Strengthening the national transparency system in Brazil under the Paris Agreement (DataClima+)

Part I: Project Information

GEF ID
10932

Project Type
FSP

Type of Trust Fund
GET

CBIT/NGI
CBIT **Yes**
NGI **No**

Project Title
Strengthening the national transparency system in Brazil under the Paris Agreement (DataClima+)

Countries
Brazil

Agency(ies)
UNEP

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, United Nations Framework Convention on Climate Change, Capacity Building Initiative for Transparency, Influencing models, Strengthen institutional capacity and decision-making, Transform policy and regulatory environments, Convene multi-stakeholder alliances, Stakeholders, Civil Society, Private Sector, Type of Engagement, Information Dissemination, Gender Equality, Gender Mainstreaming, Sex-disaggregated indicators, Capacity, Knowledge and Research, Capacity Development

Sector

Mixed & Others

Rio Markers

Climate Change Mitigation

Climate Change Mitigation 2

Climate Change Adaptation

Climate Change Adaptation 1

Duration

48 In Months

Agency Fee($)

364,384.00

Submission Date

3/8/2022

A. Indicative Focal/Non-Focal Area Elements

Programming Directions	Trust Fund	GEF Amount($)	Co-Fin Amount($)
CCM-3-8	GET	3,835,616.00	500,000.00
	Total Project Cost ($)	**3,835,616.00**	**500,000.00**

B. Indicative Project description summary

Project Objective

Strengthen the national transparency system in Brazil (DataClima+) for informing national policy-making and meeting the requirements of the enhanced transparency framework (ETF) under the Paris Agreement.

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)
1. Integrated climate data platform	Technical Assistance	1. The Brazilian Government measures, tracks and reports climate data through a robust, integrated and efficient transparency system	1.1. Data requirements, sources and gaps for preparing UNFCCC transparency reports and supporting gender-sensitive national policy-making are identified and disseminated to national stakeholders 1.2. A gender-sensitive DataClima+ system is designed, built and made accessible to key stakeholders 1.3. An institutional mechanism is established for operating DataClima+ by governmental entities 1.4. Institutional arrangements for entities to provide data to DataClima+ are established 1.5. A national capacity building programme for DataClima+ is designed and made accessible to national stakeholders 1.6 A stakeholder communication and engagement strategy for DataClima+ is designed and implemented with key stakeholders	GET	1,120,000.00	200,000.00

2. Climate transparency modules	Technical Assistance	2. The Brazilian Government produces more accurate and complete climate data and makes it available through DataClima+	2.1. A database, tools and templates are available to national stakeholders and their capacity is enhanced for using the national GHG inventory report module (SIRENE module) 2.2. A database, tools and templates are available to national stakeholders and their capacity is enhanced for using the adaptation module (AdaptaBrasil MCTI module) 2.3. Tools and templates are available to national stakeholders and their capacity is enhanced for using the NDC tracking module 2.4. Tools and templates are available to national stakeholders and their capacity is enhanced for using the means of implementation module to track support needed and received	GET	1,512,968.00	100,000.00

3. National policy-making informed by climate data	Technical Assistance	3. National policy-makers incorporate climate data and analysis into national planning and policy-making efforts	3.1. A database, tools and templates are available to national stakeholders and their capacity is enhanced for assessing the effectiveness of sectoral policy scenarios for achieving national climate goals (SINAPSE module), building upon the other DataClima+ modules 3.2 Institutional arrangements between governmental entities for integrating DataClima+ into national and sub-national planning and budgeting instances are established 3.3 Institutional arrangements between governmental entities for integrating DataClima+ into efforts to prepare a long-term low emission and climate resilient development strategy (LTS) are established	GET	980,000.00	100,000.00
4. Monitoring and Evaluation	Technical Assistance	4. Project is effectively monitored and evaluated	4.1. Monitoring and evaluation products are delivered	GET	40,000.00	
				Sub Total ($)	**3,652,968.00**	**400,000.00**
Project Management Cost (PMC)						
				GET	182,648.00	100,000.00
				Sub Total($)	**182,648.00**	**100,000.00**
				Total Project Cost($)	**3,835,616.00**	**500,000.00**

Please provide justification

C. Indicative sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
Recipient Country Government	Ministry of Science, Technology and Innovations	In-kind	Recurrent expenditures	500,000.00
			Total Project Cost($)	**500,000.00**

Describe how any "Investment Mobilized" was identified

Not Applicable

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

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
UNEP	GET	Brazil	Climate Change	CBIT Set-Aside	3,835,616	364,384	4,200,000.00
				Total GEF Resources($)	**3,835,616.00**	**364,384.00**	**4,200,000.00**

E. Project Preparation Grant (PPG)

PPG Required **true**

PPG Amount ($)	PPG Agency Fee ($)
50,000	4,750

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
UNEP	GET	Brazil	Climate Change	CBIT Set-Aside	50,000	4,750	**54,750.00**
				Total Project Costs($)	**50,000.00**	**4,750.00**	**54,750.00**

Core Indicators

Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	330			
Male	330			
Total	660	0	0	0

Provide additional explanation on targets, other methodologies used, and other focal area specifics (i.e., Aichi targets in BD) including justification where core indicator targets are not provided

Part II. Project Justification

1a. Project Description

- 1) Global environmental problems, root causes and barriers that need to be addressed

Adopted in 2015, the Paris Agreement, Article 13, established an Enhanced Transparency Framework (ETF) which increases the climate change transparency ambition and reporting requirements for all Parties to the agreement. At the 24th Conference of Parties, held in Katowice in 2018, countries agreed upon modalities, procedures and guidelines (MPGs) for the ETF, which will come into force in 2024. In accordance with the Paris Agreement and the MPGs, all Parties to the Paris Agreement are required to prepare and submit biennial transparency reports (BTR), which need to include:

- An updated national inventory of greenhouse gas (GHG) emissions by sources and removals by sinks;

- Information on progress towards achieving their nationally determined contribution (NDC); and,

- Information on support needed and received for climate actions.

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Moreover, in accordance with the Paris Agreement's Article 7, each Party should, as appropriate, submit and periodically update an adaptation communication, as a component of or in conjunction with other communications or documents.

The above-mentioned MPGs aim to facilitate improved reporting and transparency over time, while providing flexibility to those developing country Parties that need it in light of their capabilities. In their reports, countries need to clearly clarify capacity constraints and estimate time frames for improvements needed. Furthermore, they should provide as part of the BTR, to the extent possible, information on areas of improvement in relation to the country's reporting.

Brazil faces significant challenges in complying with the Paris Agreement's Article 13. Reporting on GHG emissions, support needed and received, NDC implementation and adaptation action in Brazil is an extremely complex process. This is due to multiple reasons. Firstly, Brazil has complex national circumstances: it has a population of over two hundred million people in a federal system of 26 states (and a federal district), more than 5000 municipalities and 18 federal ministries. In addition, more than 52 million people live in poverty, and 13 million in extreme poverty,[1] further complicating national priorities and the achievement of sustainable and national developmental goals. Secondly, gathering, compiling and analysing climate data is challenging due to the country's size, federative nature, geographic diversity and complex GHG emissions profile. On its emission profile, a large portion of GHG emissions comes from land-use, land-use change and forestry (LULUCF) from multiple highly significant biomes (the Amazon, the Atlantic Forest and the Cerrado) and from the

agriculture sector. However, there are growing emissions from energy generation and transport, particularly from the country's multiple megapolises (for instance Sao Paulo, Rio de Janeiro). Furthermore, with 18 federal ministries, different federal entities have responsibility for collection of climate (sectoral) data, resulting in the absence of a harmonized and central data storage and analysis process. Finally, the federal structure of country, with decentralized power and responsibilities between federal, state and municipal entities, exponentially increases the complexity of identifying international support received and needed for ambitious climate action, as well as identifying adaptation action undertaken and needed. Transversalities and multiple inter-connections inherent to the issue of climate transparency, including non-climatic aspects, and also the nature of data sources, heightens the complexity for Brazil.

To understand and anticipate the effects of climate change in different sectors and regions of Brazil, large volumes of raw data are needed. A holistic and integral approach towards data management is thus required to produce climate transparency information that also considers the co-benefits of climate actions and efforts to implement the sustainable development goals (SDGs). A holistic approach is similarly required to ensure effective integration of climate information into national planning and policy-making.

The main barriers for strengthening Brazil's transparency framework to meet the demands of the enhanced transparency framework under the Paris Agreement were identified in Brazil's Fourth National Communication (2021) and in discussions with key country stakeholders. They can be grouped into the following categories:[2]

B1. Absence of a centralized data framework and insufficient institutional arrangements for collecting, monitoring and reporting on climate data and using it for policy-making

Brazil has developed data platforms for some elements of the national transparency system, aligning with those identified in the Paris Agreement enhanced transparency framework. The Ministry of Science, Technology and Innovations (MCTI) has developed a platform for tracking GHG emissions (SIRENE), a platform for adaptation action (AdaptaBrasil MCTI) and a platform for supporting policy-making based on climate data and impact of sectoral policies (SINAPSE). On tracking support received, the Ministry of Economy tracks multilateral and bilateral international public financial support received through internal databases. Furthermore, Brazil has additional sectoral platforms which will track sectoral emissions, efforts and progress, including the Ministry of Agriculture, Farming and Food Supply (MAPA)'s Integrated Information System for the Sectoral Plan for Consolidation of a Low-Carbon Economy in Agriculture (SIN-ABC) (currently under development).

