



## **Fifth National Communication, Biennial Update Report and Biennial Transparency Reports to the United Nations Framework Convention on Climate Change (UNFCCC)**

### **Part I: Project Information**

#### **GEF ID**

10801

#### **Project Type**

EA

#### **Type of Trust Fund**

GET

#### **CBIT**

**CBIT No**

#### **Project Title**

Fifth National Communication, Biennial Update Report and Biennial Transparency Reports to the United Nations Framework Convention on Climate Change (UNFCCC)

#### **Countries**

Brazil

#### **Agency(ies)**

UNDP

#### **Other Executing Partner(s)**

Ministry of Science, Technology and Innovations (MCTI)

#### **Executing Partner Type**

Government

#### **GEF Focal Area**

Climate Change

#### **Taxonomy**

Focal Areas, Climate Change, Climate Change Mitigation, Agriculture, Forestry, and Other Land Use, United Nations Framework Convention on Climate Change, Nationally Determined Contribution, Climate Change Adaptation, Disaster risk management, Climate information, National Adaptation Plan, Land Degradation, Land Degradation Neutrality, Carbon stocks above or below ground, Chemicals and Waste, Emissions, Influencing models, Demonstrate innovative approaches, Strengthen institutional capacity and decision-making, Stakeholders, Type of Engagement, Participation, Consultation, Information Dissemination, Partnership, Beneficiaries, Communications, Awareness Raising, Education, Civil Society, Academia, Non-Governmental Organization, Private Sector, Gender Equality, Gender Mainstreaming, Sex-disaggregated indicators, Gender results areas, Knowledge Generation and Exchange, Participation and leadership, Capacity, Knowledge and Research, Knowledge Exchange, Enabling Activities, Capacity Development, Knowledge Generation, Learning, Theory of change, Adaptive management

**Sector**

Enabling Activity

**Rio Markers**

**Climate Change Mitigation**

Climate Change Mitigation 2

**Climate Change Adaptation**

Climate Change Adaptation 1

<b>Type of Reports</b>	<b>Submission Date</b>	<b>Expected Implementation Start</b>	<b>Expected Completion Date</b>	<b>Expected Report Submission to Convention</b>
UNFCCC National Communications (NC)	5/9/2022	11/2/2022	11/1/2028	12/30/2024
UNFCCC Biennial Update Report (BUR)	5/9/2022	11/2/2022	11/1/2028	6/30/2023
UNFCCC Biennial Transparency Report (BTR)	5/9/2022	11/2/2022	11/1/2028	12/30/2024
UNFCCC Biennial Transparency Report (BTR)	5/9/2022	11/2/2022	11/1/2028	12/30/2026

**Duration**

72In Months

**Agency Fee(\$)**

712,500.00

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

<b>Objectives/Programs</b>	<b>Trust Fund</b>	<b>GEF Amount(\$)</b>	<b>Co-Fin Amount(\$)</b>
CCM-EA	GET	7,500,000.00	
<b>Total Project Cost(\$)</b>		<b>7,500,000.00</b>	<b>0.00</b>

**B. Project description summary**

**Project Objective**

To prepare the Fifth National Communication (5NC), Biennial Update and Transparency Reports required to meet obligations under the UNFCCC and to disseminate the project achievements

<b>Project Component</b>	<b>Expected Outcomes</b>	<b>Expected Outputs</b>	<b>GEF Project Financing(\$)</b>	<b>Confirmed Co-Financing(\$)</b>
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Project Component	Expected Outcomes	Expected Outputs	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
1 ? National GHG Inventory (GHGI)	1.1. National GHG Inventory (GHGI) is improved and updated	1.1.1 Procedures and arrangements described to collect data, including information on the role of the partner institutions, as well as the development of an improvement plan for the preparation of national GHG inventories	3,257,857.00	
		1.1.2 Procedures and arrangements described for archiving data related to the elaboration of national GHG inventories, as well as efforts to make this process continuous, including information on the role of the institutions involved		
		1.1.3 Data and parameters collected, completeness and accuracy of the data series reviewed, and national capacities improved to provide information to the GHGI		
		1.1.4 Analysis of the methodology and procedures implemented for inventory development using		

Project Component	Expected Outcomes	Expected Outputs	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
2 ? National Circumstances, Envisaged Steps for the Convention Implementation , and other relevant information	2.1. Report on National Circumstances and other relevant information updated	2.1.1 Updated information of Brazil's national circumstances, including characterization of the territory, population description including gender issues and priorities for national and regional development	210,000.00	
		2.1.2 Report on updated policies, programs, and other initiatives to mitigate and adapt to climate change		
	2.2. Institutional arrangements structured	2.1.3 Report on updated constraints, needs and gaps, as well as any other information considered relevant to the achievement of the objective of the Convention		
		2.1.4 Report on updated relevant information to achieve the objectives of the Convention in Brazil, as awareness initiatives on climate change issues, gender assessment and capacity building on climate change, and impact of COVID-19		

Project Component	Expected Outcomes	Expected Outputs	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
3 ? Vulnerability assessment and adaptation measures	3.1. Assessment of climate scenarios and observed tendencies for Brazil improved with the use of advanced and updated climate models and information	3.1.1 Documented and analyzed climate scenarios for Brazil until 2100 based on the state-of-art available models	750,000.00	
	3.2. Vulnerability to climate change in Brazil assessed and adaptation measures identified for key-sectors	3.1.2 Documented and analyzed observed tendencies for Brazil in the last decades, according to available data		
		3.2.1 Systematization of main climate-related existing studies about observed and projected impacts and vulnerabilities in key-sectors in Brazil		
		3.2.2 Improvement of methodologies and analysis to assess the regional climate-related vulnerabilities and impacts		
		3.2.3 Report on updated information about main governance instruments and initiatives that contribute to adaptation to climate change in Brazil		



Project Component	Expected Outcomes	Expected Outputs	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
4 ? Public Awareness, Development of National Capacity, and Gender Mainstreaming in mitigation policies and measures	4.1. An enhanced public awareness strategy on climate change is developed, including the compilation and update of relevant information	4.1.1. Relevant documents (IPCC technical and special reports, and others, such as technical analyses and good practice guidance) and policy briefs published and disseminated	750,000.00	
	4.2. Development of national capacity and institutional arrangements improvement for implementation and monitoring of climate actions	4.1.2. Web site of the MCTI updated with information on GHG Inventories, legislation, scientific knowledge, and other climate change issues		
	4.3. Gender mainstreaming in planning and implementing climate change mitigation policies and measures	4.1.3. Workshops and seminars organized and participation in public events in order to disseminate information on climate change issues, presenting main findings of the project and genders experiences with climate change		
		4.1.4 Updated assessment of public perception on climate change and its risks		
		4.1.5 Training on climate change from an educational		

Project Component	Expected Outcomes	Expected Outputs	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
5 ? Publication and submission of the 5NC	5.1. 5NC is published and submitted to the UNFCCC by Dec 2024	5.1.1 5NC compiled and submitted until Dec/2024 (as a standalone report)  5.1.2 5NC published in hard copy and alternative media in Portuguese and English	385,000.00	

Project Component	Expected Outcomes	Expected Outputs	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
6 ? Preparation and submission of the Biennial Update Report (BUR) and the Biennial Transparency Reports (BTRs)	6.1. Institutional arrangements for the preparation of BUR and BTRs	6.1.1 Strengthening the institutional framework for preparing GHG inventories on a biennial basis, as well as collecting and systemizing all data related to domestic MRV, mitigations actions and their effects, needs, constraints and gaps, support received, impacts assessments, and adaptation.	1,725,000.00	
	6.2. Mitigation actions and domestic MRV	6.2.1 Analysis of the legal and strategical framework covering mitigation actions and domestic MRV system implemented and adopted		
	6.3. Needs, constraints, gaps, and other relevant info identified to the achievement of the objective of the Convention	6.2.2 Report on mitigation actions and their effects		
	6.4. Climate change impacts and adaptation	6.2.3 Enhancement on the analysis of the mitigation actions progress and the Nationally Determined Contribution (NDC) tracking progress		
	6.5. BUR and BTRs are compiled and submitted to the UNFCCC	6.2.4 Report on updated information on the description of		

<b>Project Component</b>	<b>Expected Outcomes</b>	<b>Expected Outputs</b>	<b>GEF Project Financing(\$)</b>	<b>Confirmed Co-Financing(\$)</b>
7 - Monitoring and Evaluation (M&E) of the project	7.1. Monitoring and Evaluation (M&E) of the project outcomes and outputs done	7.1.1 Inception Workshop  7.1.2 - Monitoring reports including QPR and PIR  7.1.3 Independent external evaluations (Mid-Term Review and Terminal Evaluation)  7.1.4 - Project financial and progress reports	65,000.00	
<b>Sub Total (\$)</b>			<b>7,142,857.00</b>	<b>0.00</b>
<b>Project Management Cost (PMC)</b>				
357,143.00				
<b>Sub Total(\$)</b>			<b>357,143.00</b>	<b>0.00</b>
<b>Total Project Cost(\$)</b>			<b>7,500,000.00</b>	<b>0.00</b>

Please provide justification

\* Co-financing is not required for Enabling Activities. At the project's Mid Term Review, the rationale related to co-finance for project implementation will be provided.

**C. Source of Co-Financing for the Project by Name and by Type**

<b>Sources of Co-financing</b>	<b>Name of Co-financier</b>	<b>Type of Co-financing</b>	<b>Investment Mobilized</b>	<b>Amount(\$)</b>
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**Total Co-Financing(\$)**

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

\* Co-financing is not required for Enabling Activities. At the project's Mid Term Review, the rationale related to co-finance for project implementation will be provided.

**D. GEF Financing Resources Requested by Agency, Country and Programming of Funds**

<b>Agency</b>	<b>Trust Fund</b>	<b>Country</b>	<b>Focal Area</b>	<b>Programming of Funds</b>	<b>Amount(\$)</b>	<b>Fee(\$)</b>	<b>Total(\$)</b>
UNDP	GET	Brazil	Climate Change	CC STAR Allocation	7,500,000	712,500	8,212,500.00
<b>Total Gef Resources(\$)</b>					<b>7,500,000.00</b>	<b>712,500.00</b>	<b>8,212,500.00</b>

## **Part II. Enabling Activity Justification**

### **A. ENABLING ACTIVITY BACKGROUND AND CONTEXT**

Provide brief information about projects implemented since a country became party to the convention and results achieved

As a Party to the UNFCCC since 1994, Brazil is required to prepare a National Communication Document, based on the guidelines provided by the Conference of Parties (COP) for non-Annex I countries (Decision 17/CP.8). The Government of Brazil (GoB) has successfully submitted the Initial, Second, Third, and Fourth National Communications. The first UNDP/GEF Enabling Activity project allowed Brazil to prepare its Initial National Communication (INC), which focused mainly on preparing a detailed inventory of GHG emissions and a general description of steps taken envisaged to implement the Convention. The INC assessed the most important sources and sinks of GHG in Brazil from the following sectors: (i) Energy, (ii) Agriculture and livestock, (iii) Industry, (iv) Land Use Change and Forestry (LUCF); and (v) Waste, for the period 1990 to 1994. Brazil submitted its Initial National Communication to the UNFCCC on December 10th, 2004, at COP-10.

