + DGNTI												
26	Capacity building for VVB and project developers.	DCC + academia												
Sectoral approach														
27	Define activities under Article 6.4.	DCC + key actors												
28	Quantification of NDC goals to facilitate alignment with MNCP.	DCC + key actors												
29	Development of sectoral standards under the SNCP.	DCC												
30	Define the approach to energy incentives within the framework of the MNCP.	DCC + SNE, ASEP												
31	Define approach to forestry incentives within the framework of the MNCP.	DCC + DIFOR												
32	Establish sectoral GHG budgets.	MiAMBIENTE + key actors												

Source: prepared by the author.

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Annexes

ANNEXES

Table 14. Detailed list of regulatory instruments related to carbon markets.

Regulatory instruments related to carbon markets	
Constitution	
Title	**Description**
Political Constitution of the Republic of Panama.	Defines the role of the State in natural resource management and concession management.
International treaties	
Title	**Description**
Law No. 10 of April 12, 1995.	Ratification of the UNFCCC, which seeks to stabilize GHG concentrations in the atmosphere and encourages countries to reduce greenhouse gas emissions, cooperate on research and technology, and protect greenhouse gas sinks.
Law No. 88 of November 30, 1998.	Approves the Kyoto Protocol, which seeks to reduce GHG emissions and promote sustainable growth in developing countries. Establishes flexible market mechanisms, specifically the CDM, applied in Panama.
Law No. 38 of June 3, 2015.	Approves the Doha Amendment to the Kyoto Protocol, which establishes a second commitment period to reduce GHG emissions until 2020.
Law No. 40 of September 12, 2016.	Approves the Paris Agreement, which seeks to limit global warming to 2°C, preferably to below 1.5°C, compared to pre-industrial levels. Introduces the cooperative market and non-market approaches of Article 6.
Laws, Executive Decrees and general Resolutions	
Title	**Description**
Law No. 41 of July 1, 1998.	General Environmental Law that creates the basis for climate change management at the national level. It mentions the inventory of the State's forest patrimony and carbon capture as an environmental service of the forest. Establishes coastal marine resources as part of the national patrimony of the State and under the administration of MiAMBIENTE. It recognizes the right of comarcas and indigenous peoples to the management of renewable natural resources in their territories, in coordination with MiAMBIENTE. It establishes that the protected areas are goods of public domain of the State and will be regulated by MiAMBIENTE.
Law No. 37 of August 2, 2016.	Establishes the exercise of the right to free, prior and informed consultation and consent of indigenous peoples whenever legislative and administrative measures affecting their collective rights (lands, territories, resources, ways of life and culture) are envisaged.
Executive Decree No. 100 of October 20, 2020.	Creates the PNRTH, which includes the Registry of Emissions and the Registry of Mitigation Actions, related to the National Carbon Market. In addition, it grants legal mandate to MiAMBIENTE to establish the MNCP (Article 50).
Executive Decree No. 135 of April 30, 2021.	It establishes that the income generated by the commercialization of carbon credits or any other benefit from climate change mitigation actions will represent one of the sources of income of the FONACC (Article 26).
Executive Decree No. 142 of December 9, 2021.	Establishes the National Carbon Market and its three components.
Resolution AG-0155-2011 of April 5, 2011.	Regulates the national approval process for CDM projects.
Ministerial Resolution DM-0358-2020 of November 17, 2020.	Establishes the "Top 50 Carbon-Neutral Organizations" Declaration, which will be part of the potential demand of the MNCP.
Ministerial Resolution DM-0224-2021 of May 5, 2021.	It adopts the RTH C-C Technical Standard which describes the general conditions of the program and all its methodological guidelines. RTH C-C represents the demand of the MNCP.
Ministerial Resolution DM-0382-2021 of July 19, 2021.	Modifies the "Top 50 Carbon-Neutral Organizations" Declaration, which will be part of the potential demand of the MNCP.