While it can be observed that some parts of a national transparency system exist, there is no integrated transparency system with interconnected modules. The aforementioned platforms function independently and have different data structures and underlying IT programming architectures. They were established at different times, without thought as to their interconnectivity or of the need for an overarching integrated system. SIRENE was the first platform to be launched, in 2016. MCTI launched AdaptaBrasil MCTI in 2020 and SINAPSE in 2021. The Ministry of Economy has tracked international public finance for a number of years. There is no platform tracking the implementation of the NDC. This piecemeal approach to the development of platforms related to ETF modules is due to a number of reasons. Primarily, the platforms were developed on a needs basis and depending on the availability of funds. The needs and

funding source often led to different IT architectures. For instance, SINAPSE is based on the Emissions Policy Simulator (EPS), a free and open-source computer model created by Energy Innovation LLC. It was only with the finalization of the ETF details, at COP 26 in Glasgow at the end of 2021, that Brazil had clarity on the extent and scope of its transparency responsibilities. This led to an identification of the importance of creating an overarching integrated national transparency system for facilitating compliance with the ETF and climate-sensitive national policy-making. A key challenge that is faced in creating an integrated system is in facilitating connectivity and harmonization of data across platforms which currently have different IT architectures, and, perhaps more significantly, different data structures. Creating an integrated platform would require a restructuring of these elements to facilitate data interconnectivity. However, the results would be powerful. Policy-makers would have access to an integrated platform which connects the country's emissions inventory with NDC tracking, adaptation mapping and policy projections. Policy-makers would be able to track NDC efforts against the business-as-usual scenario built upon the actual inventory, and identify scenarios to achieve the NDC based on an assessment of adaptation co-benefits and implemented mitigation efforts.

Furthermore, institutional arrangements and organizational mandates are not yet sufficient for the collection of data to secure the timely delivery of quality inputs for the different components of the transparency system. Data is not captured or shared in a systematized way. Data sharing agreements are not officially established for the different ministries and institutions taking part in measurement, reporting and verification (MRV) activities. This barrier indicates that Brazil needs to take further steps in order to have an integral MRV system at the country level.

Even in the case of the National GHG Inventory component (SIRENE), which is quite developed, the MRV of GHG emissions is hampered by the fact that official information is poorly systematized, organized or available, all sectors considered (Agriculture, Waste, Energy, LULUCF and Industry).[3] The main barrier identified is the lack of a legal framework establishing responsibilities and the operation of a national system for the National GHG Inventory. Coordination between official entities is still limited.

This decentralized and uncoordinated system of data management and collection means that the preparation of UNFCCC transparency reports is undertaken through an ad-hoc and inefficient process which depends on relationships between the data-providing entities.

Furthermore, even though SIRENE, AdaptaBrasil MCTI and SINAPSE aim to support decision-making in the context of policies, plans, programs and projects in the area of climate change related to the generation of scientific knowledge and the adoption of mitigation and adaptation measures, since they are decentralized and unconnected, policy-makers do not have a one-stop-shop for climate data, and thus develop policies and strategies through piecemeal information based on their knowledge of available existing data and existing institutional relations.

B2. Insufficient technical-scientific capacities to produce the required climate data with appropriate methodologies

While Brazil has made progress in collecting climate data to meet the transparency requirements of the ETF, progress on each ETF module has been uneven. Consequently, the country still faces significant challenges with reporting on each.

GHG emission reporting, through SIRENE. MCTI has made significant progress on this platform, and emissions reporting is robust, as demonstrated in the consistency and frequency of reporting (see section 2c of the baseline). However, the private sector is not engaged in reporting on emissions, leading to an incomplete view of the country's emissions. For example, Brazil only has a top-down measurement of emissions, which is not compared and validated with bottom-up reporting by corporations. Entity-level reporting of GHG emissions is not in place, which would be needed to pave the way for policy-making on carbon pricing. Furthermore, information in some sectors continues to be poorly systematized (as noted above), a barrier which is expected to be addressed by the Fifth National Communication project, thus improving the quality of the GHG inventory and its methodologies.

Information on adaptation, through AdaptaBrasil MCTI. Through this MCTI platform, stakeholders can now visualize projected climate-related risks and conditioning factors and components (vulnerability, exposure and climate hazard) on the country's water supply, energy sector and as related to food security. However, the platform does not specify the risks related to each of these sectors and its conditioning factors, making it only possible to visualize the levels of climate-risks in a general manner. More accurate conditioning risk factors are required to be implemented, including as regards to vulnerability, exposure and climate hazards, in order to support policy-makers and stakeholders on decision making. Other strategic sectors, such as human health, infrastructure, ecosystem services and more broadly the economy are not covered by the platform. Furthermore, the platform does not track adaptation efforts undertaken or needed, and actions or support required. No database of adaptation options is available, and synergies between mitigation and adaptation are not considered.

Tracking of efforts to achieve the NDC. To date, Brazil has not managed to develop a platform or systematic process for tracking efforts to achieve its NDC targets. This is an area requiring significant development to support the country in meeting is Paris Agreement and climate convention commitments.

Tracking of support received and needed. Through the Ministry of Economy, the Ministry of Foreign Affairs and the Brazilian Agency of Cooperation (ABC), Brazil tracks support provided through multilateral channels and some support provided through bilateral channels with developed countries. However, the ministry's accounting system uses metrics, indicators and a methodology not consistent with that used for the other modules. In addition, Brazil does not have a coordinated approach between ministries on the reporting of support needed and received.

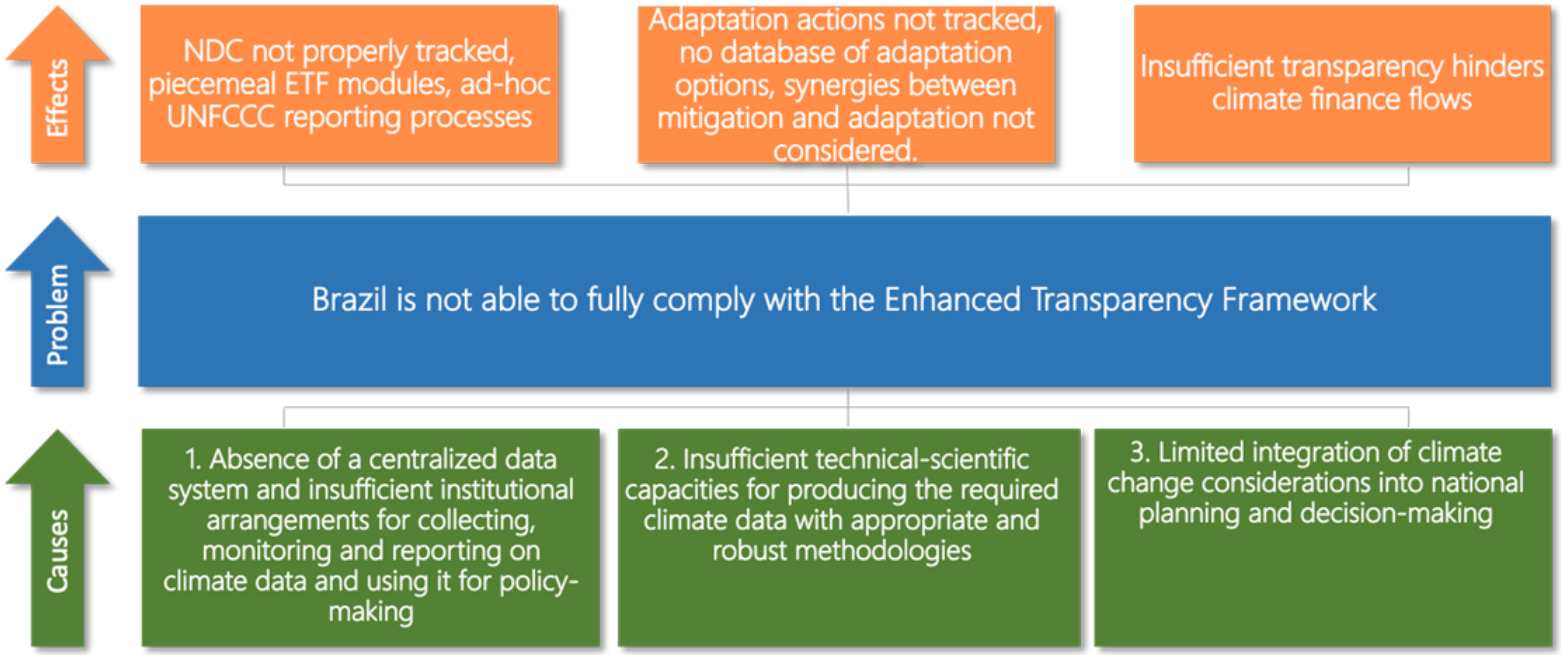
B3. Limited integration of climate change considerations into national planning and decision-making

In addition to informing the UNFCCC on progress to achieve the Paris Agreement, the purpose of an efficient, fully integrated climate transparency system is to inform nationally decision-making processes, starting with high-level national development plans and passing down to geographical, sectoral and local planning instruments. The NC4 noted that Brazil lacks an official information centre for informing decision-making on climate change and faces the barrier of limited resources for structuring and undertaking collaborative modelling of transparency.[4] There is no government tool that allows for the construction of low-carbon and climate-resilient development trajectories in the context of climate change for supporting the formulation of public policies.