The Second National Communication (SNC), submitted to UNFCCC in November 2010, envisaged extending the coverage of the annual Brazilian Inventory of anthropogenic GHG emissions and removals to the period 1990-2000; however, it was possible by the project to make efforts to report a more extensive time series (1990-2005) than required by the UNFCCC. It focused on sectors/gases with a significant share of GHG emissions and/or present a large degree of uncertainty. It enlarged the scale and scope of activities undertaken, included vulnerability and adaptation (V&A) assessments, carried out studies on possible V&A measures, and downscaled global circulation models (using a regional model). It enhanced the institutional capacity for implementing the Convention in Brazil. By this project, the MCTI engaged a broad-based network of partners to prepare the SNC. Over 600 institutions and 1,200 experts with recognized competence in their respective areas of expertise from different sectors (energy, industry, forestry, agriculture/livestock, waste treatment, etc.) were involved, coming from the public and private sectors as well as from the academy.

The third UNDP/GEF EA Project started in November 2010 and envisaged extending the coverage of the annual Brazilian Inventory of anthropogenic GHG emissions and removals to the period 2000-2010. It focused on sectors/gases that have a significant share of GHG emissions and/or present a large degree of uncertainty, such as CO<sub>2</sub> in LULUCF and Energy sectors, CH<sub>4</sub> in Agriculture and Waste, and HCFs in the IPPU sector. The preparation of the GHGI in the TNC involved a significant share of the Brazilian business, the scientific community, and government sectors, with the direct participation of more than 230 experts representing approximately 100 institutions. The progress achieved for the Brazilian Terrestrial System Model (BESM) at TNC allowed improvement for projections of global climate changes, enabling the country to generate future scenarios and also integration between MCTI/INPE with the Earth System Grid Federation (ESGF), which connects the national initiative to other world centers for the generation and dissemination of global climate change scenarios.

Furthermore, the TNC deepened knowledge production in impacts, risks, and vulnerability to climate change through new studies, with robust methodology and data. These studies were significant inputs for the adaptation and climate change national plans. At the same time, they mean more national capacity building to collect information to support drafting of public development policies in Brazil. The TNC final document was submitted to the UNFCCC in April 2016.

In the process of elaborating the 4NC, a permanent data platform called National Emissions Registry System (SIRENE in the Portuguese acronym) was launched. The SIRENE is a relevant tool that grants security and transparency to national GHG emissions outcomes. It is acknowledged by the Brazilian Government as a landmark for the establishment of the measuring, report and verification process, being a valuable tool to assist decision-makers in the context of policies, plans, programs, and projects aiming to comply with national and international plans to tackle climate change. Another significant contribution to the Fourth National Communication is the multiple research programs conducted by the Brazilian Research Network on Global Climate Change (Rede CLIMA). The research programs are filling information gaps identified in the TNC. This Network was established by the Ministry of Science, Technology and Innovations (MCTI) in 2007 to generate and disseminate knowledge about the causes and effects of global climate change.

In the 4NC, technical and scientific inputs have been developed from official national data and established partnerships and contracts, which represented the direct involvement of more than 400 experts from 217 renowned institutions. As part of a quality assurance procedure, the main technical documents developed were submitted to public consultation with experts not directly involved in the studies. The 4NC's GHGI continued to improve the method by using the IPCC 2006 Guidelines in its entirety and improving the national databases, especially for the key sectors (Agriculture, Energy, and LULUCF), but also with significant advances for the IPPU and Waste sectors. The 4NC contributed to the development of integrated analyzes for studies of impacts, vulnerability, and adaptation through Water, Energy, Food, and Social environmental Security. Also, these analyses considered climatic scenarios with a level of warming approach, something unprecedented.

As the preparation of the 4NC moved forward, Brazil has identified several aspects that should be enhanced for the 5NC. The Inventory for the Land Use, Land Use Change and Forestry (LULUCF) sector will be further refined by utilizing satellite images taken at shorter time intervals for all biomes. The Inventory will be further improved by calculating country-specific emission factors for energy, agriculture, and LULUCF. This work will allow the extension and consolidation of existing partnerships with relevant government institutions and research centers, besides the foreseen improvement of current models and data platforms.

The 4NC was presented to the UNFCCC by December 2020. In line with the decision 2/CP.17, Brazil also submitted four Biennial Update Reports, including Technical Annexes on REDD+ in Dec 2014, Mar 2017, Mar 2019, and Dec 2020.

The TTE, in consultation with Brazil, identified the following need for capacity-building that could facilitate the preparation of subsequent BURs and participation in ICA: strengthening the institutional



framework for preparing GHG inventories to enable their preparation on a biennial basis, data collection, and the application of higher-tier methodologies (in particular for the industrial processes and LULUCF sectors).

The TTE noted that, in addition to those identified during the technical analysis, Brazil reported the following capacity-building needs in its BUR: (a) Training of specialists in traceability and certification systems as part of the domestic MRV system; (b) Support for the dissemination of knowledge; (c) Support for digital interaction among public record agencies; (d) Technical training on and dissemination of energy management systems; (e) Technical training on methodology application, infrastructure and equipment and conducting studies.

Brazil signed the Paris Agreement in April 2016 and ratified it in September 2016. The First NDC (updated submission) was submitted on December 8th, 2020. Based on the reference year of 2005, Brazil's NDC reaffirms its commitment to reducing total net greenhouse gas emissions by 37% in 2025 and officially commits reducing Brazilian emissions by 43% in 2030. The NDC also expresses the indicative objective of achieving climate neutrality (net-zero emissions) in 2060. This long-term objective might be reconsidered in the future, according to the functioning of the market mechanisms under the Paris Agreement, and the possibility of considering a more ambitious long-term objective is not ruled out.

The NC/BUR process has strengthened institutional, technical, and analytical capacities by disseminating information and analysis about climate change impacts, stimulating investments in research and innovation, and promoting stakeholders engagement from all sectors to discuss and reflect on the climate change issue into the political agenda of the country.

## **B. ENABLING ACTIVITY GOALS, OBJECTIVES, AND ACTIVITIES**

The proposal should briefly justify and describe the project framework. Identify also key stakeholders involved in the project including the private sector, civil society organizations, local and indigenous communities, and their respective roles, as applicable. Describe also how the gender equality and women's empowerment are considered in project design and implementation

The project "Fifth National Communication, Biennial Update Report and Biennial Transparency Reports to the United Nations Framework Convention on Climate Change (UNFCCC)" has the goal of enabling the Government of Brazil to enhance available emission data, performing targeted research, and strengthening technical capacity and institutions to address both mitigation and adaptation. The main objective is to assist Brazil's Government in performing the activities necessary to prepare the Fifth National Communication and the Biennials Reports (BUR 5, BTR1, and BTR2) to the UNFCCC. This project is prepared in line with the GEF7 climate change mitigation objective CCM3: Foster Enabling Conditions to Mainstream Mitigation Concerns into Sustainable Development Strategies.

The project will be organized around six complementary components: (1) National GHG Inventory; (2) National Circumstances, Envisaged Steps for the Convention Implementation, and other relevant

information; (3) Vulnerability Assessment and Adaptation Measures; (4) Public Awareness and Education Strategy in Place; (5) Publication and submission of the 5NC; (6) Preparation and submission of the Biennial Update Report and the Biennial Transparency Reports.

The project will benefit from previous NCs/BURs funded by the GEF. The 5NC, the BUR5, and the first and second BTRs will update all information in the fourth National Communication, including national inventories of greenhouse gas emissions and sinks up to 2023.

Although the Enhanced Transparency Framework (ETF) under the Paris Agreement represents a challenge to developing countries, since it builds on the current measurement, reporting, and verification (MRV) system (especially for the Inventory and capacity building for the report); the BTR represents an essential component of the ambition cycle in the global climate regime by building trust and confidence to meet national climate targets and actions. Information reported in BTRs will be considered at a collective level as an essential input into the global stock take, leading to more robust climate action that will continue as the climate regimes move towards zero net emissions by 2050 and climate neutrality thereafter.

Stakeholders engagement:

The stakeholders directly involved in project design are part of the public sector, academia, and civil society (Table 1). The Brazilian Research Network on Global Climate Change (Rede Clima) is expected to be involved in preparing the 5NC, BUR5, and the BTRs, through its numerous research institutions and universities. The Network produces information for the formulation and follow-up of public policies on climate change and supports the Brazilian negotiations under the UNFCCC. Rede Clima generates and disseminates knowledge about causes and effects of global climate change in 13 sub-networks: Agriculture, Biodiversity and Ecosystems, Cities, Natural Disasters, Regional Development, Economy, Renewable Energy, Modeling, Oceans, Water Resources, Health, Environmental Services, and Coastal Zones.

The Network is based at the National Institute of Spatial Research ? INPE, in S?o Jos? dos Campos (State of S?o Paulo) and at the National Center for Natural Disaster Monitoring and Alert ? Cemaden, in Cachoeira Paulista (also State of S?o Paulo) and is comprised of a Board of Directors, a Scientific Committee, and an Executive Secretariat in support of a network of public institutions such as research institutions (National Institute for Space Research - INPE, National Institute of Amazon Researches - INPA, Oswaldo Cruz Foundation - FIOCRUZ, and Brazilian Agricultural Research Corporation - EMBRAPA) and Universities (e.g., Bras?lia University - UnB, Federal University of Cear? - UFC, Federal University - UFPE, Campinas University - UNICAMP, Alberto Luiz Coimbra Institute for Graduate Studies and Research in Engineering/Federal University of Rio de Janeiro - COPPE/UFRJ, University of S?o Paulo - USP, Federal University of Rio Grande do Sul - UFRGS, Federal University of Santa Catarina - UFSC).

Besides the Rede Clima network institutions, other institutions may be involved in preparing the 5NC, BUR5, and the BTRs, as listed in Table 1. The 5NC/BUR5/BTR1/BTR2 will be attended by the Rede CLIMA and cover a national and sub-national assessment of GHG emissions, Brazil's national circumstances in climate change, and vulnerability assessment and adaptation.

The stakeholder engagement plan will include measures to manage risks that the Covid-19 pandemic and the possible reinstatement of containment measures may pose to both project staff and stakeholders' mobility and engagement. The project will employ videoconferencing equipment/tools for virtual meetings and workshops, revise workplan, apply social distancing and provide personal protective equipment (PPE) to prevent exposure among project staff, stakeholders, and participants as and when necessary. The budget will be included for IT support and PPE accordingly.

The impact of the Covid-19 on project progress will be closely monitored, and adaptive management will be used to minimize, and address impacts it may have on the availability of technical expertise, capacity, and changes in timelines. The project will strengthen capacity and experience for remote work, online interactions, limited remote data, and information access.

Civil society representatives (including women and youth associations) will participate through the Brazilian Forum on Climate Change, assuring their perspectives are incorporated in the decision-making process.