Ministerial Resolution DM-0030-2022 of January 25, 2022.	Adopts the Manual that establishes the minimum requirements to develop the Action Plan for the "First 50 Carbon-Neutral Organizations" Declaration, which will be part of the potential demand of the MNCP.
Ministerial Resolution DM-0207-2022 of Friday, December 02, 2022.	Establishes the board of directors of the Panamanian Carbon Exchange (BPC), the third component of the MNCP.
Laws, Executive Decrees and Sectorial Resolutions	
Forestry Sector	
Title	**Description**
Law No. 24 of November 23, 1992.	Whereby incentives are established and the reforestation activity in the Republic of Panama is regulated.
Law No. 1 of February 3, 1994.	Establishes the objectives, provisions and regulations for the protection, conservation and use of the country's forest resources.
Law No. 69 of October 30, 2017.	Establishes an incentive program for the conservation of natural forests and forest cover.
Executive Decree No. 89 of June 8, 1993.	Regulates Law No. 24 of November 23, 1992, establishing the requirements for tax benefits and registration in the forestry registry.
Coastal Marine Sector	
Title	**Description**
Law No. 80 of December 31, 2009.	Regulates the titling of land in coastal areas and insular territory. Establishes that mangrove zones, indigenous and comarcas' territories, protected areas and any other territory subject to legal restrictions on private appropriation will not be subject to titling.
Energy Sector	
Title	**Description**
Law No. 45 of August 4, 2004.	Establishes an incentive regime for the promotion of renewable energies. It includes the issue of carbon markets and the CDM.
Law No. 44 of April 25, 2011.	It establishes a system of incentives for the development and protection of the construction industry, as well as for the construction and operation of wind power plants that provide public electricity service
Law No. 18 of March 26, 2013.	Amends and adds articles to Law 44 of 2011, related to Wind Power Plants for the provision of public electricity service.
Law No. 37 of June 10, 2013.	Establishes the incentive regime for the promotion of the construction, operation and maintenance of solar power plants and/or facilities.
Executive Decree No. 45 of June 10, 2009.	Regulates Law No. 45 of August 4, 2004, by establishing the administrative mechanisms necessary to avail oneself of the tax benefits defined in Article 10 of the law.
Institutionality	
Title	**Description**
Executive Decree No. 163 of August 22, 2006.	Created the Climate Change and Desertification Unit, responsible for coordinating climate change issues and participation in international negotiation processes.
Executive Decree No. 1 of January 9, 2009.	CONACCP was created to support the National Environmental Authority in the implementation and inter-institutional coordination necessary to comply with the provisions of international agreements on climate change.
Executive Decree No. 52 of January 29, 2013.	Modifications to CONACCP, organization, entities and functions.
Law No. 8 of Wednesday, March 25, 2015.	It creates and details the functions and responsibilities of MiAMBIENTE in areas such as renewable natural resources concessions, protected areas, forest patrimony, energy sector activities, marine-coastal resources management, indigenous peoples, among others.
Executive Order No. 36 of May 28, 2018.	Establishes the new organizational structure of MiAMBIENTE and creates the DCC and the Mitigation Department.
Executive Decree No. 125 of March 2, 2021.	Establishes the Climate Change Directorate and its role in the management of national climate action to enable the ecological, social, and economic transition to reduce GHG emissions, increase carbon sinks and adapt to the impacts of climate change. It establishes among its responsibilities the establishment of emission registries and mitigation actions, and the use of cooperative carbon market and non-market approaches.

Source: prepared by the author based on information from the National Environmental Information System (SINIA) of MiAMBIENTE.

Table 15. Detailed list of public policies and international commitments related to carbon markets.