In 2021, to bridge the gap identified in the NC4, MCTI launched a new platform, the *National Simulator of Sectoral Policies and Emissions* (SINAPSE). A Federal Government tool, SINAPSE allows users to create and visualize scenarios of different low-carbon public policy combinations. However, SINAPSE doesn't consider the adaptation and resilience co-benefits of different scenarios explored. Nor does it consider synergies between multiple policy combinations, nor the social implications or economic costs. Finally, SINAPSE doesn't connect to the other modules of the national MRV system (GHG emissions, adaptation, NDC tracking, support needed and received). Thus, it is unable to take into account the data of these systems as they are expanded and improved, meaning that SINAPSE continues to be based on incomplete and quickly outdated information.

Perhaps most significantly, there is little awareness of SINAPSE outside of MCTI and its use is limited to a small group of key stakeholders. More generally, climate transparency data and information of all existing platforms (SIRENE, AdaptaBrasil MCTI, SINAPSE) is not mainstreamed into public policy- and decision-making. There are no existing institutional arrangements for drawing on the information of these platforms during national strategic planning processes. Importantly, this means that a future process for developing a long-term low-emission strategy, in accordance with the Paris Agreement, Article 4, paragraph 19, would not necessarily draw on the data and information of these platforms. Provision of data is still perceived as a burden or as a risk, and the reports generated from existing transparency mechanisms currently do not greatly inform political decisions and are seldom consulted outside of the environment sector or academic institutions.

Figure 1. Problem tree



2) Baseline scenario and any associated baseline projects

This section presents a deeper discussion of the scenario in which these barriers currently materialize. It describes the existing ecosystem for climate transparency in Brazil and existing planned future efforts. It starts by describing the national legal framework for climate action and transparency. This is followed by a description of related institutional arrangements. Following this, an overview is provided of national reporting to the UNFCCC. The fourth sub-section provides an overview of the status of the ETF modules: GHG emissions tracking, adaptation, NDC tracking, and support needed and received. The fifth sub-section highlights tools which support Brazil to draw on climate data for national policy making. The section concludes with an overview of all baseline projects.

a) Federal framework for climate action

The legal framework on climate change was set by the **National Policy on Climate Change** (PNMC), enacted in 2009 by Law n. 12187. It made official the adoption of a voluntary commitment to the UNFCCC with the objective of reducing the country's GHG emissions between 36.1% and 38.9% by 2020 according to projected levels in a business-as-usual scenario. Such reductions were planned to be achieved through the implementation of nationally appropriate mitigation actions (NAMAs) and clean development mechanism projects in Brazil. Decree No. 7,390/2010, which regulated the PNMC by defining the national voluntary sector-specific commitment, was later revoked by Decree No. 9,578/2018 in the context of the nationally determined contribution under the Paris Agreement. The objectives of the PNMC, which are mandated to be in line with sustainable development in order to pursue economic growth, eradication of poverty, and reduction of social inequalities, include:

- To promote sustainable development while protecting the climate system;
- To reduce greenhouse gas emissions from different sources, as well as to strengthen removals of these gases by sinks;
- To implement measures to adapt to climate change;
- To preserve, conserve and recover natural resources;
- To consolidate and expand legally protected areas; and to foster the development of a Brazilian Emissions Reduction Market.

Instruments under the PNMC include the National Plan on Climate Change; the National Fund on Climate Change; the Action Plans for the Prevention and Control of Deforestation – Amazon, Cerrado; the Mitigation and Adaptation Plans for Agriculture, Energy, and Charcoal; the National REDD+ Strategy; as well as the National Communication to the UNFCCC. The institutional arrangement of the National Policy on Climate Change is presented in the figure below.

Figure 2. Institutional arrangement of the National Policy on Climate Change[5]

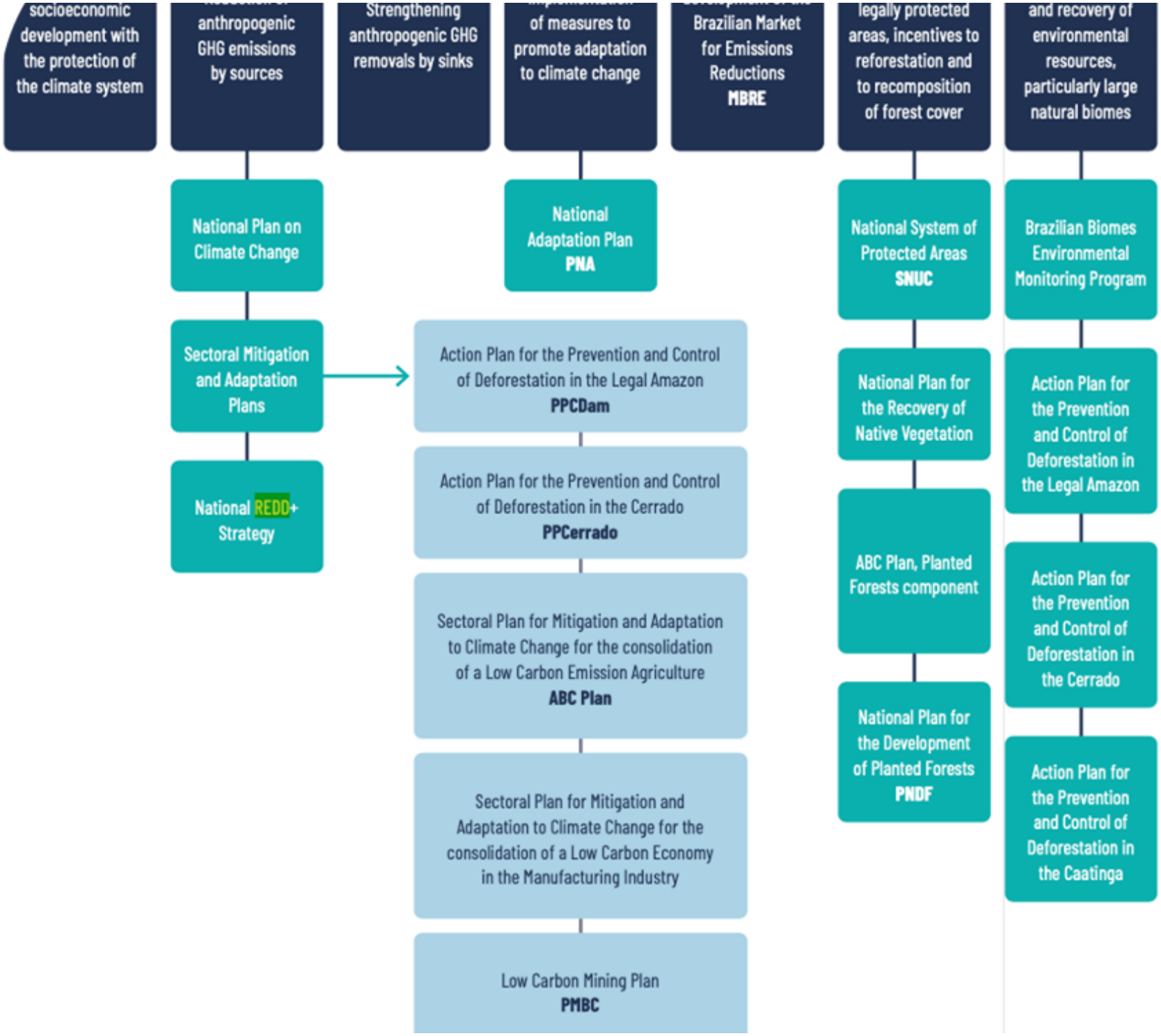

socioeconomic development with the protection of the climate system
anthropogenic GHG emissions by sources
Strengthening anthropogenic GHG removals by sinks
of measures to promote adaptation to climate change
Brazilian Market for Emissions Reductions
MBRE
legally protected areas, incentives to reforestation and to recomposition of forest cover
and recovery of environmental resources, particularly large natural biomes
National Plan on Climate Change
Sectoral Mitigation and Adaptation Plans
National REDD+ Strategy
National Adaptation Plan
PNA
Action Plan for the Prevention and Control of Deforestation in the Legal Amazon
PPCDam
Action Plan for the Prevention and Control of Deforestation in the Cerrado
PPCerrado
Sectoral Plan for Mitigation and Adaptation to Climate Change for the consolidation of a Low Carbon Emission Agriculture
ABC Plan
Sectoral Plan for Mitigation and Adaptation to Climate Change for the consolidation of a Low Carbon Economy in the Manufacturing Industry
Low Carbon Mining Plan
PMBC
National System of Protected Areas
SNUC
National Plan for the Recovery of Native Vegetation
ABC Plan, Planted Forests component
National Plan for the Development of Planted Forests
PNDF
Brazilian Biomes Environmental Monitoring Program
Action Plan for the Prevention and Control of Deforestation in the Legal Amazon
Action Plan for the Prevention and Control of Deforestation in the Cerrado
Action Plan for the Prevention and Control of Deforestation in the Caatinga

Figure 1.10
Institutional arrangement of the National Policy on Climate Change (PNMC).

