

# **NDC Equity Analysis: Republic of Panama**

## **Executive Summary**

Climate change is a natural process that, due to human action, has accelerated and increased. At present, all nations share a common goal, which is limiting the increase in the average global temperature of the planet to 2 °C compared to pre-industrial levels and redouble efforts to keep global warming below 1.5°C. This objective is established in the Paris Agreement, adopted by all the parties to the United Nations Framework Convention on Climate Change (UNFCCC).

For a developing country such as Panama, climate change marks one of the main challenges for climate action, requiring new low-emission and resilient economic models, in the context of actions focused on loss and damage due to environmental impacts that have adversely affected several communities.

Panama updated its Nationally Determined Contribution (NDC1) after signing the Paris Agreement, assuming more sectoral commitments for the year 2050 within the framework of the 2030 Agenda for Sustainable Development and launching plans, guides and basic programs to gradually increase climate ambition.

Climate action must be based on comprehensive actions, which include a social approach to articulate all people and where climate ambition is consistent with territorial approaches that properly represent the country's urgent needs.

Achieving the Paris Agreement and our commitments not only requires a global cooperation framework but also meaningful climate action in the country. To reach these goals, all Panamanians must have access to information and effective participation, feel part of the climate agenda, and be empowered to join collective actions.

## **Introduction**

According to Panama's updated NDC, the country contributes 0.036% of global greenhouse gas (GHG) emissions, while per capita GHG emissions indicate that the country does not contribute significantly to climate change. In spite of this, it is highly vulnerable to the adverse effects of climate change.

At the global level, there are regulations such as those established in the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol, which are the main instruments governing climate change and of which Panama is a signatory.

In terms of public policy and climate action progress, Panama ratified the Kyoto Protocol in June 1998, and strengthened this commitment by approving the Doha Amendment through Law 38 of June 3, 2015.

The Panamanian State, through Law 8 of March 25, 2015, recognizes that climate change is a major global environmental threat that affects the population, ecosystems and all productive sectors of the economy. It also recognizes its common but differentiated responsibility to participate in the stabilization of GHG concentrations in the atmosphere at a level that prevents dangerous anthropogenic interference in the global climate system. On that note, Title XI includes two chapters on Climate Change Adaptation and Mitigation, where the state assumes, in collaboration with other institutions, a national strategy and initiatives to increase the country's resilience to the adverse effects of climate change and promote the national transition to a low-carbon economic development.

Panama submitted its Intended Nationally Determined Contribution (INDC) in April 2016, the month and year in which it signed the Paris Agreement prior to its ratification in September 2016. Its INDC became its NDC [1]. The country submitted its Third National Communication in 2018 [2] and its first biennial report (BUR) [3] in December of the same year.

In 2020, Panama updated its first Nationally Determined Contribution (Updated NDC1) [4], which proposes a transformation of the country's economic, social and productive dynamics that will allow it to move towards circularity, resilience and progressive emission reductions.

In 2021 Panama presented its National Gender and Climate Change Plan [5], which aims to strengthen national capacities to mainstream the gender approach in processes, policies, strategies, programs and tools for environmental management and climate action, aimed at upholding the negative carbon status by 2050 according to the results presented in the 2nd biennial update report submitted to the convention in March 2021, ensuring that national commitments are implemented in a gender-responsive manner.

In 2022, Panama published its National Climate Action Plan [6], which seeks to promote a long-term vision to ensure compliance with the state's commitment under the Paris Agreement, and establish a roadmap for the next 5 years for the implementation of key climate change mitigation and adaptation actions, in order for the country to meet the commitments articulated in the Updated NDC1, while supporting economic recovery after the COVID-19 pandemic.

### **National context regarding the NDC**

In compliance with its commitments to the United Nations Framework Convention on Climate Change (UNFCCC), the Republic of Panama submitted, in December 2020, the 2016 update of the First Nationally Determined Contribution (NDC1). This update represents the evolution of climate action from environmental management to a management aimed at decarbonizing the economy and increasing climate resilience at the national, local and sectoral levels.

In response to the above, the twenty-nine (29) commitments presented in the Updated NDC1 are structured around ten sectors and strategic areas:

- Energy
- Forests
- Integrated Watershed Management
- Marine-Coastal System
- Biodiversity
- Sustainable Agriculture, Livestock and Aquaculture
- Resilient Human Settlements
- Public Health
- Sustainable Infrastructure
- Circular Economy

### Legal Framework

Based on the National Climate Change Plan, the country's Magna Carta established roles and responsibilities for the State in terms of elements that ensure the nation's sustainable development.