Table 1. Major Identified Stakeholders at the national level (additional to the Ministry of Science, Technology and Innovations (MCTI), acting as the coordinating entity for this project)

Stakeholder	Role	Outcomes related
Ministry of Foreign Affairs	Its mission is to assist the President in foreign policy formulation, ensure its implementation, conduct diplomatic relations with other national state governments, international organizations and bodies, and promote the Brazilian state and society's interests abroad.	1.1 2.1 2.2 3.2 4.1 4.2 4.3 5.1 6.1 6.2 6.3 6.4 6.5

Stakeholder	Role	Outcomes related
Ministry of the Environment	Promoting the adoption of principles and strategies for the knowledge, protection, and recovery of the environment, the sustainable use of the natural assets, the valuation of environmental services, and the insertion of sustainable development in the formulation and implementation of public policies, in a transversal, participative, and democratic form at all levels and instances of government and society.	1.1 2.1 2.2 3.2 4.1 4.2 4.3 5.1 6.1 6.2 6.3 6.4 6.5
Ministry of Mines and Energy	Its competence includes geology, mineral and energy possessions, hydraulic energy, mining and metallurgy, oil, fuels, and electric energy, including nuclear.	1.1 2.1 2.2 3.2 4.1 4.2 5.1 6.1 6.2 6.3 6.4 6.5

Stakeholder	Role	Outcomes related
Ministry of Economy	Its main objective is to formulate and implement the Brazilian economic policy to deal with various fiscal and monetary policy issues.	2.1 2.2 3.2 4.1 4.2 4.3 5.1 6.1 6.3 6.4 6.5
Ministry of Infrastructure	Formulation, coordination and supervision of transport policies. Participation in the strategic planning, establishing guidelines for its implementation and definition of priorities in investment programs. Approval of concession plans. Formulation and supervision of the execution of transportation policies in articulation with other relevant Ministries.	2.1 2.2 3.2 3.2 4.1 4.2 4.3 5.1 6.1 6.3 6.4 6.5

Stakeholder	Role	Outcomes related
<p>Ministry of Agriculture, Livestock and Food Supply</p>	<p>It is responsible for public policies that promote Agriculture and Livestock activities, foster agribusiness, and regulate related services.</p>	<p>1.1 2.1 2.2 3.2 4.1 4.2 4.3 5.1 6.1 6.2 6.3 6.4 6.5</p>
<p>Office of the Chief of Staff</p>	<p>Responsible for the Chief of Executive Power's direct advice in coordinating government actions, including other ministries. They are also responsible for evaluating the legislative proposals that the Chief Executive directs to the Legislative Branch and taking care of the government's official acts.</p>	<p>2.1 2.2 3.2 4.1 4.2 5.1 6.1 6.5</p>

Stakeholder	Role	Outcomes related
Ministry of Regional Development	It is responsible for a cross-sector approach on housing, sanitation, transport, and urban mobility, considering land use and occupation.	1.1 2.1 2.2 3.2 4.1 4.2 4.3 5.1 6.1 6.3 6.4 6.5
Ministry of Health	Its mission is to provide conditions for the promotion, protection, and recovery of the population health, reduce illnesses, control endemic and parasitic diseases, and improve health surveillance.	2.1 2.2 3.1 3.2 4.1 4.2 4.3 5.1 6.1 6.3 6.4 6.5

Stakeholder	Role	Outcomes related
Brazilian Research Network on Global Climate Change (Rede CLIMA)	A scientific network to generate and disseminate knowledge to address the challenges inherent to the causes and effects of global climate change.	1.1 2.2 3.1 3.2 4.1 4.2 4.3 6.1 6.2 6.3
National Institute for Space Research (INPE)	INPE is a National Institute of Science and Technology (INCT) that produces science and technology in space and terrestrial environments.	3.1 3.2 4.1 4.2 6.4
Brazilian Forum on Climate Change (FBMC)	It aims to raise society awareness and mobilize it for discussion and decision-making on problems resulting from climate change, thus promoting stakeholder dialogue. It promotes the institutional interface between Government and Civil Society.	4.1 4.2 4.3 6.2 6.4
Brazilian Agricultural Research Corporation (Embrapa)	Essential partner for the development of analysis, data collection, and generation of national emission factors related to the agriculture, LULUCF, and waste management sectors of the National Inventory;	1.1 2.2 3.1 3.2 4.1 4.2 6.1 6.2 6.3 6.4



Stakeholder	Role	Outcomes related
Brazilian Institute of Geography and Statistics (IBGE)	Responsible for surveying, systematizing, and making available the country's official statistical data, many of them regionalized, which subsidize the development of the Emissions Inventory, National Circumstances, and the analysis of Impacts, Vulnerability and Adaptation.	2.1 3.1 3.2 4.1 4.2 4.3
National Industry Confederation (CNI)	It has the mission of representing the industry sector, fostering an environment favoring business, competitiveness, and sustainable development. It is the leading business organization engaged in promoting the growth and competitiveness of the Brazilian Industry.	2.1 3.2 4.1 4.2 6.2 6.4
Energy Research Office (EPE)	EPE aims at supporting the Brazilian Ministry of Mines and Energy (MME) energy policies with studies and research on energy planning covering electricity, oil, natural gas, and its derivatives and biofuels.	1.1 2.2 3.2 4.1 4.2 6.1 6.3
Brazilian Panel on Climate Change (PBMC)	It functions as an IPCC-like panel of Brazilian scientists issuing authoritative science-based assessments of climate change science, impacts, vulnerability, adaptation, and mitigation options.	3.1 3.2 4.1 4.2 4.3 6.2 6.2 6.4

Stakeholder	Role	Outcomes related
<p>Institute of Applied Economic Research (IPEA)</p>	<p>It is a research institute on economics and planning policies.</p>	<p>2.1 2.2 3.1 3.2 4.1 4.2 4.3 6.2 6.4</p>
<p>Brazilian Chemical Industry Association (ABIQUIM)</p>	<p>Provide data and information on GHG emissions of industrial processes: chemical industry and industrial processes emissions.</p>	<p>1.1 2.2 4.1 4.2 6.1 6.3</p>
<p>National Cement Industry Union (SNIC)</p>	<p>Provide data and information on GHG emissions of industrial processes: mineral products ? production of cement.</p>	<p>1.1 2.2 4.1 4.2 6.1 6.3</p>
<p>Brazilian Aluminum Association (ABAL)</p>	<p>Provide data and information on GHG emissions of industrial processes: metal products ? aluminum.</p>	<p>1.1 2.2 4.1 4.2 6.1 6.3</p>
<p>Brazil Steel Institute (IABr)</p>	<p>Provide data and information on GHG emissions of industrial processes: metal products ? iron and steel.</p>	<p>1.1 2.2 4.1 4.2 6.1 6.3</p>

Stakeholder	Role	Outcomes related
Brazilian Lime Producers Association (ABPC)	Provide data and information on GHG emissions of industrial processes: mineral products ? production of lime, limestone, and dolomite.	1.1 2.2 4.1 4.2 6.1 6.3
Petrobras	Provide data and information on GHG emissions of fugitive GHG emissions in the oil and natural gas industry.	1.1 2.2 4.1 4.2 6.1 6.3
Association of the Santa Catarina Coal Industry (SATC)	Provide data and information on GHG emissions of fugitive GHG emissions from coal mining and handling.	1.1 2.2 4.1 4.2 6.1 6.3
National Civil Aviation Agency (ANAC)	Provide data and information on GHG emissions from civil aviation.	1.1 2.2 4.1 4.2 6.1 6.3

Gender dimension:

Many governments worldwide have established legally binding commitments to respect, protect, and fulfill women's human rights; simultaneously, gender equality and diversity have been widely recognized to positively affect organizations, the economy, and sustainability . In climate change, women are most negatively affected while displaying knowledge and skills to orient themselves toward climate adaptation activities within their communities.

According to the Brazilian Institute of Geography and Statistics, 51.8% of the Brazilian population comprises women. Ten years ago, the number of women in the federal public administration represented 41.38%. In 2021, of the 226,763 ministry workers, 43.3% are women, increasing only 1.77%[1]<sup>1</sup>. The Federal Government's Transparency Portal[2]<sup>2</sup>, which presents data on civil servants,

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does not immediately offer the share of women in the number of active civil servants. Still, concerning the Federal Executive Branch, the female representation in the first echelon is three women among the 22 existing ministries. As for representativeness in the Brazilian parliament, the Female Bench in the National Congress for the 2019-2022 legislature grew compared to the previous one, totaling 15% of the seats in parliament. The number of female federal deputies rose from 51 to 77, with 43 occupying the position for the first time<sup>[3]</sup>. The Federal Senate remained stable; of the 81 seats, only 12 (14%) are occupied by women in this legislature. Of the 353 candidates for the Senate in the 2018 elections, 62 were women and, of those, seven were elected<sup>[4]</sup>.

The Gender Development Index (GDI), released by the United Nations Development Program (UNDP)<sup>[5]</sup> of 2019, indicates that women in Brazil study an average of 8.1 years (7.6 of men) and are in better conditions of health than men, with a longer life expectancy at birth at 79.4 years compared to 72 for men. However, they are lower when it comes to gross income, receiving 41.5% lower income. Women receive by year an average of US\$ 10,432 against US\$ 17,827 for men. According to the GDI, which points to the same indicators like the Human Development Index (HDI) - health, education, and income - but disaggregated by sex, among the 166 countries evaluated, Brazil is in 79th position (0.761).

The HDI ranges from 0 to 1 ? the higher, the more developed the country. As for the HDI released in 2020, Brazil fell five positions, 84th in the ranking involving 189 countries.

The pandemic context from 2020 also affected the labor market for women. According to a recent study by the Institute for Applied Research (IPEA), in the second quarter of 2019, the female occupancy rate (46.2%) was lower than that of men (64.8%). In the same period of 2020, there was a reduction to 39.7% for women and 58.1% for men. According to the same study, before the pandemic, women in Brazil had a greater chance of changing their situation from occupied to inactive and a lesser chance of entering the occupied condition. According to the survey, the health crisis further intensified these odds<sup>[6]</sup>.

Among women who have a formal job, there is the challenge of the wage gap. A survey released by the IBGE in 2021 indicates that women received 77.7% of men's wages in 2019. The difference is higher in managerial positions, such as directors and managers. In this group, women earned only 61.9% of men's income<sup>[7]</sup>.

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The information presented above indicates how relevant the gender perspective is in the current Brazilian context. However, the debate on climate change from a gender perspective is still insufficient given the prospects that climate change will aggravate the existing gender gaps[8]<sup>8</sup>.

The project expects to include gender-responsive measures to address gender gaps or promote gender equality and women empowerment, closing gender gaps in access to and control over natural resources, and improving women's participation and decision-making.

The key reasons for incorporating gender issues in NCs correspond to greater transparency, better planning, greater efficiency and better results. Some of these are immediately obvious, such as the benefits documented in the NC reports; and some others will be later, such as the benefits arising from gender sensitivity in NCs and related plans and policies. The "Gender Responsive National Communications Toolkit" from UNDP[1] will be consulted to strengthen the capacity of national government staff and assist in integrating gender equality into the development of NC.

Gender equality and women's empowerment will be considered in 5NC/BUR/BTR1/BTR2 in several different ways:

- In the participatory processes (through the selection of participants, mediator roles), including in all capacity development activities;
- On socioeconomic description by gender dimensions, and in the definition of public policies associated with gender equality and women's empowerment;
- In the workshops to evaluate climate change impacts per gender, which will lead to a publication that will address gender-responsive measures to address climate change;
- On project coordination and team selection criteria, including the National Secretary for Women and Project's Consulting Technical Committee involvement.