Source: Based on MMA (2009).

The **National Plan on Climate Change** was launched in 2008 to detail the voluntary commitment to the UNFCCC based on NAMAs, being structured around four axes: mitigation opportunities; impacts, vulnerabilities and adaptation; research and development; and education, training and communication. The plan presented its goals in terms of GHG emission reductions, in addition to other environmental gains and socioeconomic benefits. These were primarily set for the period 2015-2020. The sectoral plans established as part of the national policy on climate change include the *sectoral climate change mitigation and adaptation plan for the consolidation of a low carbon emission economy in agriculture* (ABC Plan), PPCerrado, PPCDAM, Steel Industry, Low Carbon Mining Plan, Transport and Mobility, Manufacturing industry, and the Ten-Year Energy Plan (PDE, for its acronym in Portuguese). See annex D for descriptions of elements of the national climate change policy.

In September 2016,[6] Brazil deposited the instrument of ratification of the Paris Agreement in which the country pledged to adopt measures to reduce GHG emissions through its **Nationally Determined Contribution**, which was updated on 8 December 2020.[7] All policies, measures and actions to implement Brazil's NDC derive from the National Policy on Climate Change (Law No. 12,187/2009), the Forest Code (Law No. 12,651/2012), the National System of Conservation Units Law (Law No. 9,985/2000) in addition to related regulation, programs and planning instruments. Brazil's updated NDC in 2020 confirms the commitment originally presented in its intended nationally determined contribution (iNDC), to reduce its greenhouse gas emissions in 2025 by 37%, compared with 2005. Additionally, Brazil commits to reduce its emissions in 2030 by 43%, compared with 2005. Brazil also notes that its NDC is compatible with an indicative long-term objective of reaching climate neutrality in 2050 (as communicated in October 2021),[8] although it affirms that the final determination of any long-term strategy for the country, in particular the year in which climate neutrality may be achieved, will depend on the proper functioning of the market

mechanisms provided for in the Paris Agreement. The NDC presents economy-wide targets, consistent with the sectors present in the National Inventory of Greenhouse Gas Emissions for 2025 and 2030, always compared with 2005 levels. It is stated that the targets therein communicated will be translated into policies and measures to be detailed and implemented by the Brazilian Federal Government.

The **National Adaptation Plan (NAP),** enacted in 2016, has the goal *"to promote management and reduction of climate risk in the face of adverse effects associated with climate change in order to take advantage of emerging opportunities, avoid losses and damages, and build instruments for the adaptation of natural, human, production, and infrastructure systems."**[9]* Thematic and sectoral adaptation strategies were set up for the following sectors: agriculture, water resources, food and nutrition security, biodiversity, cities, disaster risk management, industry and mining, infrastructure (transport, urban mobility and energy), vulnerable peoples and populations, health care, and coastal zones.

Regarding long-term planning, at COP 26 the Ministry of Environment (MMA) launched the **Guidelines for a national strategy for climate neutrality**,[10] which announced the bringing forward the goal of eliminating illegal deforestation from 2030 to 2028. The document contains guidelines for different sectors including with regards to agriculture (through the implementation of the ABC+ plan); illegal deforestation; energy sector; CO2 capture and storage technology; transport; industrial processes and product use; and waste. Annex D contains information on the guidelines for each sector.

b) Institutional arrangements

The implementation of UNFCCC commitments in the Brazil is characterized by a cross-cutting institutional arrangement through activities at different levels (national and subnational) and sectors (line ministries). One of the main institutional instruments is the **Interministerial Committee on Climate Change and Green Growth (CIMV)**, established by decree no. 10,145/2019. The CIMV is prior consulted on matters related to climate change actions, plans and policies and national and international commitments. The committee also establishes guidelines and designs and coordinates public actions and climate change policies. It further promotes dialogue with the national congress, subnational governments, civil society, the business sector and the scientific-academic sector. The CIMV deliberative body is chaired by the Chief of Staff of the Presidency of the Republic and comprised of another eight federal ministers (foreign affairs; economy; agriculture, livestock and food supply; regional development; mines and energy; science, technology and innovations; environment; and infrastructure).

On forests, coordination of climate action is undertaken through the **National Committee for REDD+**[11] (CONAREDD+), established in 2015, and the Executive Committee for the Control of Illegal Deforestation and Recovery of Native Vegetation. CONAREDD+ is guided by Decree No. 10,144/2019 and has the purpose of coordinating, enforcing and monitoring the implementation of the National REDD+ Strategy, and coordinating the elaboration of eligibility conditions for REDD+ results-based payments and actions in Brazil accredited by the UNFCCC.[12]

Specifically, to climate transparency, the **Ministry of Science, Technology and Innovations** is responsible for the management of climate data, development of climate data systems and production of UNFCCC reports. Through its General Coordination of Climate Science and Sustainability (CGCL), the ministry, inter alia:

- Manages the National Emissions Registry System (SIRENE), the government's official platform for measurement, reporting and verification (MRV) of GHG emissions (see section d(1) below);
- Manages AdaptaBrasil, the government's online platform for tracking and providing projections and solutions related to national adaptation to climate change effects (see section d(3) below);
- Manages the National Simulator of Sectoral Policies and Emissions (SINAPSE MCTI), a new tool of the Federal Government for the projection of scenarios for the implementation of sectoral public policies with the potential to reduce GHG emissions (see section d(4) below);
- Prepares UNFCCC National Communications, Biennial Update Reports and Technology Needs Assessments (TNAs).

Furthermore, it coordinates the implementation of GEF climate mitigation projects and is the country's National Designated Entity (NDE) for the UNFCCC Technology Mechanism and the Clean Development Mechanism.

Specifically on **institutional arrangements for climate transparency**, and notwithstanding the above arrangements, at the Federal Government level (or any other level for that matter), there is not an institutional arrangement for ensuring comprehensive provision of climate data to meet the requirements of the ETF.

Another key institution related to climate change and transparency are the **Brazilian Research Network on Global Climate Change** (Rede CLIMA) was created in 2007 to support the MCTI at the national scope through the contribution of research groups in universities and science and technology institutes. It is also an institutional instrument to assist in the implementation of the Convention, particularly with supporting MCTI in preparing UNFCCC transparency reports.

At the civil society level, **the Brazilian Forum on Climate Change (FBMC)** facilitates coordination between civil society and government at the national level. Its aim is to create awareness and mobilizing society towards discussing and taking a stand on problems caused by climate change, as per Presidential Decrees No. 3,515/2000 and 28/8/2000. It is chaired by the Presidency and composed of ministerial authorities as members, plus representatives from civil society. It has ten thematic chambers (TCs), which promote events and meetings, and foster capacity-building and thematic discussions on climate change with the civil society, covering the following themes: TC1 (Agriculture, Forests and Biodiversity), TC2 (Energy), TC3 (Transport), TC4 (Industry), TC5 (Cities and Waste), TC6 (Finance), TC7 (National Defence and Security), TC8 (Long-term Vision), TC9 (Science, Technology and Innovation), and TC10 (Adaptation).

c) National reporting to the United Nations Climate Change Convention

A summary of reporting to the UNFCCC is presented in the following table. Completed national communications (NCs) and biennial update reports (BURs) were funded by the GEF.

Table 1. Official reporting to the UNFCCC

Year	Report	Comments

Year	Report	Comments
2004	First National Communication (NC1)	Inventories for 1990, 1994
2010	Second National Communication (NC2)	Inventories for 1990, 1994, 2000, 2005.
2014	First Biennial Update Report (BUR1)	Inventories for 1990, 1994, 2000, 2010, as well as mitigation actions, constraints and gaps, and information on the description of domestic MRV arrangements
2016	Third National Communication (NC3)	Includes inventories for 1990, 1995, 2000, 2005, 2010 but also substantive information on mitigation actions, adaptation, support received and needed and outstanding barriers and challenges.
2017	Second Biennial Update Report (BUR2)	Inventories for 1994, 2000, 2010, 2012
2016	Nationally Determined Contribution (NDC)	Information on national circumstances, mitigation and adaptation actions, means of implementation and use of markets. The NDC gained legally binding status in 2017.
2016	National Adaptation Plan	Plan under implementation with the support of BMU and GIZ under the Pro Adapta Project (2017-2022)
2019	Third Biennial Update Report (BUR3)	Inventories for 1994, 2000, 2010, 2012, 2015
2020	Updated NDC	Information on national circumstances, mitigation actions, and intention to use market mechanisms.
2020	Fourth National Communication (NC4)	Includes inventories for 1990, 1995, 2000, 2005, 2010, 2016 but also substantive information on mitigation actions, adaptation, support received & needed and outstanding barriers and challenges Main source for the design of this CBIT project.
2020	Fourth Biennial Update Report (BUR4)	Inventories for 1990, 1995, 2000, 2005, 2010, 2016
2021	First Technology Needs Assessment TNA	Delivered a Technology Action Plan (TAP), taking into consideration priority sectors and key technologies, with a view to achieving mitigation targets, c

		onsidering the Brazilian NDC and the country's strategy for the GCF.
Future repor ting	BUR5 (Dec 2022); NC5 (Dec 2024); BTR1 (Dec 2024); BTR2 (Dec 2026).*	GEF combined project 10801: *Fifth National Communication (NC5), Biennia l Update Report and Biennial Transparency Reports to the United Nations Fr amework Convention on Climate Change (UNFCCC)* to start in 2022. See section 3 (alternative scenario) for a description of the differences, co mplementarities and synergies between this project and the proposed GEF/ UNEP CBIT project.