Under the General Environmental Law (Unique Text of 2016, from Law No. 41 of July 1, 1998), the environmental regulatory body is developed, which establishes the basic principles and rules for the protection, conservation and recovery of the environment, promoting the sustainable use of natural resources.

### Emissions

In the National Climate Action Plan, according to World Bank results, Panama reported in 2017 an average of 2.496 t CO<sub>2</sub> eq per capita and its contribution to global GHG emissions was only 0.045%.

In relation to sectors, the Land Use, Land Use Change and Forestry (LULUCF) sector is presented as the most relevant, with 60.7% (- 27,629.2 kt CO<sub>2</sub>eq) of GHG contributions, followed by Energy with 24.7% (11,245.9 kt CO<sub>2</sub>eq), Agriculture with 7.6% (3,463.2 kt CO<sub>2</sub>eq), Waste with 4.2% (1,904.9 kt CO<sub>2</sub>eq), and finally IPPU (Industrial Processes and Product Use Sector) with 2.8% (1,256.8 kt CO<sub>2</sub>eq). It should be noted that these percentages derive from a comparison in absolute values, where the % of LULUCF refers to removals, while the % of the other sectors covers emissions.

### Panama's Sectoral Commitments under the NDC

Energy	By 2050, 30% of the installed capacity of the electricity matrix should come from renewable energy sources, with a projected investment of USD 2,232 million.
Land Use, Land Use Change and Forestry (LULUCF)	<b>Reforestation of degraded areas.</b> By 2050, increase the carbon absorption capacity by 10% with respect to the Reference Scenario. <b>Supported Contribution.</b> Increase carbon sequestration capacity by 80%

	<p>with respect to the Reference Scenario by 2050, with a projected investment of USD 2,225 million.</p> <ul style="list-style-type: none"> <li>a. Develop a record of reforestations carried out and monitor progress achieved with the implementation of the agreement.</li> <li>b. Promote the creation of protection strips with reforestation and restoration around protected areas threatened by deforestation.</li> <li>c. Promote and encourage landowners to protect water sources; maintain and/or increase forest cover on their farms through the establishment of agroforestry and silvopastoral systems and fast-growing forest plots; and the maintenance of forest cover on their farms.</li> <li>d. Create biological corridors through the establishment of live fences on all farms and the protection of water sources.</li> <li>e. Incorporate the concepts of reforestation and ecosystem restoration into agricultural systems.</li> <li>f. Promote research on forest species in Panama as a basis for decision making on state policies in the forestry sector.</li> </ul>
Capacity Building	<p>Establishment of the International Implementation Center for Reducing Emissions from Deforestation and Forest Degradation (ICIREDD), with a projected investment of USD 250,000. This Center will be responsible for implementing innovative market mechanisms to facilitate international emissions reductions.</p> <p><b>Research and knowledge networks:</b> promote and organize research, as well as the development of technical, scientific and operational capacities, programs, projects and activities related to REDD+ (Reducing Emissions from Deforestation and Forest Degradation). In addition, create and maintain knowledge, information and technology networks with international and regional institutions working on REDD+.</p> <p><b>Standard setting and financing frameworks:</b> promote the collection, analysis, standardization of scientific data, information and protocols related to REDD+ and related activities. This commitment seeks to organize and lead efforts to promote public financing and market-oriented approaches at the national, regional and international levels to ensure that the REDD+ mechanism can be financed in a sustainable manner.</p> <p><b>Implementation:</b> mobilize and manage donations, trusts, grants, tenders, contracts and loans granted through multilateral, bilateral, private and philanthropic cooperation in order to implement sustainable development programs, projects and activities related to tropical forest</p>

	conservation and management.
Financing	<b>Support the implementation of mitigation and adaptation policies and projects around the world.</b> Panama's commitment to the fight against climate change was also put into effect through the donation of USD 1 million to the Green Climate Fund (GCF).