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[1] Available at:

<https://www.undp.org/content/dam/undp/library/gender/UNDP%20Gender%20Responsive%20National%20Communications%20Toolkit.pdf>

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- [1] Available at: <https://www.metropoles.com/brasil/politica-brasil/apesar-de-maioria-no-pais-mulheres-sao-433-nos-22-ministerios>
- [2] Available at: <http://www.portaltransparencia.gov.br/servidores>
- [3] Available at: <https://www.camara.leg.br/noticias/545897-bancada-feminina-na-camara-sobe-de-51-para-77-deputadas/>
- [4] Available at: <https://www12.senado.leg.br/noticias/materias/2019/01/31/bancada-feminina-no-senado-diminui-em-2019>
- [5] Available at: <https://g1.globo.com/mundo/noticia/2019/12/09/mulheres-estudam-mais-no-brasil-mas-tem-renda-415percent-menor-que-homens-diz-onu.ghtml>
- [6] Available at:  
[https://www.ipea.gov.br/portal/index.php?option=com\\_content&view=article&id=37963&catid=10&Itemid=9](https://www.ipea.gov.br/portal/index.php?option=com_content&view=article&id=37963&catid=10&Itemid=9)
- [7] Available at: <https://www.cnnbrasil.com.br/business/2021/03/04/mulheres-ganham-77-7-dos-salarios-dos-homens-no-brasil-diz-ibge>
- [8] Available at: <https://www.cepal.org/pt-br/publicaciones/46643-dimensao-genero-big-push-sustentabilidade-brasil-mulheres-contexto-transformacao>

A gender action plan will be developed during the project preparation phase for CEO Endorsement, including gender-responsive activities, gender-sensitive indicators, and expected project outputs. The project expects to include gender-responsive measures to address gender gaps or promote gender equality and women empowerment, closing gender gaps in access to and control over natural resources, and improving women's participation and decision-making.

Gender equality and women's empowerment will be considered in 5NC/BUR/BTR1/BTR2 in several different ways:

- In the participatory processes (through the selection of participants, mediator roles), including in all capacity development activities;
- On socioeconomic description by gender dimensions, and in the definition of public policies associated with gender equality and women's empowerment;
- In the workshops to evaluate climate change impacts per gender, which will lead to a publication that will address gender-responsive measures to address climate change;
- On project coordination and team selection criteria, including the National Secretary for Women and Project's Consulting Technical Committee involvement.

### **C. DESCRIBE THE ENABLING ACTIVITY AND INSTITUTIONAL FRAMEWORK FOR PROJECT IMPLEMENTATION**

Discuss the work intended to be undertaken and the output expected from each activity as outlined in Table A

The Implementing Partner for this project is the Ministry of Science, Technology and Innovation (MCTI).

The Implementing Partner is the entity to which the UNDP Administrator has entrusted the implementation of UNDP assistance specified in this signed project document along with the assumption of full responsibility and accountability for the effective use of UNDP resources and the delivery of outputs, as set forth in this document.

The Implementing Partner is responsible for executing this project. Specific tasks include:

- ? Project planning, coordination, management, monitoring, evaluation and reporting. This includes providing all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes and is aligned with national systems so that the data used and generated by the project supports national systems.
- ? Overseeing the management of project risks as included in this project document and new risks that may emerge during project implementation.
- ? Procurement of goods and services, including human resources.
- ? Financial management, including overseeing financial expenditures against project budgets.
- ? Approving and signing the multiyear workplan.
- ? Approving and signing the combined delivery report at the end of the year; and,
- ? Signing the financial report or the funding authorization and certificate of expenditures.

Responsible Parties: The selection and engagement of Responsible Parties will be defined during the project execution and in accordance with UNDP rules.

Project stakeholders and target groups: The MCTI will coordinate all the necessary steps to achieve the project outcomes, especially promoting deliberations and sharing good practices by holding bilateral and expanded meetings, establishing suitable institutional arrangements for the national communications preparation on an ongoing basis, also, investing efforts in the diversification of engagement mechanisms to stimulate interested parties' participation, allowing the preparation of all outcomes expected in this project.

The coordination promoted by the MCTI under the project includes the federal government's prominent representatives and public consults done with the specialists from the civil society, private sector, and academic area, ensuring the national institutions' ownership of the project outcomes, and enhance inter-institutional cooperation.

During the implementation of the project, Brazil will explore opportunities to benefit from and take advantage of institutional and stakeholder engagement and existing consultation mechanisms, such as the Interministerial Committee on Climate Change (CIM), which is the ultimate national authority of

decision-making on climate change issues under the country and currently is comprised of eight relevant Ministries such as the Ministry of the Environment (MMA), Ministry of Economy (ME), Ministry of Infrastructure (MINFRA), Ministry of Mines and Energy (MME), Ministry of Agriculture, Livestock and Food Supply (MAPA), Ministry of Science, Technology and Innovations (MCTI), Ministry of the Foreign Affairs (MRE), Ministry of Regional Development (MDR), and Ministry of the Civil House.

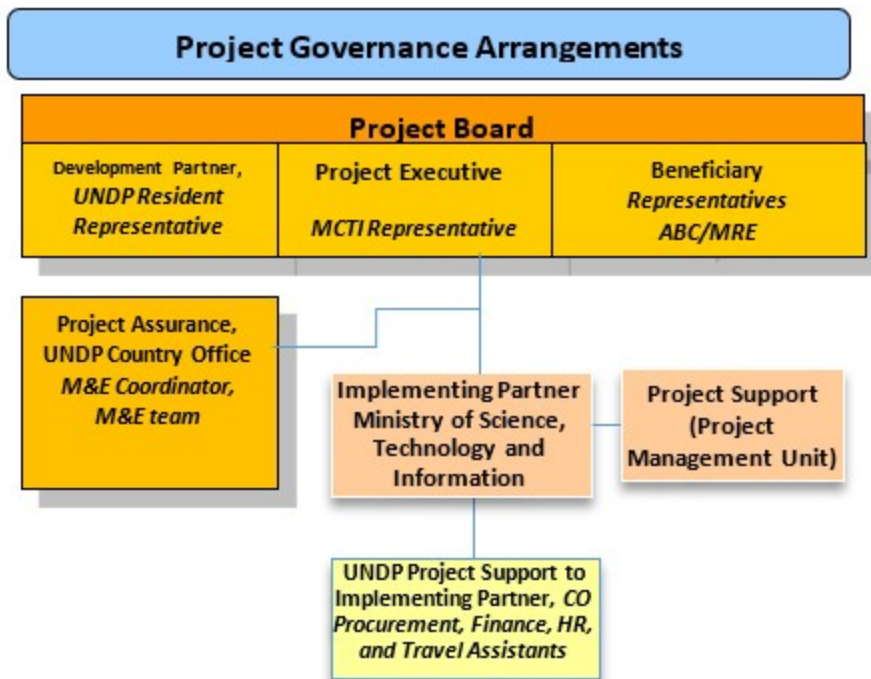
The activities developed under the National Communications? projects by the coordination of the MCTI will further strengthen the discussion and the institutional arrangements that currently exist to better be prepared to elaborate and improve future NCs and BTRs, or other commitments assumed by the country at the UNFCCC. Internally, the project activities foster exchanging information and experiences, formulate and promote capacity building, and raise awareness through a participatory approach based on scientific evidence

UNDP is accountable to the GEF for the implementation of this project. This includes overseeing project execution undertaken by the Implementing Partner to ensure that the project is being carried out in accordance with UNDP and GEF policies and procedures and the standards and provisions outlined in the Delegation of Authority (DOA) letter for this project. The UNDP GEF Executive Coordinator, in consultation with UNDP Bureaus and the Implementing Partner, retains the right to revoke the project DOA, suspend or cancel this GEF project. UNDP is responsible for the Project Assurance function in the project governance structure and presents to the Project Board and attends Project Board meetings as a non-voting member.

A firewall will be maintained between the delivery of project oversight and quality assurance performed by UNDP and charged to the GEF Fee and any support to project execution performed by UNDP (as requested by and agreed to by both the Implementing Partner and GEF) and may be charged to the GEF project management costs (only if approved by GEF). The segregation of functions and firewall provisions for UNDP in this case is described in the next section.

Project governance arrangements





- First line of defense**
- UNDP oversight of project support to IP cannot be UNDP staff providing project assurance or providing programmatic oversight support to the RR
- Second line of defense**
- Regional Bureau oversees RR and Country Office compliance at portfolio level.
  - BPPS NCE RTA oversees technical quality assurance and GEF compliance. BBPS NCE PTA oversees RTA function.
  - UNDP NCE Executive Coordinator and Regional Bureau Deputy Director can revoke DOA/cancel/suspend project or provide enhanced oversight.

The UNDP Resident Representative assumes full responsibility and accountability for oversight and quality assurance of this Project and ensures its timely implementation in compliance with the GEF-specific requirements and UNDP's Programme and Operations Policies and Procedures (POPP), its Financial Regulations and Rules and Internal Control Framework. A representative of the UNDP Country Office will assume the assurance role and will present assurance findings to the Project Board, and therefore attends Project Board meetings as a non-voting member.

UNDP project support: The Implementing Partner and GEF OFP have requested UNDP to provide support services in the amount of USD 210,130.00 for the full duration of the project, and the GEF has agreed for UNDP to provide such execution support services and for the cost of these services to be charged to the project budget. The execution support services - whether financed from the project budget or other sources - have been set out in detail and agreed between UNDP Country Office and the Implementing Partner in a Letter of Agreement (LOA). This LOA is attached to this Project Document.

To ensure the strict independence required by the GEF and in accordance with the UNDP Internal Control Framework, these execution services will be delivered independent from the GEF-specific oversight and quality assurance services.

Roles and Responsibilities of the Project Organization Structure:

a) Project Board: All UNDP projects must be governed by a multi-stakeholder board or committee established to review performance based on monitoring and evaluation, and implementation issues to ensure quality delivery of results. The Project Board (also called the Project Steering Committee) is the most senior, dedicated oversight body for a project.

The two main (mandatory) roles of the project board are as follows:

- 1) High-level oversight of the execution of the project by the Implementing Partner (as explained in the 'Provide Oversight' section of the POPP). This is the primary function of the project board and includes annual (and as-needed) assessments of any major risks to the project, and decisions/agreements on any management actions or remedial measures to address them effectively. The Project Board reviews evidence of project performance based on monitoring, evaluation and reporting, including progress reports, evaluations, risk logs and the combined delivery report. The Project Board is responsible for taking corrective action as needed to ensure the project achieves the desired results.
- 2) Approval of strategic project execution decisions of the Implementing Partner with a view to assess and manage risks, monitor and ensure the overall achievement of projected results and impacts and ensure long term sustainability of project execution decisions of the Implementing Partner (as explained in the 'Manage Change' section of the POPP).

Composition of the Project Board: The composition of the Project Board must include individuals assigned to the following three roles:

1. Project Executive: This is an individual who represents ownership of the project and chairs (or co-chairs) the Project Board. The Executive usually is the senior national counterpart for nationally implemented projects (typically from the same entity as the Implementing Partner), and it must be UNDP for projects that are direct implementation (DIM). In exceptional cases, two individuals from different entities can co-share this role and/or co-chair the Project Board. If the project executive co-chairs the project board with representatives of another category, it typically does so with a development partner representative. The Project Executive is: the Ministry of Science, Technology and Innovations (MCTI).
2. Beneficiary Representative(s): Individuals or groups representing the interests of those groups of stakeholders who will ultimately benefit from the project. Their primary function within the board is to ensure the realization of project results from the perspective of project beneficiaries. Often representatives from civil society, industry associations, or other government entities benefiting from the project can fulfil this role. There can be multiple beneficiary representatives in a Project Board. The Beneficiary representative (s) is: the Brazilian Cooperation Agency (ABC, in Portuguese acronym).
3. Development Partner(s): Individuals or groups representing the interests of the parties concerned that provide funding, strategic guidance and/or technical expertise to the project. The Development Partner(s) is/are: the United Nations Development Programme (UNDP).

b) Project Assurance: Project assurance is the responsibility of each project board member; however, UNDP has a distinct assurance role for all UNDP projects in carrying out objective and independent

project oversight and monitoring functions. UNDP performs quality assurance and supports the Project Board (and Project Management Unit) by carrying out objective and independent project oversight and monitoring functions, including compliance with the risk management and social and environmental standards of UNDP. The Project Board cannot delegate any of its quality assurance responsibilities to the Project Manager. Project assurance is totally independent of project execution.