Public policies and international commitments		
Instruments related to Climate Change		
Title	**Date**	**Description**
Second National Communication on Climate Change.	April 11, 2011.	Carbon markets are mentioned as a means of mitigation.
First Nationally Determined Contribution (NDC1).	April 1, 2016.	Panama's intention to design a carbon market and participate in international emissions trading, including the maritime and aviation sectors, is mentioned.
Third National Communication on Climate Change.	October 10, 2016.	The voluntary carbon market, NAMAs and the Clean Development Mechanism are considered viable mitigation measures for Panama.
National Climate Change Strategy 2050.	July 23, 2019.	Addresses the measures to reduce CO_2 emissions from civil aviation in Panama, through CORSIA.
Panama nationally determined contribution, first update (Updated NDC1).	December 14, 2020.	Details the intention to use voluntary cooperation under Article 6 of the Paris Agreement to ensure global climate integrity and accelerate climate action. Panama is committed to using the three cooperation mechanisms of the Paris Agreement
Second Biennial Update Report (2BUR).	December 30, 2020.	Details Panama's participation in the international carbon market, specifically in the CDM and the voluntary carbon market
National Climate Change Policy.	June 8, 2023.	Means for national transformation include the implementation of carbon markets.
Panama's Fourth National Communication on Climate Change (4NC).	August 3, 2023.	Describes the MNCP as one of the measures to mitigate climate change at the national level, and details Panama's participation in international carbon markets, including the voluntary market and the CDM.
Second Nationally Determined Contribution (NDC2).	May 31, 2024.	Includes a commitment by 2028 to have 50 companies that are part of the RTH C-C program and committed to carbon neutrality. It is expected to build capacity among these companies for their participation in the MNCP. Establishes the intention to resort to voluntary cooperation under Article 6 of the Paris Agreement and reiterates Panama's participation in the three mechanisms.
National Strategy for Socioeconomic, Inclusive, Low Emission and Climate Resilient Development 2050 (ELP Panama).	June 20, 2024.	Carbon credits are mentioned as a financing mechanism option for climate action.
First Biennial Climate Transparency Report (1BTR).	June 30, 2024.	Describes the MNCP as a national mitigation initiative. Reviews the progress of the NDC targets and establishes their relationship to the cooperative approaches of Article 6 of the Paris Agreement.
Main Sector Instruments *Forestry Sector*		
Title	**Date**	**Description**
National Forest Strategy 2050.	March 23, 2019.	Mentions carbon markets as a means to comply with the forestry strategy.
National Strategy for Reducing Emissions from Deforestation and Forest Degradation (ENREDD+).	July 1, 2022.	Mentions the MNCP as an enabling condition. It seeks to establish regulations governing carbon ownership and the right to the usufruct of carbon benefits and to establish procedures for actions under the REDD+ mechanism to enter the voluntary and regulated carbon market.
Energy Sector		
Title	**Date**	**Description**

National Energy Plan (PEN) 2015-2050.	April 5, 2016.	It mentions carbon markets as mechanisms to achieve diversification of the energy matrix and considers the carbon tax and emissions markets.
Energy Transition Agenda (ATE).	November 24, 2020.	Constitutes the roadmap for climate action in the energy sector. The activities included in the ATE form the basis for achieving the sector's climate commitments.
National Strategy for Green Hydrogen and Derivatives of Panama.	July 11, 2023.	Mentions the generation of carbon credits to obtain financing.
Agriculture Sector		
Title	**Date**	**Description**
National Climate Change Plan for the Agricultural Sector of Panama (PNCCSA).	June 10, 2019.	It represents the instrument for planning climate change adaptation and mitigation, food and nutritional security in the sector.
Project: Rice NAMA in Panama: innovation through blockchain and precision.	October 21, 2022 (project approval).	Financed by SENACYT and the IDB, and executed by IICA, it consists of a "precision" production pilot project with 100 rice producers to increase profitability, reduce GHG emissions by 40% and capture 13,200 tCO_2 equivalent that can be transformed into carbon credits as additional income for producers.
Industrial Processes and Product Use Sector		
Title	**Date**	**Description**
Panama Cooling Plan (PEP).	June 23, 2021.	Consolidates the country's roadmap for sustainable development of the RAC sector, ensuring the protection of the ozone layer, the reduction of GHG emissions and energy efficiency.
Roadmap for implementing the Kigali Amendment in Panama 2021-2045.	June 11, 2023.	Includes enabling activities for the Implementation of the Kigali Amendment in Panama that support the reduction of HFCs in the country.
Waste Sector		
Title	**Date**	**Description**
National Integrated Waste Management Plan 2017 - 2027.	July 31, 2017.	Mentions carbon credits as a possible source of income from waste treatment. Includes waste-to-energy activities.

Source: prepared by the author.

Table 16. Detailed list of projects developed in Panama participating in the VCM.