### Panama's Sectoral Commitments according to the Updated NDC1

Energy	By 2050, Panama will achieve a reduction of total emissions from the country's energy sector by at least 24% and by at least 11.5% by 2030 with respect to the BAU scenario, representing an estimated 60 million tons of CO2 equivalent accumulated between 2022-2050 and up to 10 million tons of CO2 equivalent accumulated between 2022-2030.
Forests	Panama commits to restore 50,000 hectares nationwide, which will sequester approximately 2.6 million tons of CO2 eq. by 2050.  By 2025, Panama commits to initiate the implementation of the National REDD+ Strategy and to develop a National Technical Guide on Climate Change for the LULUCF sector, with a focus on adaptation and mitigation.
Integrated watershed management	By 2025, Panama will have a Climate Change Plan for Integrated Watershed Management that includes adaptation and mitigation components.  By 2022, the Panama Canal Authority will have completed the development of the Indicative Environmental Land Use Plan (PIOTA) for the Panama Canal Watershed (CHCP).
Marine-Coastal Systems	By 2025, Panama will have a Technical Guide on Climate Change for the Marine-Coastal Systems sector with adaptation and mitigation components, and will have developed a manual on restoration techniques for degraded mangrove areas.  As of 2022, national greenhouse gas inventories will integrate blue carbon, applying chapter 4 of the 2013 IPCC (Intergovernmental Panel on Climate Change) supplement, which emphasizes coastal wetlands.
Biodiversity	By 2025, the design, construction and preliminary actions for the implementation of the Climate Change Guide for the Biodiversity sector with a focus on adaptation and mitigation, built with the technical support of the Protected Areas and Biodiversity Directorate and the

	Coasts and Seas Directorate, will be in place.
Sustainable agriculture, livestock and aquaculture	<p>By 2025, the National Climate Change Plan for the Agricultural Sector (PNCCSA) will have been updated and implemented, and an agro-climatic information system for the agricultural sector will have been created, based on the establishment of hydro and agro-meteorological stations, a climate information center, and the implementation of participatory technical roundtables.</p> <p>By 2050, 130,000 hectares of degraded land will have been restored under agroforestry and silvopastoral systems, to the extent of the international support received.</p> <p>By 2030, the rice NAMA (Nationally Appropriate Mitigation Action) will have begun to be implemented and the livestock NAMA will have been formulated and its implementation will have begun.</p>
Resilient human settlements	By 2025 Panama will have developed the Climate Change Technical Guide for Human Settlements with mitigation and adaptation components. In addition, it will have implemented the Reduce Your Footprint Municipal Program.
Public health	By 2025, Panama will have developed a Climate Change Plan for the Health sector that includes adaptation and mitigation components.
Sustainable infrastructure	<p>By 2025, Panama will have developed a Climate Change Plan for the infrastructure sector that includes adaptation and mitigation components. That same year, Panama will have integrated the climate change dimension into public investment processes through the implementation of the Climate Change Technical Guide for Public Investment Infrastructure Projects.</p> <p>By 2022, the Environmental Impact Assessment (EIA) Regulations will have been updated to incorporate climate risk management, adaptation measures and carbon footprint reduction in projects.</p>
Circular economy	By 2025, the Ecolabeling Executive Decree will have been updated, and the Circular Economy Center of CONEP (National Council of Private Enterprise) will be operational. In addition, metrics and indicators will have been generated to monitor the country's progress in this sector, and the Reduce Your Corporate Footprint Program will be operational, with at least 100 registered organizations reporting carbon or water footprints.

Capacity Building	By 2025, the SIREC Platform (Damage Collection and Evaluation Systems) will be expanded and strengthened by including slow-onset events resulting from climate change. Finally, by that year Panama also commits to establish and implement the National Climate Transparency Platform.
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**Planning, implementation processes, monitoring, gaps, needs and challenges for climate action.**

According to the 2016 NDC, a citizen participation process was carried out based on various mechanisms for the population to have access to government decisions without the need to be part of the public administration or a political party. This was done with the objective of exchanging information and creating interaction to craft the NDC as a collective, based on the needs not only of the public sector, but also of civil society, the private sector and indigenous peoples.

The citizen participation process was carried out based on the criteria defined by Article No. 25 of Law 6 of 2002, which establishes the modalities for citizen participation. With this legal basis, the public hearing mechanism was used for the participation of diverse sectors, highlighting gender equity, presence of underrepresented groups, youth and the elderly, and literate and illiterate people. As a result of the public hearing process, there was representation from the 10 provinces and 9 structures of the native peoples of Panama, and the planning and implementation of the Monitoring, Registration and Verification (MRV) plan of its NDC was defined, counting on the international support required to implement it, which will be carried out by the Ministry of Environment, in conjunction with the competent entities, as established by Law 8 of March 25, 2015.