* *Expected completion dates*

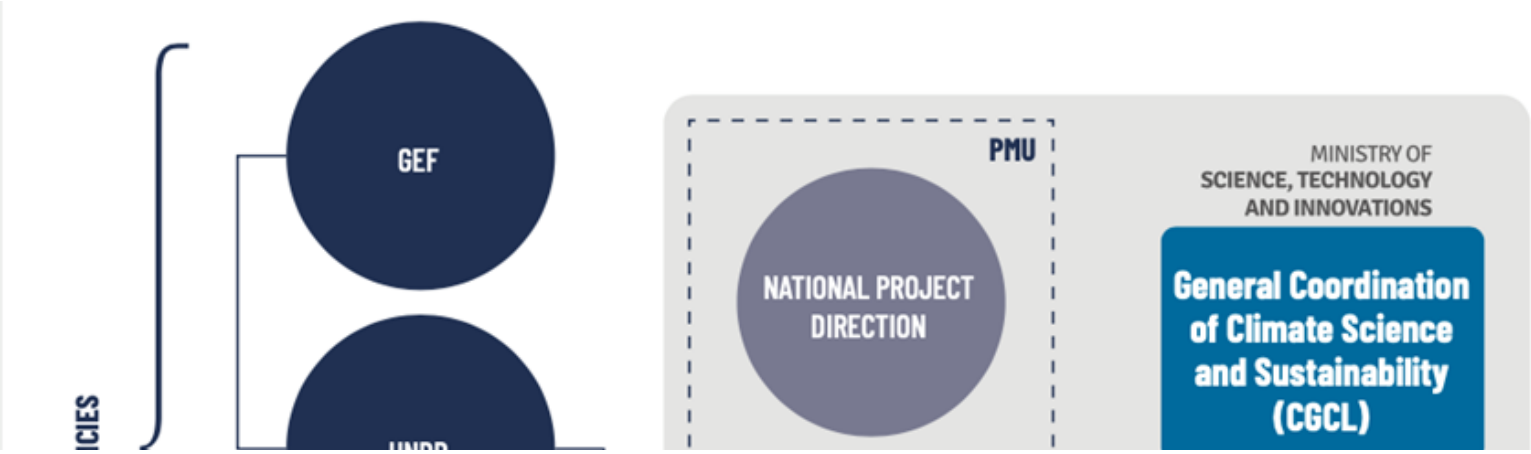
In Brazil's Fourth National Communication, section 5.3 contains a table on technological, financial and training needs relating to achieving the Convention's objectives in Brazil. This table identified needs related to climate transparency, including as related to:

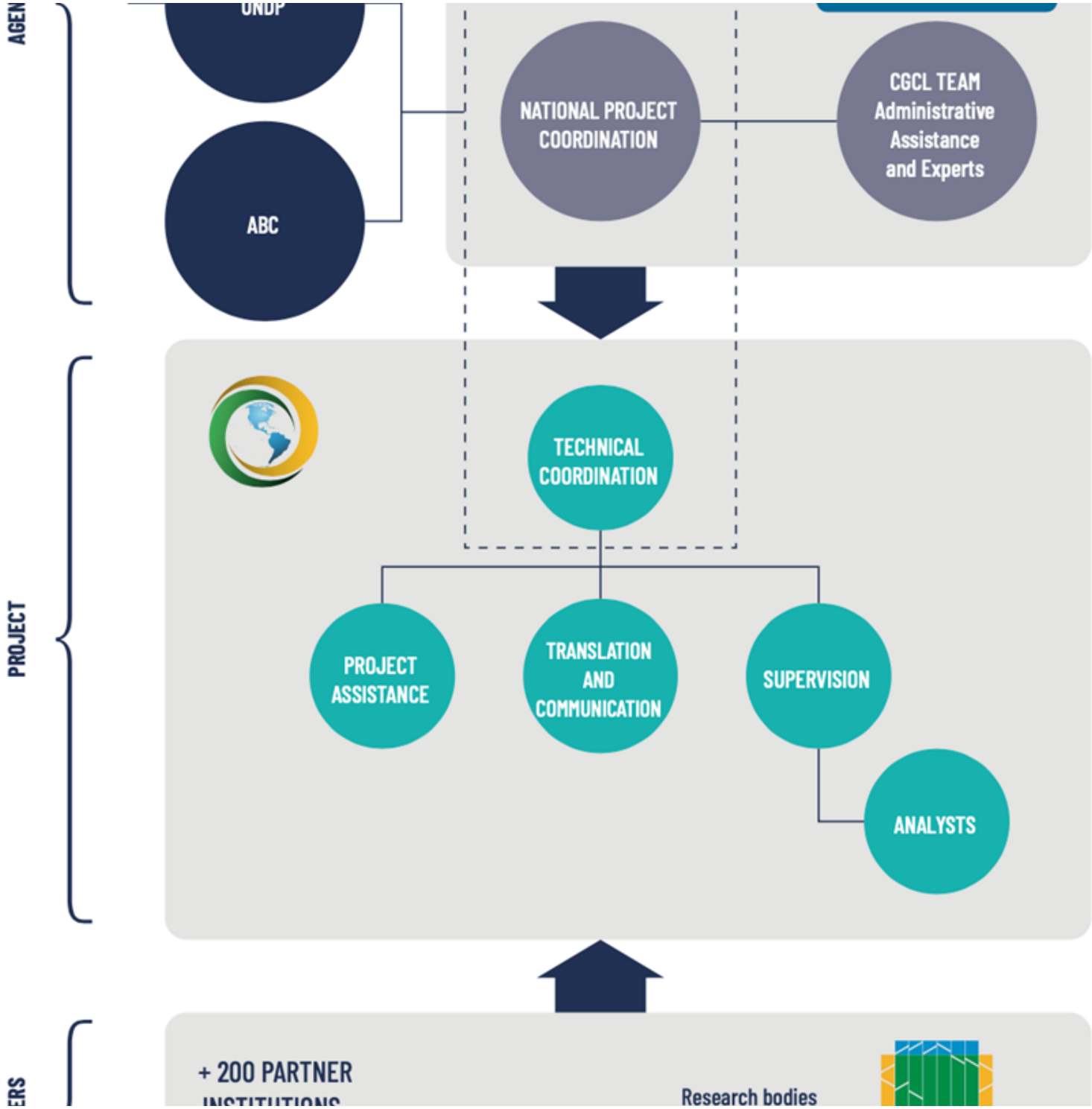
- Measurement, reporting and verification of transformation and maintenance actions of resilient and sustainable production systems;
- Quantification of greenhouse gas emission reductions by production chain.

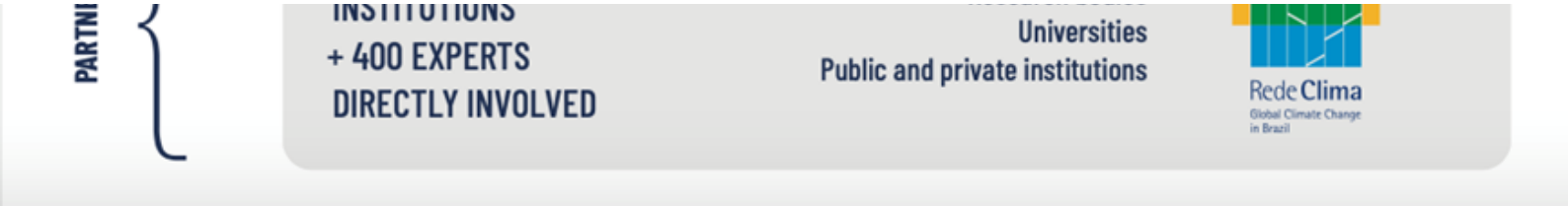
In annex E of this document, this table is reproduced with an additional column added to indicate how these needs are addressed by the GEF 10801 combined project (BUR5, NC5, BTR1 and BTR2) or proposed to be addressed by this CBIT project.

Institutional arrangements for preparing national communications and biennial update reports are created on an ad-hoc basis, dependent on GEF funding and support from international organizations. The following figure highlights the project-funded elements of the recently completed NC4 (see section in the diagram 'project').