A designated representative of UNDP playing the project assurance role is expected to attend all board meetings and support board processes as a non-voting representative. It should be noted that while in certain cases UNDP's project assurance role across the project may encompass activities happening at several levels (e.g. global, regional), at least one UNDP representative playing that function must, as part of their duties, specifically attend board meeting and provide board members with the required documentation required to perform their duties. The UNDP representative playing the main project assurance function is: the Monitoring & Evaluation Officer.

c) Project Management ? Execution of the Project: The Project Manager (PM) (also called project coordinator) is the senior most representative of the Project Management Unit (PMU) and is responsible for the overall day-to-day management of the project on behalf of the Implementing Partner, including the mobilization of all project inputs, supervision over project staff, responsible parties, consultants and sub-contractors. The project manager typically presents key deliverables and documents to the board for their review and approval, including progress reports, annual work plans, adjustments to tolerance levels and risk registers. A Technical Coordinator will also be hired with the project resources and will be responsible for the coordination of the project technical activities.

A designated representative of the PMU is expected to attend all board meetings and support board processes as a non-voting representative. The primary PMU representative attending board meetings is the Project Manager.

Narrative description of project activities:

1 ? National GHG Inventory (GHGI)

Outcome 1.1. - National GHG Inventory (GHGI) is improved and updated

The National GHG Emissions Inventory represents one of the most complex and costly project components due to the comprehensive institutional arrangement necessary for the suitable collection of activity data, in addition to the development of specific studies to define parameters and emission factors to the main categories of the emitting sectors (Energy, IPPU, Agriculture, LULUCF, and Waste). Allied to this, we have challenges associated with information management due to the country's extensive territorial dimension and the extraordinary volume of data used to calculate emissions and removals of greenhouse gases (GHG) - which include CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, and SF<sub>6</sub>, in addition to the CO, NO<sub>x</sub>, NMVOCs, and SO<sub>x</sub> precursors.

Previous editions of the National Inventory presented at INC, SNC, TNC, and 4NC have been recognized to increase methodological improvement. Above all, within the scope of the 4NC project, it

was possible to comply with the initial forecast of engaging the national scientific community, mainly through partnerships established with Rede CLIMA. Their researchers were responsible for technical-scientific studies that supported the estimation of national emissions with statistics and parameters; the majority developed regionally, which allowed the possibility of disaggregating all sectoral emissions results subnationally.

This additional effort had a positive effect on recognizing Brazilian states' emissions profile, intending to allow subnational entities to assess and plan whenever relevant public policies for mitigating emissions consistent with their key sectors.

Given the perspective during the 4NC that countries should use the IPCC 2006 methodology to report emissions in the future, the MCTI and its partners anticipated efforts related to the methodological improvement necessary to meet this guidance requirements. Thus, in addition to the team's capacity and the partners network using IPCC 2006, it was also possible to identify information gaps and technical aspects to be filled through this project.

In this project proposal, it will be developed the emission inventories for 5CN, BUR5, and two BTRs (BTR1 and BTR2), a continuous improvement inherent to the elaboration of national inventories is foreseen. In this sense, the lessons learned based on efforts to overcome the challenges pertinent to the capacity for political and institutional articulation between the executing agency, MCTI, and hundreds of institutions involved in carrying out the Inventory will be considered for planning partnerships to comply with activities described in this project proposal for 5NC, BUR5, and BTRs. This articulation planning will include holding meetings and technical workshops to discuss the methodological improvements that should be addressed in the partnership contracts, with the definition of procedures, institutional arrangements, and responsibilities.

Based on the formalization of partnerships and the establishment of improved institutional arrangement, activities aimed at collecting data and parameters necessary to comply with the IPCC 2006 methodology may be carried out to update historical series of emissions published in the 4NC inventory (1990-2016), and advance the estimates for the expected subsequent years of the BUR5 (2017-2018), 5NC (2019-2021) and BTRs (2019-2021 and 2022-2023) Inventories.

Initially, a 3-year interval will be adopted for BTR inventories between the last inventoried years (2021 and 2023) and the deadlines for submitting documents to the UNFCCC (2024 and 2026). However, as national capacity is developed, mainly related to generation and official data availability, this interval may be reduced to 2 years. Regarding the methodology considered in this project, it is worth emphasizing that IPCC 2006 will be the initial methodological reference for this component, with the possibility of adopting updated IPCC methodological guidelines approved by UNFCCC, as appropriate, to comply with the principles of improving transparency, accuracy, consistency, comparability, and completeness.

Based on improvements carried out on emission categories, according to the analysis of key categories, the Agriculture, Energy, and LULUCF sectors will receive special attention to improve their estimates, given their greater relevance to national emissions. These improvements are related to (i) the access to

activity data from information sources more statistically robust; (ii) studies to define emission factors and other regionalized accurate parameters, as far as possible; and (iii) the definition of a mapping methodology for land use and land use transition spatially explicit for LULUCF sector, on a biennial basis.

The Quality Assurance and Quality Control (QA/QC) plan implemented for the 4NC inventory included structuring a project team composed of Technical Coordination, Supervision, and Expert Analysts in the sectors responsible for reviewing data and results generated within the scope of partnerships, as part of the QC. In addition, for the LULUCF sector, due to the specificities of Brazilian biomes, a Land Use Mapping Validation Committee was structured to ensure the quality of identified transitions. Regarding the QA, as occurred in previous National Communications, a Public Consultation process was performed with Specialists not directly involved in developing the Inventory. This QA/QC plan was successful; however, it is foreseen to be reviewed and improved based on lessons learned and the need to adapt the processes to this project schedule.

Additionally, a more significant effort should be made to improve the analysis of uncertainties in the Inventory, whose quantification methodology is mandatory to BTR; these improvements have not yet been appropriately applied due to specific sectorial information unavailability. There are also plans to include analyzes of key categories to be reported in the BTR inventories.

The rules established for reporting the GHG Inventory in the BTRs will require actions to promote institutional framework strengthening for its preparation every two years. Due to the IPPU sector dependence on data from the private sector and industry, and the time consuming for mapping work at the LULUCF sector, an appropriate strategy must be developed to meet the deadlines. After each Inventory edition planned for this project, it is intended to execute an analysis of flexibility needs, including institutional or technical capacity limitations. In addition, an improvement plan will be drawn up for subsequent inventories.

2 ? National Circumstances, Envisaged Steps for the Convention Implementation, and other relevant information

Outcome 2.1. Report on National Circumstances and other relevant information updated

Due to this outcome similarity with NC and BUR documents scope, the data collected can be used in different publications and updated from official data whenever possible. Previous NCs and BURs presented information on the national circumstances on natural resources, geography, population, GDP, climate, and socioeconomic conditions, as well as mitigation and adaptation initiatives, needs and gaps, and support received. In this project, all information will be updated for the reports.

The relevant initiatives, policies, programs, and plans for mitigation and adaptation to climate change will be identified, updated, and reported, as done in the last NC submitted to the UNFCCC. The national priorities, strategy, and relevant legislation to climate change will be updated and analyzed considering their status and tendencies. Still related to national priorities analysis, there will be an in-depth discussion on economic, agricultural, and energy circumstances.

A gender perspective will be included in the analysis of socioeconomic indicators and official statistics from the country, and analysis of Covid-19 pandemic impacts for climate change and national health indicators will be presented.

A complementary analysis will also be carried out about investments to promote mitigation actions and the report on capacity building and awareness initiatives on climate change issues. This component will also include describing the institutional arrangements relevant to the 5NC, the BUR5, and the BTRs preparation, and the engagement of a diversity of stakeholders (national and subnational government, private sector, academy, NGOs) for 5NC execution. Partnerships with government agencies responsible for generating statistics and official analyses and hiring specialized consultants to execute appropriate analysis and data consolidation are foreseen.

#### Outcome 2.2. Institutional arrangements structured

The information on institutional arrangements for implementing the Convention and elaborate the NCs and BURs will be updated for the reports. The relevant institutional arrangements and partnerships with government agencies responsible for generating statistics and official analyses will be described.

### 3 ? Vulnerability assessment and adaptation measures

#### Outcome 3.1. Assessment of climate scenarios and observed tendencies for Brazil improved with the use of advanced and updated climate models and information

The observed climate trends, which have an essential role in understanding climate change and its impacts will be analyzed in Outcome 3.1. Gathering information from studies and other sources will provide elements for reporting the major climate-related impacts and vulnerabilities in key-sectors (such as Energy, Food, Water and Socioenvironmental Securities) in Brazil, as part of a continuous process of updating and improving the information made available from previous National Communications. Further studies on specific issues (such as extreme events and natural disasters) are expected to complement the descriptions and analysis carried out, and advance scientific knowledge.

The 5NC and future BTRs intend to benefit from a continued scientific program from the National Institute for Space Research (INPE), which constitutes advanced and updated climate models to produce national scenarios until 2100. The initiative will also analyze observed climate trends, which have an essential role in understanding climate change and its impacts.

#### Outcome 3.2. Vulnerability to climate change in Brazil assessed and adaptation measures identified for key-sectors

The 4NC presented considerable methodological improvements, compared to the TNC, when carried out the analysis of impacts and vulnerabilities in an integrated manner (by Food, Water, Energy, and Socioenvironmental Securities). In addition, the analyzes were based on the warming level of climatic scenarios considering temperature rise of 1.5, 2, and 4 Celsius degrees. It was agreed that this

perspective would be more in line with Paris Agreement objectives and commitments, and despite the tremendous complexity regarding this analysis and the countless challenges associated, there is a prospect of moving forward from these analyzes to work on 5NC.

Gathering information from studies and other sources will provide elements for reporting the major climate-related impacts and vulnerabilities in key-sectors in Brazil, as part of a continuous process of updating and improving the information made available from previous National Communications. Further studies on specific issues are expected to complement the descriptions and analysis carried out and advance scientific knowledge. The country's main governance instruments and initiatives contributing to the adaptation to climate change shall be surveyed to report efforts being made and identify opportunities, considering available reports of the National Adaptation Plan, as well as sectoral and subnational initiatives as appropriate.

Additionally, planning will be developed to promote a vulnerability assessment in the gender context, including indigenous people and traditional communities. This analysis will represent another innovation. It is essential to create an environment where gender-related vulnerabilities and threats are identified and, for that, it is necessary to value specific knowledge that is prepared to capture these particularities. For example, a critical socio-climatic risk related to women is developing diseases during pregnancy, usually enhanced at high temperatures, such as pre-eclampsia.

There are also female-headed houses in climatic threats, such as floods, which can indicate multiple working hours and, therefore, amplified impacts on the family. This knowledge is linked to the importance of mapping socio-climatic risks by collecting data in loco to understand risks, considering gender differences. In order to comply with component activities, the project team will be appropriately structured, with the possibility of formalizing partnerships and hiring specialists of climate projections and analysis of impacts and vulnerabilities.