According to the Updated NDC1, its implementation involves challenges in terms of financing, technical, technological, scientific capacities, institutional transformation and governance. Through consultations with key stakeholders, the following three categories of needs emerged: technology transfer, capacity building and financing needs.

**Principles and Methodological Approaches of the NDC Update1**

The following principles and methodological approaches that guided the NDC1 Update were:

- 1. Integrated adaptation-mitigation approach:** refers to the need to demonstrate how each of the ten prioritized sectors and strategic areas can reduce emissions, while promoting synergies and benefits in resilience and improved livelihoods, generating green jobs, and improving health, education, and reducing inequality.
- 2. Participatory and gender-sensitive planning and decision-making approach for resilient and inclusive development:** refers to the fact that the definition of contributions

and the mechanisms for their implementation are agreed with national, sectoral and local stakeholders, ensuring broad participation and distributing burdens and opportunities as equitably and fairly as possible, while recognizing gender as an essential issue.

**3. Nature-based solutions and green infrastructure approach:** refers to nature-based solutions (NBS) that include actions that integrate ecosystems and the services they provide to respond to various societal challenges such as climate change, food security or disaster risk. Green infrastructure" is a good alternative or complement to conventional engineering approaches, known as "gray" infrastructure.

In parallel to the specific commitments assumed by the country, by 2025 an additional set of regulations, instruments and actions relevant to climate action will be in place, which are currently in the process of elaboration and formalization, including:

1. The modernization of environmental management instruments based on the conceptual framework of climate change and climate variability analyses.
2. Formalization of the national climate risk map and vulnerability indicators (differentiated by sex and age as appropriate).
3. Formulation of the preliminary draft of the Framework Law on Climate Change and updating of Panama's National Climate Change Policy to 2050.
4. Low Carbon Economic and Social Development Strategy to 2050.
5. Regulation of the Adaptation Provisions of the General Environmental Law.
6. Implementation of climate change labeling in the budget to allow the measurement of climate spending and financing and to identify the way in which financing flows and the final destination by sector.
7. Guide and procedure for the incorporation of climate variability and climate change variables in the National Public Investment System (SINIP).

### **Processes for updating Panama's NDCs**

The update process was carried out under a vision of resilience and progressive reduction towards Panama's carbon neutrality by 2050, and was based on the following steps [7]:

- **Priority policy review:** the climate change progress of 10 strategic areas and sectors for climate action was analyzed.
- **Institutional consultation:** an assessment of policies and alignment with the Sustainable Development Goals (SDGs) was conducted, identifying options for increased ambition.
- **Review of national circumstances:** options for increasing ambition were identified and climate commitments prioritized based on more than 40 bilateral meetings with different State entities.



- **Stakeholder participation:** an institutional and stakeholder participation plan was implemented, as well as a communication and public consultation strategy in which stakeholders were involved through Active Listening. In addition, 9 thematic workshops open to the public were held with more than 250 participants from the private sector, civil society, youth, local governments, the scientific community and the public sector.
- **Design of commitments:** the mitigation and adaptation potential for the improvement of the NDC1 was analyzed and compliance with the guidelines for clarity, transparency and understanding covered.

Upon completion of this process, the Updated NDC1 Panama submitted the document to the UNFCCC Secretariat.

- **Accountability and equity.** The updated NDC1 includes two capacity building commitments for climate transparency on loss and damage, and the monitoring and assessment of climate data to strengthen decision making for climate action.
- **Transparency.** An enhanced transparency framework is established in the context of the Paris Agreement. Under this, from 2024, countries will report transparently on climate change, including their actions, processes undertaken, support received and/or provided, as well as international procedures for the review of submitted reports. Such information collected through this framework will feed into the Global Stocktake, which will assess collective progress towards long-term climate goals and generate recommendations for countries to establish more ambitious plans [8].

In its 2016 Intended Nationally Determined Contribution (INDC), Panama notes that with the "intention to promote transparency, environmental integrity, accuracy, comparability and consistency, Panama will increase its efforts to avoid double counting GHG emissions."

The 2020 NDC1 update mentions that "to advance in the fulfillment of the commitments presented, adaptive management will be applied in light of national circumstances and needs, responding to gender issues, participation and transparency, taking into consideration vulnerable groups, communities and ecosystems," as stipulated in the Paris Agreement. It will also address the requirements of the Paris Agreement in relation to guidance on information needed for clarity, transparency and understanding (ICTC) related to each Party's respective NDC and guidance for adaptation communications (Decisions 4/CMA.1 and 9/CMA.1 respectively), with a view to participating in the Global Stocktake process from 2023, and improving access to sources of international climate finance."