Figure 3 - Institutional arrangement for elaborating Brazil's fourth national communication[13]




AGEN
UNDP
ABC
NATIONAL PROJECT COORDINATION
CGCL TEAM Administrative Assistance and Experts
PROJECT
TECHNICAL COORDINATION
PROJECT ASSISTANCE
TRANSLATION AND COMMUNICATION
SUPERVISION
ANALYSTS
ERS
+ 200 PARTNER
Research bodies



d) Progress on the four key areas of the enhanced transparency framework

1. Tracking greenhouse gas emissions

In October 2017, Brazil established the National Emissions Registry System (SIRENE) through Decree No. 9,172/2017. SIRENE is a computer system developed by the MCTI, whose main objective is to make available the results of the national inventory of anthropogenic emissions by sources and removals by sinks of greenhouse gases not controlled by the Montreal Protocol. It also makes available information related to other emission accounting initiatives, such as the annual estimates of greenhouse gas emissions and the biennial update report inventory. SIRENE aims to provide security and transparency to the process of preparing inventories of greenhouse gas emissions. If also aims to support decision-making in the context of policies, plans, programs and projects in the area of climate change related to the generation of scientific knowledge and the adoption of mitigation measures.[14]

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.

The MCTI's CGCL is responsible for coordinating, managing and maintaining SIRENE. Various public and private entities contribute by providing activity data. They also contribute by developing updated national parameters and emission factors that are relevant to the methodology to be used in the development of GHG emission and removal estimates.

While SIRENE is an advanced system for managing GHG emissions, it is unable to distinguish or display private sector (corporate) GHG inventories. These means that the platform is not able to validate national top-down measurements and estimates with bottom-up measurements provided by non-state actors. In addition, it is not connected with other sub-systems of the MRV system (on adaptation, support, NDC tracking, long-term scenarios). Without such

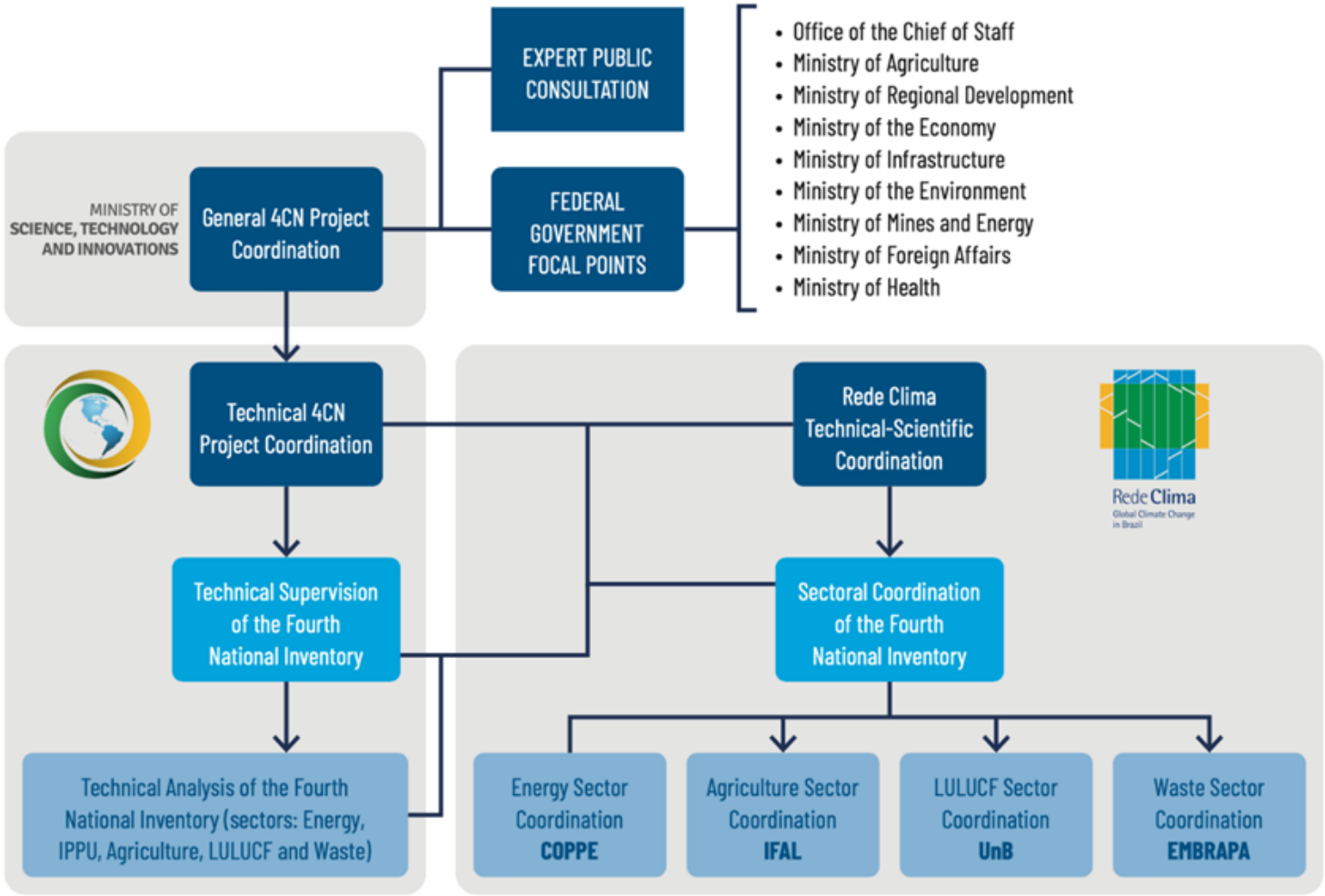
connectivity, decision-makers are unable to draw on interconnected modules of an integrated climate transparency system to undertaking decision-making processes and national planning in a holistic and cross-cutting manner. Furthermore, there is a need to promote the utility of SIRENE with a broader group of national and sub-national stakeholders, as well as building their capacity, so that they can draw on the platform's rich data for undertaking evidence-based decision-making.

Table 2. Greenhouse gas inventory milestones

Year	Instance	Published data
2004	NC1	Inventories for 1990, 1994
2010	NC2	Inventories for 1990, 1994, 2000, 2005
2014	BUR1	Inventories for 1990, 1994, 2000, 2010
2016	NC3	Inventories for 1990, 1995, 2000, 2005, 2010
2017	BUR2	Inventories for 1994, 2000, 2010, 2012
2019	BUR3	Inventories for 1994, 2000, 2010, 2012, 2015
2020	NC4	Inventories for 1990, 1995, 2000, 2005, 2010, 2016
2020	BUR4	Inventories for 1990, 1995, 2000, 2005, 2010, 2016

The latest results from the GHG inventories are presented in Annex D. The time series analysis shows that the most important sectors in terms of emissions are Agriculture, Energy and LULUCF (2016). The following diagram illustrates the institutional framework for the development of the Fourth GHG Inventory, consisting of a general coordination, a technical project coordination, and a technical scientific coordination provided by Rede CLIMA under sectoral groups (energy, agriculture, LULUCF, waste).

Figure 4 - Institutional arrangement for the development of the Fourth GHG Inventory[15]



	Energy Sector	IPPU Sector	Agriculture Sector	LULUCF Sector	Waste Sector
Rede CLIMA Focal Points	2	1	13	4	3
Experts	46	22	74	124	42
Institutions directly involved	13	7	30	34	12
Institutions indirectly involved	10	21	17	23	6

2. Tracking adaptation efforts and impacts

The Information and Analysis System on the Impacts of Climate Change (AdaptaBrasil MCTI) was established by MCTI through Ordinance No. 3896 of October 16, 2020. It aims to consolidate, integrate and disseminate information that facilitates the analysis of the impacts of climate change observed and projected in the national territory. Through this, it aims to provide key data and information to relevant authorities for designing and undertaking adaptation actions. The platform contributes to the dissemination of knowledge through the analysis of increasingly integrated and updated information on the climate risks of impacts in Brazil, in addition to ensuring that the main results are accessible to decision makers at all levels, as well as researchers, civil society and the private sector.[16]

AdaptaBrasil MCTI is developed through a cooperation between the MCTI, the National Institute of Spatial Research (INPE) and the National Research and Education Network (RNP). Its governance is exercised by a Management Committee composed of two representatives, one incumbent and one alternate, from the three aforementioned institutions.[17]

The technology allows users to access data and composite indicators that express risks of impact across the entire Brazilian territory related to climate change, up to this moment, for three strategic sectors: water resources, energy security and food security. The platform was designed from the aggregation of indicators and indexes to capture the causality relationships and the influence of risk factors. The development of indicators is based on the steps indicated by the Competence Center on Composite Indicators and Scoreboards of the Joint European Research Center (JRC) (NARDO et al., 2008), adapted to national needs and circumstances. The weighting and consolidation of the indicators were based on questionnaires and workshops with specialists, in addition to analyses at multiple spatial (national, regional, state, and municipal) and temporal scales (interval of decadal analysis), with multiple stressors (climatic, biophysical, socioeconomic, public policies, etc.).