#### 4 ? Public Awareness, Development of National Capacity, and Gender Mainstreaming in mitigation policies and measures

Outcome 4.1. An enhanced public awareness strategy on climate change is developed, including the compilation and update of relevant information

In recent years, the Brazilian government has developed important initiatives to increase awareness of climate change through the creation of three systems presented at 4NC: (1) Integrated Information System of the Sector Plan for the Consolidation of a Low Carbon Emission Economy in Agriculture (SIN-ABC); (2) National Emissions Registry System (SIRENE); and (3) Climate Vulnerability System (SisVuClima). Other platforms such as AdaptaBrasil MCTI, EducaClima, and AdaptaCLIMA, which also contributed to the climate awareness and education strategy, were reported at 4NC. These achievements reflect the counterpart of the Brazilian government.

Continuous updates of the website will be implemented, aimed at disseminating scientific data and other information. As a result of a good practice previously adopted, within the scope of the 4NC

project, communication and language specialists will be hired to improve the project communication strategy and translate relevant documents from English into Portuguese, and vice versa. This activity allowed the previous project to contribute to the Community of Portuguese Speaking Countries through the access to translated documents, originally written in English by the UNFCCC, facilitating and improving their understanding of the guidelines and rules agreed in the Convention.

Workshops and seminars are also planned to disseminate information and strengthen debates on climate change by disclosing the project's main results. One of the major concerns and opportunities associated with climate change is the lack of public awareness regarding the actual extent and dimensions of the related risks and challenges. Brazil believes in promoting scientific exchange among specialists and diffusing scientific findings to society. It will allow scientific knowledge to promote a change in current paradigms and adequately inform the policy-making community.

Specialized services will be hired to continue some activities implemented in the 4NC project, such as research on public perception of climate risk, training about Climate Change for Science teachers, and the development of didactic, educational, and accessible material on climate change issues. These training and exchange of experiences will allow the appropriate development and future improvement of the activities concerning outputs 4.2.2 (Development of an interconnected database for mitigation options and other relevant information systematized), 4.2.3 (Improvement of the National Emissions Registry System - SIRENE), and 4.2.4 (Improvement of adaptation platform (AdaptaBrasil MCTI) with updated data), ensuring the perpetuity, organization, and security of information for continuity of work in the long term.

Outcome 4.2. Development of national capacity and institutional arrangements improvement for implementation and monitoring of climate actions

Capacity building to strengthen the government to manage the existing platforms and databases continuously is highly needed. Activities will be carried out to develop databases for systematizing information related to mitigation options and including the improve of the existing platforms and systems (as SIRENE, AdaptaBrasil MCTI, MCTI's official Climate portal).

SIRENE provides graphs and tables on national emissions, which can be exported in an editable format based on user-selected filters. In addition, all official publications and transparency reports are made available to the general public on the platform. Finally, SIRENE also provides emission and energy scenarios for 2012-2050, which are generated based on information emanating from the project ?Mitigation Options of Greenhouse Gas Emissions in Key Sectors in Brazil?, a GEF project previously executed by MCTI CGCL with the support of UNEP. Procedures are planned to strengthen institutional arrangements for access to official data, considering technical cooperation with official government institutions, making available suitable data to the inventory calculation, as well as the cooperation of industrial associations for data collection that allow better estimates IPPU and Waste sector.

National and international specialists will be hired to assist in the development of national capacity, mainly to strengthening the institutional arrangements and scientific, technical, and institutional



improvement for the implementation and monitoring of mitigation actions, the structuring of a national MRV system, the preparation of estimates of GHG emissions and their respective database.

Under the Enhanced Transparency Framework (ETF) of the Paris Agreement, starting in 2024, all Parties will be required to regularly report information on national greenhouse gas (GHG) inventories using a set of Common Reporting Tables (CRTs). This will require a greater effort and an enhanced capacity of the technical team. The rules established for reporting the GHG Inventory in the BTRs will require actions to strengthen institutional framework for its preparation every two years. Due to the IPPU sector dependence on data from the private sector and industry, and the time consuming for mapping work at the LULUCF sector, an appropriate strategy must be developed to meet the deadlines.

In addition, training courses will be carried out for the different technical teams of government partners and other partners to be involved in the project to guarantee the exchange of experiences and good practices to comply with the analyses, monitoring, and reporting of GHGI, mitigation actions, and others.

Outcome 4.3. Gender mainstreaming in planning and implementing climate change mitigation policies and measures

Innovatively, this project proposes to adopt measures to broaden the gender perspective on climate change and promote clarification about the relevance of this aspect for the stakeholders involved in its execution. It is expected to strengthen the institutional capacity to incorporate the gender perspective through training to the team directly involved with the project, stakeholders, government focal points, indigenous people and traditional communities, and general public, so that they can identify opportunities to include, expand or strengthen the gender theme and climate change, which is transversal to the different agendas conducted by the federal government, in the already existing initiatives.

Training for climate change gender empowerment will be planned based on discussions with different partners such as UN Women, representatives of Universities, and national and international organizations involved with the Gender theme. This training may target different audiences - female leaders, the most vulnerable communities, the private sector, and others, depending on the training's final scope definition. In addition, gender specialists will be hired to promote an appropriate integration between this theme and climate change, identify gaps and related needs, and promote recommendations to ensure gender mainstreaming in planning and implementing climate change mitigation policies and measures.

Special attention will be given to the detailed gender analyses as well as collection and analysis of gender data in relation to climate change. Studies will be made in order to identified gender missing data and gender needs assessment to climate change. Recommendations to ensure gender mainstreaming are planned, even as outreach activities about integrating gender and climate change and Training for climate change gender empowerment will be undertake.

## 5 ? Publication and submission of the 5NC

Outcome 5.1. 5NC is published and submitted to the UNFCCC by Dec 2024

This component will include the final consolidation of the 5NC document, which must be submitted until December 2024 to the UNFCCC.

Specialized services will be hired for layout design and printing of the final document in Portuguese and English. Other activities planned for this component are: organize regular workshops to discuss progress, exchange ideas, and present findings of the 5NC process; prepare the Executive Summary; 5NC submission to Project Steering Committee for technical and language review; 5NC publication; 5NC submission to Executive Secretary of the UNFCCC; 5NC report distribution to stakeholders; and, lessons learned assessment.

## 6 ? Preparation and submission of the Biennial Update Report (BUR) and the Biennial Transparency Reports (BTRs)

Outcome 6.1. Institutional arrangements for the preparation of BUR and BTRs

The previous experiences for the elaboration of BURs facilitate, to a certain extent, the development of institutional capacity of government agencies, at national level, involved in the management of information, collection, and data analysis of mitigation actions and their effects, as well as for support received for climate actions. Despite the advances achieved, there is still a need for improvement for the adequate systematization of information that can be better managed by developing a single and consistent database, which considers the historical record of resources received by different channels and funds. As far as possible, the project will envisage this database's structuring based on specialized IT service hiring.

In addition, this project intends to strengthen the institutional arrangement for preparation of BUR and BTRs, with a clear definition of roles and responsibilities of the bodies involved with the preparation of these documents and their specific components, such as the National GHGI, Mitigation Actions, domestic MRV, Support Received, among others.

Despite the similarities in scope between BUR and BTR, there are significant differences in reporting requirements and their respective review processes; then, the BTR still represents a field of broad improvement for the country. It is anticipated that the preparation of BTRs will take place under the flexibility rules agreed in the Convention and according to the national technical and institutional capacities developed.

BURs and BTRs' scope have common aspects to other project components, such as the emissions inventory (Component 1) and national circumstances analysis (Component 2) for both reports, and V&A (Component 3) for the BTRs. Thus, this Component 6 is planned to update and consolidate all of this information to publish BUR5, BTR1, and BTR2. However, it is worth clarifying that due to

decisions regarding modalities, procedures, and guidelines (MPGs) of the Convention for the Paris Agreement, some adjustments to formatting and deepening of analyzes should also be considered in this component, such as the structure of the National Inventory report according to the common reporting format tables (CRFs) and additional information about V&A.

#### Outcome 6.2. Mitigation actions and domestic MRV

Brazil was one of the few developing countries to report the NDC to the Paris Agreement with a mitigation approach based on an absolute reduction in greenhouse gas emissions for the economy as a whole. Besides, before 2020, the country steadily and consistently implemented the NAMAs reported to the Convention. In 2020, Brazil submitted to the UNFCCC its updated NDC, which reaffirms its commitment to reducing total net greenhouse gas emissions. The NDC also expresses the indicative objective of achieving climate neutrality (net-zero emissions) in 2060.

There are many challenges in implementing, monitoring and reporting these mitigation actions given its national circumstances. Besides, it will be necessary to enhance the analysis of the mitigation actions progress and the NDC tracking progress. The tracking progress toward the mitigation is a critical target in the coming period. An appropriately maintained MRV system with precise metrics in line with the MPGs for the Transparency Framework will be necessary.

This arrangement is challenging due to the need to consolidate information distributed in several initiatives. To achieve this is necessary to improve legal, strategic, methodological, and institutional aspects to ensure compliance with reporting requirements and biennial periodicity. To this end, training and capacity building with specialists will be planned to meet the needs raised with government partners, involving: (a) Training of specialists in traceability and certification systems as part of the domestic MRV system; (b) Support for dissemination of knowledge; (c) Support for digital interaction among public record agencies; (d) Technical training on and dissemination of energy management systems; (e) Technical training on methodology application, infrastructure and equipment and conducting studies.

#### Outcome 6.3. Needs, constraints, gaps, and other relevant info identified to the achievement of the objective of the Convention

The adequate systematization of information will be developed to better manage information and the historical record of resources received by different channels and funds. The updated information on needs, constraints, gaps, and other will be reported. For support received an official data managed by the federal government will be used and reported using the common format agreed under the UNFCCC decisions by the development of a time-series database.

#### Outcome 6.4. Climate change impacts and adaptation

Compiling information from studies and other sources will provide elements for reporting the major climate-related impacts and vulnerabilities in Brazil, as part of a continuous process of updating and

improving the information. The planning includes: identification and report of loss and damage available information associated to climate-related impacts in the country; prospection of initiatives that contribute to the adaptation efforts in the country, aiming to provide subsidies for planning and implementation cycles in different sector and scales, building up on previous experience; analysis of economic implications of adaptation initiatives, as well as mitigation co-benefits, aiming to support decision making on different sectors of society.

Outcome 6.5. BUR and BTRs are compiled and submitted to the UNFCCC

Specialized services will be hired for the layout design and printing of the final document for BUR5, BTR1, and BTR2, in Portuguese and English versions. Other activities planned for this component are: governments meetings to plan the elaboration of these documents and to approve the final versions; technical and language review; the publication of the BUR5, BTR1, and BTR2; the submission of these documents to the Executive Secretary of the UNFCCC; and, the lessons learned assessment. The timeframes for submission are: for the BUR5, Jun/2023; for the BTR1, Dec/2024; and for the BTR2 compiled and submitted in Dec/2026. The project team and government partners will be involved in the BUR5 ICA and the BTRs revision processes.

7- Monitoring and Evaluation (M&E) of the project

Outcome 7.1. Monitoring and Evaluation (M&E) of the project outcomes and outputs done

In this component, the project's financial and progress reports will be prepared according to the monitoring and evaluation (M&E) plan and requirements. In this sense, it is foreseen to hire a project team composed of a Technical Coordinator, Project Manager, and Project Assistant who will be responsible for: planning and monitoring the technical activities progress and outputs; preparation and submission of progress implementation reports; updated work plans and project budget revision; and others.