Within the Environmental Information System (SINIA) of the website of the Ministry of the Environment of Panama, the National Climate Transparency Platform (PNTC) was designed as a portal that gathers and incorporates all the climate change information generated in the country, where users can register, manage, monitor and report on national initiatives

under the Reduce your Corporate Footprint Program, as well as publicly find other information on climate change.

## **Recommendations**

**Transparency and Human Rights.** Transparency includes the communication of information on climate change, while responding to human rights with a focus on gender and youth, where effective and fruitful participation guarantees the right of every individual or group to participate in public affairs. Transparency must promote social inclusion, where collective participation prioritizes actions that respond to the needs of the country and its most vulnerable sectors, as well as the demand for actions to those sectors cataloged as major emissions and contaminants.

**Processes for updating Panama's NDCs.** The updating process should be carried out with a more inclusive methodology, since active listening is the physical and mental effort of wanting to capture with attention the totality of the message that is emitted. In climate change processes, participation must be early and informed to be effective, integrating the knowledge and priorities of citizens and clearly defining the scope of participation, so as to ensure compliance with Article 12 of the Paris Agreement and the Access Rights of Principle 10 of the Rio Declaration.

**Compliance with NDCs and NDC1.** Panama should publicly report on the progress and compliance of its NDCs, where each sector presents its indicators, compliance and gaps, so country-level efforts are accelerated and ambition is increased.

**Implementation of the NDC1.** Panama should communicate the roadmap for the implementation of NDC1, evidencing the needs for capacity building and technology transfer, the costs of the actions established to determine their financial needs and the diversification of funding sources. In addition, roles for climate action should be clearly communicated and established, which should include all citizens and various levels of climate action.

**Planning, implementation processes, monitoring, gaps, needs and challenges for climate action.** Panama should establish a formal process based on the evaluation of the NDCs, in which it recognizes and identifies its limitations and/or needs for the implementation process and increase the ambition of sectoral commitments.

**Legal Framework for Climate Change.** The country needs a climate change law that regulates and dictates specific provisions on climate change. The creation of this law should be based on a broad participatory, effective and inclusive process at the country level, being an opportunity for transformation to promote a climate agenda that encourages and ensures the informed participation of all stakeholders and citizens.

**Country climate action vision.** To overcome the perception created about the sole responsibility of the country's environmental entity, it is urgent not to leave any voice or solution behind.

**Gender focus.** The National Climate Action and Gender Plan aligns the country's climate commitments with gender actions. However, women's full and equal participation and their right to equal voice, responsibilities and opportunities to contribute to the country's climate agenda must be fulfilled.

**Focus on youth.** The meaningful participation of children, adolescents and youth in climate change processes should be optimized, including dialogue through the Action for Climate Empowerment (ACE), as well as creating formal mechanisms at the national level to ensure effective participation in the processes of updating, regulation and decision-making on climate change.

**Territorial approach.** A gender and human rights approach must be incorporated into all territorial planning and risk management instruments. In addition, in order to achieve social articulation and a just transition, a process based on dialogue and the agendas of various stakeholders is necessary, taking into account the particular geographic, political, cultural and social contexts, as well as the coverage of commitments in each territory of the country. Priority must be given to the protection of natural resources and biodiversity, given that in order to be a carbon negative country, adequate resource management must prevail and forest conservation ensured.

**Loss and damage.** Globally, extreme weather events, floods, landslides and droughts, among others, are becoming more frequent and intense. Panama is a country that is highly vulnerable to the impacts of climate change and is already showing losses and damages, which is why this issue should be included in national and international climate change negotiations. For example, the impacts have been evidenced in rising sea levels, which have displaced the native people of Guna Yala to the mainland.

Panama's NDCs and its climate action are based on a sectoral approach. The country has a strong political-legal and institutional articulation, as well as a sectoral articulation in the Nationally Determined Contributions (NDC1), so climate action should be addressed with a social approach, so that their process and level of ambition is increasingly collective and inclusive, and with commitments focused on actions for climate empowerment.

Commitments must be comprehensive and ambitious, and have quantitative and qualitative targets that allow us to know, measure and evaluate compliance and the contribution to the global climate fight and that, in addition, respond to the urgent needs of the country.

## References

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