The platform is designed on an understanding of the different needs of different target audiences. Users can assemble thematic maps, graphics and other customized reports. In addition, when creating a profile on AdaptaBrasil MCTI, they can recommend content, rate the content available, share their contact details, and access contact details of registered professionals. The platform was launched nationally in October 2021.

While AdaptaBrasil is a major advance in providing information to design-makers on the impacts of climate change, it is under a dynamic process of construction, and has much space to be improved, To serve as an effective design-making tool, the platform needs to provide more specific information on climate related risks, and in doing so, to broaden the climate related risks analyses, as well as be expanded to cover other sectors, including human health, infrastructure and ecosystem services. Different spatial scales also need to be considered, such as sub municipal. It also doesn't track national adaptation efforts to date, nor provide a database of climate change adaptation options, including policies, programs, actions and technologies with different approaches and levels of governance. Furthermore, it doesn't enable the evaluation of different adaptation options, considering criteria such as effectiveness, feasibility and limits, as well as analyses of synergies and trade-offs between adaptation and mitigation strategies. Finally, AdaptaBrasil MCTI is not connected to other modules of the MRV system (SIRENE, NDC tracking, means of implementation, SIRENE), hampering coherent national reporting of climate action and reducing the effectiveness of policy-makers due to a lack of consideration of co-benefits and synergies between mitigation and adaptation actions.

3. Tracking mitigation actions to achieve the nationally determined contribution

In 2014, guidelines were established for tracking mitigation actions through a proposed Modular System for Monitoring Actions of Greenhouse Gas Emissions Reduction (SMMARE, acronym in Portuguese). Designed by the Center for Management and Strategic Studies under the execution of the Ministry of the Environment, the aim was to develop a system that would monitor actions and reductions in GHG emissions achieved through sectoral mitigation plans. SMMARE is part of the MRV strategy for mitigation actions as stipulated in Article 10 of Decree No. 7,390/2010 - updated by Article 23 of Decree No. 9,578, of 2018, of the National Policy on Climate Change. However, SMMARE didn't become operational and no progress was made since 2014 on any modular computer system nor in the full engagement of the line ministries for the production of information. The country shall resume implementation of its transparency arrangements based on the ETF, but no longer for NAMAs.[18]

As such, the Brazilian government currently doesn't have a NDC tracking system that allows it to measure progress of mitigation actions announced in the NDC and their impact in terms of GHG emission reductions. NDC tracking requires that a causal relationship be demonstrated between emission reductions and the actions that have enabled them, besides measuring the progress in their implementation as compared to NDC targets. Considering the complexity of Brazil's GHG emission profile, the multitude of sectoral emission reduction plans and the plethora of actors with differing responsibilities, developing a NDC tracking system would play an important role in facilitating coordination between key actors and ensuring efficient use of resources for national climate action.

The NDC tracking system would build upon efforts at the sectoral level. For instance, in the case of the agriculture sector, such a system would connect to the planned Integrated Information System for the Sectoral Plan for Consolidation of a Low-Carbon Economy in Agriculture. Established through Federal Decree n. 10.606/2021, the system is to be developed and hosted by the Ministry of Agriculture, Livestock and Supply (MAPA) with the support of the Brazilian Agricultural Research Corporation (Embrapa). SIN-ABC will monitor the adoption of the different production technologies recommended by the ABC Plan and their contribution to combating and confronting climate change. Bringing together data from advanced studies and data from the direct execution of the ABC Plan, it aims to support the continuous improvement of public policy.[19]

4. Tracking support needed and received

The Ministry of Economy tracks international public resources committed to Brazilian entities through multilateral and bilateral channels (Parties included in Annex II of the Convention). Information on multilateral channels is more comprehensive and comparable than bilateral flow data. This is because of technical restrictions: information on bilateral channels only includes resources that have been internalized through a national public entity or implemented under the coordination of a national public entity, while information on multilateral channels also includes resources directed to local private companies. Information available includes the amount and, where possible, information about possible technical training provided, technology transfers facilitated and the project contact.

While the Ministry of Economy tracks funds received for certain projects and investments, the ministry's accounting system is not connected to other climate data modules on GHG emissions, adaptation and NDC tracking. Furthermore, the metrics, indicators and methodology used by the Ministry of Economy are not consistent with those used for the other modules. This lack of connectivity and the use of different metrics hampers transparent reporting on the actual scale of climate finance support received by Brazil, as well as hampering the efforts of policy-makers to identify the scale and strategic allocation of funds to achieve maximum impact in mitigating and adapting to climate change. In addition, Brazil does not have a coordinated approach between ministries on the reporting of support needed and provided.

e) National tools for facilitating long-term low-emission and climate-resilient development planning

Sinapse MCTI

Simulador Nacional de Políticas Setoriais e Emissões

The Ministry of Science, Technology and Innovations (MCTI) of Brazil has the mission of guaranteeing and promoting the advancement of science, technology, innovation and communications aiming at sustainable development and improving the quality of life of the Brazilian society. In this context, MCTI plays the central role in public administration with regards to developing tools and instruments that can support other ministries and governmental actors with undertaking evidence-based public policy-making. The Ministry, as noted previously, is also the lead ministry for developing and managing climate data, particularly with regards to the national GHG emissions inventory, and the preparation of reports to the UNFCCC. In this context, the Ministry plays a key role in developing tools that can facilitate the elaboration of public policy informed by climate data.

In 2021, MCTI launched the *National Simulator of Sectoral Policies and Emissions* (SINAPSE), a new tool of the Federal Government for the projection of scenarios for the implementation of sectoral public policies with the potential to reduce GHG emissions. SINAPSE is the result of a partnership with the research institutes WRI Brasil and Energy Innovation. It is based on the Emissions Policy Simulator (EPS), a free and open-source computer model created by Energy Innovation LLC and adapted for the Brazilian context.

The SINAPSE tool allows the user to simulate future climate mitigation scenarios through 48 policy measures across six sectors, ranging from deforestation, road transport, to the number of lives preserved (avoided deaths) by reducing emissions, among others. The user is able to download the generated scenarios, with all the selected parameters, which include policy implementation progression rates for future years (intermediate policy compliance targets). The tool makes it possible to identify trajectories that differ from the reference scenario (business as usual) and to determine the viability of different paths for achieving the targets of the NDC.

Recently launched, SINAPSE has the potential to be a game-changer in supporting Brazilian policy- and decision-makers with developing and prioritizing the introduction of policies to achieve NDC targets. That said, there is little awareness amongst such actors of the module's potential in supporting evidence-based policy-making. Massive dissemination of the tool is required targeting key policy-makers and decision-makers, as well as a wide range of stakeholders

and the general public.

Furthermore, to ensure its effectiveness there is a need for it to be drawn upon during major national policy and strategy making processes, such as during the future elaboration of the long-term low greenhouse gas emission development strategy to the UNFCCC, in accordance with Paris Agreement, Article 4, paragraph 19. It also needs to be enhanced. Currently, SINAPSE doesn't consider adaptation and resilience co-benefits of different trajectories explored. Nor does it consider synergies between multiple policy combinations, nor the social implications or economic costs. Finally, SINAPSE doesn't connect to the other modules of the national MRV system (GHG emissions, adaptation, NDC tracking, support needed and received). Thus, it is unable to take into account national advances, challenges and priorities related to low-emission and climate resilient development already underway or defined.

More broadly, the lack of connectivity between the four modules described in the aforementioned sub-sections means that policy-makers are unable to draw on one central database for climate data. Instead, they need to go to three different databases (SIRENE, AdaptaBrasil MCTI, SINAPSE), which have different data structures, layouts and underlying IT programming languages. And, as noted previously, they are unable to access a platform on NDC tracking.

f) Table of baseline projects

Table 3. Projects associated with transparency systems relevant to CBIT

Project	Description	Actors, Timeframe
Fourth National Communication 2016-2021 and Fourth BUR of Brazil 2018 – 2021	Supported Brazil in preparing and submitting its Fourth National Communication and Fourth BUR to the UNFCCC. These two reports submitted in 2020 will inform the development of the CBIT project proposal. Subsequent GEF enabling activities will inform the CBIT project implementation and will be developed building up the outputs and outcomes of the CBIT project.	GEF, MCTI, UNDP as Implementing Agency, 2016-2021. The Fourth National Communication (NC4) and BUR4 were submitted in 2020 and the project was closed in 2021.
GEF ID: 10801. Fifth National Communication, Biennial Update Report and Biennial Transpare	Starting in 2022, Brazil will execute a GEF project to support it in preparing four reports to the UNFCCC (with estimated delivery dates in brackets): BUR5 (Dec 2022), NC5 (Dec 2024), BTR1 (Dec 2024), BTR2 (Dec 2026).	GEF, MCTI, UNDP as Implementing Agency. Project to start in 2022.