Name	IAM	ID	Location	Type	Status	End	Issued	Withdrawn
REDD+ Emberá Wounaan	BCR	PA – 22 – 14 - 001	Darién (Comarca Emberá Wounaan)	AFOLU	Listed	Apr 2048	-	-
Waste handling and disposal	CC	92	Panamá	Waste handling and disposal	Certified	Jun 2027	518,237	6,449
Las Delicias	ERS	002	Bocas del Toro	Reforestation	Certified	Apr 2045	-	-
ACP Sustainable Forest Cover Establishment Project	GS	3421	Panamá	A/R	Certified	Aug 2019	-	-
CO2OL Tropical Mix	GS	2940	Veraguas, Darién, Chiriquí,	A/R	Certified	Jan 2024	3,189,791	1,874,376

			Bocas del Toro, Panamá					
Panama Reforestation Services ARR	GS	11899	Darién, Panamá Oeste	A/R	Listed	Sep 2049	455,670	14,495
Panasolar Photovoltaic Project	GS	3556	Coclé	Electricity – Solar Therm	Listed	Nov 2022	-	-
Azuero Reforestación Colectiva (ARC)	VR	5059	Los Santos	AFOLU	Under Validation	Jun 2063	-	-
Conservation of Panama Forests - Reduction of GHG Emissions from Deforestation. Grouped Project	VR	1881	Bocas del Toro, Chiriquí, Coclé, Colón, Panamá, Los Santos, Veraguas	AFOLU	Registration required	Oct 2046	-	-
Cuango Farm, Afforestation Colon, Panama	VR	4632	Colón	ARR	Under development	Mar 2049	-	-
Forest Landscape Restoration in Panama	VR	4884	Veraguas	AFOLU	Under validation	Mar 2084	-	-
Ganaderos Y Bosques Azuero: Reforestation of Riparian Areas and Rotational Grazing on Cattle Farms in the Azuero Peninsula, Panama	VR	5180	Los Santos	ALM; ARR	Under development	-	-	-
Generation Forest Group Project	VR	2481	Darién, Colón	AFOLU	Registered	Aug 2116	51,317	20,936
Panama Forests Conservation Project Reduction of GHG Emissions Through Deforestation and Avoided Degradation.	VR	2578	Coclé	AFOLU	Inactive	Oct 2046	-	-

Source: prepared by the author, based on information from the Climate Change Directorate of MiAMBIENTE.

Table 17. Information included in the Pre-Registry and Registry of Marketable Offset Projects.

Stage	Subsection	Information requested
Pre-Registration	General information	Project name.
Pre-Registration		Sector in which the project is developed.
Pre-Registration		Project activity.
Pre-Registration		Brief description of the project.
Pre-Registration		Related policy instrument or program.
Pre-Registration		Impacted NDC sector.
Pre-Registration		Government benefit or incentive.
Pre-Registration	Current status	Project start date.
Pre-Registration		Project proponent entity.
Pre-Registration		Entity owning the Project.
Pre-Registration		Documentation demonstrating authority to develop the project.
Pre-Registration		Contact person.
Pre-Registration		Website.
Pre-Registration	Geographic scope	Project location.
Pre-Registration		Georeferencing (UTM format and in the WGS84 system).
Pre-Registration		Project area.
Pre-Registration		Coincidence of the project in indigenous territory or collective lands.
Pre-Registration		Coincidence of the project with public lands.
Pre-Registration		Coincidence of the project with protected areas.
Pre-Registration	Financing	Estimated total project cost or budget.
Pre-Registration		Source of project financing.
Pre-Registration	Other relevant information	Previous participation in the development of offset projects.
Pre-Registration	Relationship with Crediting Mechanisms	Intention to participate in the MNCP.
Pre-Registration		Crediting Mechanism under which you will register the project.
Pre-Registration		Selected methodology.
Pre-Registration		Link to methodology.
Registration	Description	Overall qualitative project goals.
Registration		Baseline.
Registration		Annual project goals.
Registration		Overall project goal.
Registration	Current status	Project crediting period.
Registration		Other organizations involved in the project.
Registration	Geographic scope	Documentation demonstrating the geographic position of the project including a shapefile of the project polygon and CSV file.
Registration	Sector scope	Inventory sectors impacted by the project.
Registration		GHGs involved in the project.
Registration		SDGs impacted by the project.
Registration	Financing	Variation in project cost or budget.
Registration		New source of financing.
Registration	Beneficiaries	Beneficiaries.
Registration		Co-benefits.
Registration	Crediting Mechanism	Selected Crediting Mechanism.
Registration		Methodology selected for the project.
Registration		Amount of carbon credits emitted.
Registration		Amount of carbon credits traded prior to filling out the registry.
Registration		Carbon credits available for sale.
Registration		Documentation to verify the registration and certification of the project under the chosen Crediting Mechanism.
Registration	Affidavit	Affidavit.

Source: Climate Change Directorate of MiAMBIENTE.