#### **D. DESCRIBE, IF POSSIBLE, THE EXPECTED COST-EFFECTIVENESS OF THE PROJECT**

Brazil has played an important role in international discussions and scientific assessment of climate change, as well as in setting up an international institutional framework. Brazil has a strong interest in continuing its leading and innovative role in the international dialogue on climate change. Brazil has already established several projects, programs, and policy measures to monitor the impacts of and adapt to climate change. Several governmental programs and initiatives in Brazil are resulting in significant reductions in greenhouse gas emissions. Some of these programs are responsible for Brazil having a comparatively "clean" energy mix, with low levels of greenhouse gas emissions per unit of energy produced and consumed.

The National Plan on Climate Change was approved in December 2008. It has four general themes: (i) mitigation; (ii) vulnerability, impact, and adaptation, (iii) research and development; and (iv) enhancement of skills and dissemination. The main objectives of the Plan are: (i) stimulate efficiency

increase in a constant search for better practices in the economic sectors; (ii) keep the high share of renewable energy in the energy mix, preserving the important position Brazil has always held in the international scenario; (iii) encourage a sustainable increase in the share of biofuels consumption in the transport sector and also work towards the structuring of an international market of sustainable biofuels; (iv) seek a sustained reduction of deforestation rates, in all Brazilian biomass, in order to reach zero illegal deforestation; (v) eliminate the net loss of forest coverage; (vi) strengthen cross-sector actions aimed at reducing vulnerabilities of populations; (vii) identify environmental impacts resulting from climate change and stimulate scientific research to minimize socioeconomic costs of adaptation.

The Plan, which is now undergoing revision and updating, is based on the National Policy on Climate Change (Federal Law No. 12,187 of December 29th, 2009), proposed by the Executive branch to Congress in 2008. The National Policy organizes Brazil efforts in mitigation, adaptation, scientific and technological research, institutional coordination, public information, and capacity building. Through its article 6, IV, the National Policy defined as one of its instruments the National Communication.

Brazil's voluntary nationally appropriate mitigation actions, presented to the UNFCCC in January of 2010, are directed towards reductions of deforestation in the Amazon and Cerrado biomes; restoration of grazing land; integrated crop-livestock system; no-till farming; biological N<sub>2</sub> fixation; energy efficiency; increased use of biofuels; increased energy supply by hydroelectric power plants; alternative energy sources; and use of charcoal from planted forests in iron & steel industry.

Brazil's National Policy also provides elaboration of specific plans directed towards mitigation and adaptation. These plans focus on industry, mining, transport and urban mobility, and health. According to the National Policy, both elaborating specific plans and updating the National Plan will be undertaken based on Brazil's National Communications to the UNFCCC.

The project is in line with the National Policy, National Plan on Climate Change, and Brazilian NDC. The Fifth National Communication of Brazil to the UNFCCC will be fundamental for implementing national mitigation and adaptation actions. Brazil started to implement a project financed by the GCF and executed by the MCTI named "Technology Needs Assessment for the Implementation of Climate Action Plans in Brazil ? TNA Project" in partnership with the United Nations Environment Program (UNEP). It shall be concluded by 2021. The Project's objective is to establish a national consensus where Technology Action Plans can build from, aiming at developing local content of priority technologies and sectors for compliance with the NDC. Thus, the TNA Project results, including identifying mitigation alternatives with abatement potential and costs, shall provide essential inputs and be reported in the 5NC, BUR, and BTRs.

Other main initiatives currently in progress will be synergic with the 5NC, such as the Strategic Partnerships for the Implementation of the Paris Agreement ([https://www.international-climate-initiative.com/en/details/project/strategic-partnerships-for-the-implementation-of-the-paris-agreement-spipa-17\\_I\\_364-2993](https://www.international-climate-initiative.com/en/details/project/strategic-partnerships-for-the-implementation-of-the-paris-agreement-spipa-17_I_364-2993)); the Climate Policy Program Brazil ([https://www.international-climate-initiative.com/en/details/project/climate-policy-programme-brazil-pomuc-16\\_I\\_205-492](https://www.international-climate-initiative.com/en/details/project/climate-policy-programme-brazil-pomuc-16_I_205-492)); and the REDD+ Floresta Program (<http://redd.mma.gov.br/en/floresta-program>).

## E. DESCRIBE, DESCRIBE THE BUDGETED M & E PLAN

The monitoring and evaluation plan of the project will include:

- Inception workshop;
- Monitoring reports including QPR and PIR;
- The project will be subjected to at least two independent external evaluations (midterm review evaluation and a Terminal evaluation (TE)).
- Project financial and progress reports with gender analysis and action plan prepared and submitted according to the M&E plan.

The Project M&E will be conducted following the established UNDP and GEF procedures and will be provided by the project team and the UNDP-CO with support from the UNDP/GEF RSC in Panama City. The Project Strategic Results Framework provides performance and impact indicators for implementation and their corresponding means of verification. The M&E plan includes an inception report, project implementation reviews, quarterly and annual review reports, mid-term and final evaluations, and audits.

The following sections outline the main components of the M&E plan and indicative cost estimates related to M&E activities. The M&E budget is provided in the table below. The project's M&E plan will be presented and finalized in the Project Inception Report following a collective fine-tuning of indicators, means of verification, and the full definition of project staff M&E responsibilities.

<p><b>Monitoring and Evaluation Budget for project execution:</b> <i>This M&amp;E budget provides a breakdown of costs for M&amp;E activities to be led by the Project Management Unit during project implementation. These costs are equivalent to those of the M&amp;E Component of the Results Framework and TBWP. Other project M&amp;E activities can be added to this budget if they are included under the M&amp;E component of the results framework. The oversight and participation of the UNDP Country Office/Regional technical advisors/HQ Units in these M&amp;E activities and in performing standard UNDP M&amp;E requirements are not included as these are covered by the GEF Fee.</i></p>		
<b>GEF M&amp;E requirements to be undertaken by Project Management Unit (PMU)</b>	<b>Indicative costs (US\$)</b>	<b>Time frame</b>
<b>Inception Workshop and Report</b>	<i>15,000</i>	Inception Workshop within 2 months of the First Disbursement
<b>M&amp;E required to report on progress made in reaching GEF core indicators and project results included in the project results framework</b>	<i>None</i>	Annually and at mid-point and closure.
<b>Preparation of the annual GEF Project Implementation Report (PIR)</b>	<i>None</i>	Annually typically between June-August
<b>Supervision missions</b>	<i>N/A</i>	Not applicable
<b>Learning missions</b>	<i>N/A</i>	Not applicable

**Monitoring and Evaluation Budget for project execution:** *This M&E budget provides a breakdown of costs for M&E activities to be led by the Project Management Unit during project implementation. These costs are equivalent to those of the M&E Component of the Results Framework and TBWP. Other project M&E activities can be added to this budget if they are included under the M&E component of the results framework. The oversight and participation of the UNDP Country Office/Regional technical advisors/HQ Units in these M&E activities and in performing standard UNDP M&E requirements are not included as these are covered by the GEF Fee.*

<b>GEF M&amp;E requirements to be undertaken by Project Management Unit (PMU)</b>	<b>Indicative costs (US\$)</b>	<b>Time frame</b>
<b>Independent Mid-term Review (MTR):</b>	20,000	November 02, 2025
<b>Independent Terminal Evaluation (TE):</b>	30,000	August 02, 2028
<b>TOTAL indicative COST</b>	65,000	Equivalent to TBWP component (M&E)

Type of M&E Activity	Responsible Parties	Budget US\$ Excluding project team staff time	Time Frame
Inception Workshop and Report	? Project Manager ? UNDP CO, UNDP GEF	Indicative cost: \$15,000	Within the first two months of project start
Measurement of Means of Verification of project results.	? UNDP GEF RTA/Project Manager will oversee specific studies and institutions' hiring and delegate responsibilities to relevant team members.	To be finalized in Inception Phase and Workshop.	Start, mid, and end of project (during evaluation cycle) and annually when required.
Measurement of Means of Verification for Project Progress on <i>output and implementation</i>	? Oversight by Project Manager ? Project team	To be determined as part of the Annual Work Plan's preparation.	Annually before ARR/PIR and to the definition of annual work plans
ARR/PIR	? Project manager and team ? UNDP CO ? UNDP RTA ? UNDP EEG	None	Annually
Periodic status/ progress reports	? Project manager and team	None	Quarterly
Mid-term Review	? Project manager and team ? UNDP CO ? UNDP RCU ? Evaluation team	Indicative cost: \$20,000	At the mid-point of project implementation.
Final Evaluation	? Project manager and team, ? UNDP CO ? UNDP RCU ? Evaluation team	Indicative cost: \$30,000	At least three months before the end of project implementation
Lessons Learned	? Project manager and team ? UNDP CO ? Local consultant	None	Yearly
Project Terminal Report	? Project manager and team ? UNDP CO ? Local consultant	None	At least three months before the end of the project
Visits to field sites	? UNDP CO ? UNDP RCU (as appropriate) ? Government representatives	For GEF supported projects, paid from IA fees and operational budget	Yearly
TOTAL		US\$ 65,000*	

\*Estimated based at the Fourth National Communication Project

#### F. EXPLAIN THE DEVIATIONS FROM TYPICAL COST RANGES (WHERE APPLICABLE)

The estimated cost for preparing the National Communication in Brazil is based on the previous



projects for the four versions sent over the last 16 years, taking into account the improvements and the methodological challenges identified throughout the process.

**Part III: Approval/Endorsement By GEF Operational Focal Point(S) And GEF Agency(ies)**

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

<b>Focal Point Name</b>	<b>Focal Point Title</b>	<b>Ministry</b>	<b>Signed Date</b>
Marcus Cesar Ribeiro Barretto	Undersecretary for Financing for Development and International Markets, Substitute	MINISTRY OF ECONOMY	1/28/2021

**B. Convention Participation**

Convention	Date of Ratification/Accession	National Focal Point
UNFCCC	5/29/1994	Ministry of External Relations

**ANNEX A: Project Budget Table**

Please attach a project budget table.

Expenditure Category	Detailed Description	Component (USDeq.)									Total (USDeq.)	(Executing Entity receiving funds from the GEF Agency) [1]
		Comp. 1	Comp. 2	Comp. 3	Comp. 4	Comp. 5	Comp. 6	Sub-Total	M&E	PMC		
Equipment	Standard office equipment	64,500		3,370	200			68,070			68,070	Ministry of Science, Technology and Innovations ? MCTI
Equipment	Purchase of IT equipment, such as laptops, webcams, tablets, screens, connection cables, among others for the consultants and project team.		44,730	22,859	32,971		80,000	180,560			180,560	Ministry of Science, Technology and Innovations ? MCTI

Expenditure Category	Detailed Description	Component (USDeq.)									Total (USDeq.)	(Executing Entity receiving funds from the GEF Agency) [1]
		Comp. 1	Comp. 2	Comp. 3	Comp. 4	Comp. 5	Comp. 6	Sub-Total	M&E	PMC		
Equipment	Equipment rental, as laser printer, necessary to carry out some activities in the project.						4,215	4,215			4,215	Ministry of Science, Technology and Innovations ? MCTI
Sub-contract to executing partner	Direct Project Costs.							0		210,130	210,130	Ministry of Science, Technology and Innovations ? MCTI
Contractual services-Individual	Hiring of 1 project administrative assistant to help the project organization and financial execution (approximately \$ 30,000/year).							0		125,000	125,000	Ministry of Science, Technology and Innovations ? MCTI

Expenditure Category	Detailed Description	Component (USDeq.)									Total (USDeq.)	(Executing Entity receiving funds from the GEF Agency) [1]
		Comp. 1	Comp. 2	Comp. 3	Comp. 4	Comp. 5	Comp. 6	Sub-Total	M&E	PMC		
Contractual services-Individual	Hiring the project team for the development of the GHGI. Contracted forecasts of: 1 QA/QC Supervisor (approximately USD 65,000/yr); 1 GHGI Supervisor (approximately USD 40,000/yr); 5 specialist analysts in the inventory sectors (approximately USD 31,000/yr).	1,680,857						1,680,857			1,680,857	Ministry of Science, Technology and Innovations ? MCTI

Expenditure Category	Detailed Description	Component (USDeq.)									Total (USDeq.)	(Executing Entity receiving funds from the GEF Agency) [1]
		Comp. 1	Comp. 2	Comp. 3	Comp. 4	Comp. 5	Comp. 6	Sub-Total	M&E	PMC		
Contractual services-Individual	Hiring the project team for the development of the studies and analysis of impacts, vulnerabilities and adaptation to climate change. Contracted forecasts of: 1 specialist analyst in V&A (approximately USD 45,000/yr).			249,100				249,100			249,100	Ministry of Science, Technology and Innovations ? MCTI

Expenditure Category	Detailed Description	Component (USDeq.)									Total (USDeq.)	(Executing Entity receiving funds from the GEF Agency) [1]
		Comp. 1	Comp. 2	Comp. 3	Comp. 4	Comp. 5	Comp. 6	Sub-Total	M&E	PMC		
Contractual services-Individual	Hiring the project team for the development of the translation of the official documents and promotion of public awareness strategy to achieve the main objectives of the project. Contracted forecasts of: 1 translator English-Portuguese-English (approximately USD 30,000/yr) and 1 communication analyst (approximately USD 40,000/yr).				429,737			429,737			429,737	Ministry of Science, Technology and Innovations ? MCTI

Expenditure Category	Detailed Description	Component (USDeq.)									Total (USDeq.)	(Executing Entity receiving funds from the GEF Agency) [1]
		Comp. 1	Comp. 2	Comp. 3	Comp. 4	Comp. 5	Comp. 6	Sub-Total	M&E	PMC		
Contractual services-Individual	Hiring the project team to structure the Project Management Unit. Contracted forecasts of: 1 technical coordinator (approximately \$ 50,000/year) and 1 project manager (approximately 65,000/year).						850,000	850,000			850,000	Ministry of Science, Technology and Innovations ? MCTI



Expenditure Category	Detailed Description	Component (USDeq.)									Total (USDeq.)	(Executing Entity receiving funds from the GEF Agency) [1]
		Comp. 1	Comp. 2	Comp. 3	Comp. 4	Comp. 5	Comp. 6	Sub-Total	M&E	PMC		
Contractual services-Company	Hiring companies and formalizing partnerships, through bidding processes, budget research or letters of agreement, for the development of technical studies in key-sectors and analysis of future climate scenarios.			260,274				260,274			260,274	Ministry of Science, Technology and Innovations ? MCTI
Contractual services-Company	Hiring of specialized services for: development of graphic and educational material; systematization of information; database structuring and 5NC publishing.				111,932	204,237	314,547	630,716			630,716	Ministry of Science, Technology and Innovations ? MCTI

Expenditure Category	Detailed Description	Component (USDeq.)									Total (USDeq.)	(Executing Entity receiving funds from the GEF Agency) [1]
		Comp. 1	Comp. 2	Comp. 3	Comp. 4	Comp. 5	Comp. 6	Sub-Total	M&E	PMC		
Contractual services-Company	Hiring specialized services to carry out analysis that will subsidize the development of Output 2.1.4. through the development of capacity building and assessments related to gender and awareness issues associated with the climate change agenda and developing technical studies and mapping of land cover, in order to contribute to improving the accuracy of the GHGI.	1,390,388	44,187					1,434,575			1,434,575	Ministry of Science, Technology and Innovations ? MCTI

Expenditure Category	Detailed Description	Component (USDeq.)									Total (USDeq.)	(Executing Entity receiving funds from the GEF Agency) [1]
		Comp. 1	Comp. 2	Comp. 3	Comp. 4	Comp. 5	Comp. 6	Sub-Total	M&E	PMC		
International Consultants	Hiring international consultant for the development of the Mid-Term Review (\$ 20,000) and the Terminal Evaluation (\$ 30,000).							0	50,000		50,000	Ministry of Science, Technology and Innovations ? MCTI

Expenditure Category	Detailed Description	Component (USDeq.)									Total (USDeq.)	(Executing Entity receiving funds from the GEF Agency) [1]
		Comp. 1	Comp. 2	Comp. 3	Comp. 4	Comp. 5	Comp. 6	Sub-Total	M&E	PMC		
Local Consultants	Hiring 2 junior analyst consultant to develop specific studies to improve the GHGI, engaged for inspection activities for Outcome 1.1 at approximately \$6,000/yr (years 2-4). 1 consultant for the development of a GHGI improvement at \$6,000 for Output 1.1.2. 1 consultant for the methodology analysis at \$6,503 for Output 1.1.4.	12,603						12,603			12,603	Ministry of Science, Technology and Innovations ? MCTI

Expenditure Category	Detailed Description	Component (USDeq.)									Total (USDeq.)	(Executing Entity receiving funds from the GEF Agency) [1]
		Comp. 1	Comp. 2	Comp. 3	Comp. 4	Comp. 5	Comp. 6	Sub-Total	M&E	PMC		
Local Consultants	Hiring of 2 junior consultants for updates on analysis relevant to national circumstances and the country's institutional arrangements for implementing the Convention at approximately \$ 1,120/month worked.		56,005					56,005			56,005	Ministry of Science, Technology and Innovations ? MCTI

Expenditure Category	Detailed Description	Component (USDeq.)									Total (USDeq.)	(Executing Entity receiving funds from the GEF Agency) [1]
		Comp. 1	Comp. 2	Comp. 3	Comp. 4	Comp. 5	Comp. 6	Sub-Total	M&E	PMC		
Local Consultants	Hiring of junior and senior consultants for the development of cross-cutting analysis for the themes of climate change and gender. 1 junior local consultant to support the climate modelling scenarios at approximately \$ 1,120/month worked. 1 senior consultant to consolidate the impact assessment at \$ 2,000/month worked.				21,425			21,425			21,425	Ministry of Science, Technology and Innovations ? MCTI

Expenditure Category	Detailed Description	Component (USDeq.)									Total (USDeq.)	(Executing Entity receiving funds from the GEF Agency) [1]
		Comp. 1	Comp. 2	Comp. 3	Comp. 4	Comp. 5	Comp. 6	Sub-Total	M&E	PMC		
Local Consultants	Hiring of junior and senior consultants for the final consolidation work of the 5NC document related to the translation and revision of the publication standards. 1 junior local consultant to support the organization of the document data at approximately \$ 1,120/month worked. 1 senior consultant to revise the document draft at \$ 2,000/month worked.					97,162		97,162			97,162	Ministry of Science, Technology and Innovations ? MCTI

Expenditure Category	Detailed Description	Component (USDeq.)									Total (USDeq.)	(Executing Entity receiving funds from the GEF Agency) [1]
		Comp. 1	Comp. 2	Comp. 3	Comp. 4	Comp. 5	Comp. 6	Sub-Total	M&E	PMC		
Local Consultants	Hiring of junior and senior consultants, in the IC modality to develop impact analysis on key-sectors. 1 junior local consultant to support the climate modelling scenarios at approximately \$ 1,120/month worked. 1 senior consultant to consolidate the impact assessment at \$ 2,000/month worked.			112,762				112,762			112,762	Ministry of Science, Technology and Innovations ? MCTI



Expenditure Category	Detailed Description	Component (USDeq.)									Total (USDeq.)	(Executing Entity receiving funds from the GEF Agency) [1]
		Comp. 1	Comp. 2	Comp. 3	Comp. 4	Comp. 5	Comp. 6	Sub-Total	M&E	PMC		
Local Consultants	Hiring of senior consultancy in the IC modality for support international negotiations on climate change at \$ 2,000/month worked. Hiring of at least 2 specialists in the IC modality to collect data, update information and compile analysis and reports on mitigation, MRV and adaptation actions for consolidation of BUR and BTRs at \$ 1,600/month worked.						148,889	148,889			148,889	Ministry of Science, Technology and Innovations ? MCTI

Expenditure Category	Detailed Description	Component (USDeq.)									Total (USDeq.)	(Executing Entity receiving funds from the GEF Agency) [1]
		Comp. 1	Comp. 2	Comp. 3	Comp. 4	Comp. 5	Comp. 6	Sub-Total	M&E	PMC		
Training, Workshops, Meetings	<p>*At least 1 training for the team and 5 technical workshops with project partners for methodological discussion and GHGI results.</p> <p>*Conducting at least 1 training for the team and 5 technical working meetings with project partners to discuss the methodology and results of the impact, vulnerability and adaptation to climate change analysis.</p> <p>*Conducting training for project members and partners to monitoring the implementation of mitigation actions, for improvement</p>	30,000		45,000	30,000			105,000			105,000	Ministry of Science, Technology and Innovations ? MCTI

Expenditure Category	Detailed Description	Component (USDeq.)									Total (USDeq.)	(Executing Entity receiving funds from the GEF Agency) [1]
		Comp. 1	Comp. 2	Comp. 3	Comp. 4	Comp. 5	Comp. 6	Sub-Total	M&E	PMC		
Training, Workshops, Meetings	Project Inception Workshop and report (\$15,000).							0	15,000		15,000	Ministry of Science, Technology and Innovations ? MCTI
Travel	Travel for get information considered relevant to the achievement of the activities planned for this Component.	64,509	15,000	50,000	83,542	31,665	267,349	512,065			512,065	Ministry of Science, Technology and Innovations ? MCTI
Office Supplies	Basic office supplies for a period of three years duration of project.		11,700	5,000	3,451	9,183	10,000	39,334			39,334	Ministry of Science, Technology and Innovations ? MCTI
Other Operating Costs	Audit and annual spot checks for the Responsible Parties identified during the project's execution							0		22,013	22,013	Ministry of Science, Technology and Innovations ? MCTI

Expenditure Category	Detailed Description	Component (USDeq.)									Total (USDeq.)	(Executing Entity receiving funds from the GEF Agency) [1]	
		Comp. 1	Comp. 2	Comp. 3	Comp. 4	Comp. 5	Comp. 6	Sub-Total	M&E	PMC			
Other Operating Costs	Hiring a professional service for institutional capacity assessment of Responsible Parties (\$15,000).	15,000	15,000						30,000			30,000	Ministry of Science, Technology and Innovations ? MCTI
Other Operating Costs	Printing and audio-visual costs related to project activities and knowledge dissemination.		23,378						23,378			23,378	Ministry of Science, Technology and Innovations ? MCTI
Other Operating Costs	Standard project communication strategy and development of promotional material.			1,635	36,453	42,753	50,000	130,841				130,841	Ministry of Science, Technology and Innovations ? MCTI
Other Operating Costs	Cost of transporting materials or equipment related to the project.				289			289				289	Ministry of Science, Technology and Innovations ? MCTI
<b>Grand Total</b>		<b>3,257,857</b>	<b>210,000</b>	<b>750,000</b>	<b>750,000</b>	<b>385,000</b>	<b>1,725,000</b>	<b>7,077,857</b>	<b>65,000</b>	<b>357,143</b>	<b>7,500,000</b>		