ncy Reports to the United Nations Framework Convention on Climate Change (UNFCCC)	See section 3 (alternative scenario) for a description of the differences, complementarities and synergies between this project and the proposed GEF/UNEP CBIT project.	
Climate Change Policy Programme (PoMuC)	Goal: to support selected sections of the National Policy on Climate Change to ensure that they are successfully implemented with the participation of states and municipalities in the implementation of the program and the country's environmental assets, notably renewable energies, forests and biofuels. Expected impacts: (i) effective, transparent and participatory implementation of the National Strategy for REDD+; (ii) reduced vulnerability of people and ecosystems by supporting the implementation of actions under the National Adaptation Plan; (iii) strengthened Brazilian institutional arrangements; and (iv) improved coordination, cooperation and exchange of experiences among the climate change community, as well as the multiplier effect at national and international levels by disseminating and sharing experiences, lessons learned and work done.	GIZ (German technical cooperation implementing agency), Ministry of the Environment, Ministry of Economy, Institute of Applied Economic Research (IPEA). Funded by the Initiative on Climate Change (IKI) of the Ministry of Environment, Nature Conservation, Construction and Nuclear Safety of Germany (BMUB). Period: 2016 – 2022
GEF: Mitigation options of greenhouse gas emissions in key sectors in Brazil	Several scenario studies have discussed possible alternative futures for Brazil considering current trends and uncertainties. To date the most comprehensive scenario study conducted for Brazil was undertaken under the GEF project 'Mitigation options of greenhouse gas emissions in key sectors in Brazil.' Through the project, the Government of Brazil strengthened its technical capacity in identifying and implementing GHG mitigation actions in key economic sectors (industry, energy, transportation, household and services, LULUCF and other cross-sector alternatives). This project performed an innovative integrated approach to assess different GHG mitigation pathways, which guaranteed the consistency across sectors and the macro-economy. Results are available on the SIRENE platfor	GEF, MCTI, UNEP Period: 2013-2018.

	m.	
Technology Needs Assessment for the Implementation of Climate Action Plans in Brazil (TNA_BRAZIL)	Goal: to strengthen the technical capacity of the Brazilian government by developing a comprehensive assessment of technological needs for the implementation of climate action plans in Brazil with a view to providing inputs for decision-making processes regarding the fulfilment of GHG mitigation goals, taking into account Brazil's NDC and strategy for the GCF. Sectors covered are AFOLU and energy, including: precision agriculture; genetic breeding for beef cattle; forestry and genetic improvement of native species; forestry with mixed plantations for restoration; satellite monitoring; hybrid flex vehicles; ethanol fuel cell electric vehicles; industry 4.0; innovative materials for cement; floating photovoltaic solar energy; utilization of agricultural and agro-industrial waste; electric induction-based photovoltaic solar cookers.	GCF, MCTI, UNEP Period: 2019-2021.
Brazil PMR Project (Partnership for Market Readiness)	Goal: to consider the adoption of a carbon pricing instrument as part of the national climate policy in the post-2020 period, and how to leverage the relationship between environmental and socio- economic development objectives. It reviewed various instrument options: (i) price regulation, via an emissions tax; (ii) regulation of quantities, through the adoption of an emissions trading system (ETS, commonly known as carbon market); or (iii) some combination of the two instruments. The project focused on: energy (electricity generation and fuels); the seven subsectors in the Sectoral Plan for Mitigation and Adaptation in the Manufacturing Industry (namely, steel, cement, aluminium, chemistry, lime, glass, and paper and cellulose); and agriculture. PMR comprises technical and financial support for the analysis, rationale and design of GHG pricing instruments, including the preparation of components necessary for their operation, such as a Monitoring, Reporting and Verification system (MRV) on emissions data or tools for recording and tracking certificate transactions or emission permits. It is expected to deliver a white paper of policy proposals on carbon pricing instrument(s). It raised awareness and built knowledge of relevant stakeholders in relation to carbon pricing instruments.	World Bank, Ministry of Economy. Period: 2015-2020
Support for adaptation to Climate Change (ProAdapta): Supporting Brazil in the implementation of its National Agen	Objective: Brazil effectively implements the National Agenda for Climate Change Adaptation and is better prepared for the consequences of climate change. The project is supporting the MMA in its coordinating role using management t	GIZ/BMU, Ministry of Environment (MMA) Funded by German Federal Ministry for the

on of its National Agenda for Climate Change Adaptation	The project is supporting the MMA in its coordinating role using management tools such as the monitoring of adaptation measures. Moreover, it is enabling selected sectors, federal states and municipalities to implement public strategies, methods and instruments and develop measures for adapting to climate change. In addition, the project is running awareness-raising measures to encourage the private sector and civil society to adapt to climate change. The project approach involves improving the framework conditions for adapting to climate change. It supports MMA and other governmental stakeholders in taking account of climate risks in strategies, plans and programmes. Another aim is to raise awareness among decision-makers. Tools are being developed to facilitate climate risk management and mainstreaming climate change adaptation in planning and decision-making processes.	Environment, Nature Conservation and Nuclear Safety (BMU) Period: 2017 to 2022
Floresta+ Program - policy for the payment of environmental services	Objective: to promote the development of initiatives that can produce innovative solutions for the implementation of the Forest Code its objectives and associated needs, such as promoting the sustainable management (with the purpose of generating income) of forests in general and Legal Reserves and Permanent Preservation Areas in particular, techniques for forest recovery, monitoring and control of deforestation and forest degradation, and enforcement efforts to combat and prevent deforestation and illegal forest degradation.[1] Payment for diverse environmental services activities, including territorial surveillance, protection and monitoring, combat and subsequent restoration of wildfires, soil, biodiversity and water resources conservation, environmental inventories, use of an agroforestry system, reforestation with native trees, natural regeneration and ecological restauration, amongst others. The Program extends to all landholding categories: conservation areas, indigenous lands, settlements and private properties (areas of permanent protection, legal land reserves or their surplus entitlements and land with restricted use), with native vegetation cover in all biomes.	MMA, UNDP, funded by the GCF Period: 2020-2026
Sectoral climate change mitigation and adaptation plan for the consolidation of a low carbon emission economy in agriculture (ABC Plan)	Goal: to ensure the continuous and sustainable improvement of management practices that enhance the production efficiency of agricultural systems resulting in greater economic gains, increased resilience to climate uncertainties and control of GHG emissions. The emission reductions achieved through this Plan are monitored through the ABC Platform. One of the specific objectives of the revised Plan (2021-2030) is to improve the	Coordinated by the Ministry of Agriculture, Livestock and Food Supply (MAPA), the ABC Plan has national coverage, but its vertical political structure allo

ABC+ Plan (revised)	ABC+ information management system, to carry out MRV and M&E of its portfolio of actions and results. Related actions will include: · Operationalization of the ABC+ Computerized Governance System (SIGABC), to monitor the implementation of ABC+ promotion actions at national and state level · Operationalization of the Multi-institutional Platform for Monitoring GHG Reductions in Agriculture (Platform ABC), to carry out the monitoring of GHG emissions resulting from adoption of Sustainable Production Systems, Practices, Products and Processes (SPS_{ABC}) · Improved interaction with the Rural Credit and Pro-agro Operations System (SICOR), and with the Brazilian Securities and Exchange Commission (CVM), for monitoring the adoption of SPS_{ABC} · Consolidation, systematization and evaluation of the ABC+ execution results via the ABC Plan Integrated Information System (SINABC) · Monitoring and validation of ABC+ by the National Executive Committee of the ABC Plan (CENABC)	wed for the development of state and municipal plans. Period: 2010-2020: 2021-2030 (updated plan published in November 2021)[2]
REDD+ for Early Movers MT (REM MT)	The REDD Program for Early Movers MT started in 2017 and aims to remunerate the climate change mitigation efforts of pioneer REDD+ initiatives at the state, subnational, or national levels to foster sustainable development. The main objective of the program is to value existing forests. Sixty percent (60%) of the REM Mato Grosso resources are distributed to family farming sub-programs, traditional peoples and communities in the Amazon, Cerrado, and Pantanal; indigenous territories; and sustainable production, innovation, and markets. The remaining 40% are used for institutional strengthening of state government entities and in the application and development of public policies.	KfW, UK government (BEIS), Secretary of Environment of Mato Grosso
Programa ISA Carbono	The ISA Carbon Program was the first initiative implemented under the Environmental Services Incentive System in Acre, in the form of the REM Program "remuneration for results", applicable to actors who had advanced in the REDD preparation process (REDD readiness). The referred program is configured as a REM in the State of Acre; that considers the remuneration or "award" on (ex-post) results of reductions in greenhouse gas emissions from deforestation. Since 2017, SISA has established technical bases for carbon accounting, partici	KfW, UK government (BEIS), Secretary of Environment of Acre

	patory structures for building the system, subprograms, implementation strategies, and adopting a benefit-sharing approach called “stock-flow-pragmatics”. Thus, ensuring a balanced distribution both for the actors who contributed to reducing greenhouse gas emissions (reduction in the flow) and those who still make efforts to maintain the conservation of forests (maintenance of stocks) with the application of financial resources through policies or programs that already exist in the State.	
Programa Produzir, Conservar e Incluir (PCI Mato Grosso)	The Program was launched in 2015 to raise funds for the State of Mato Grosso to expand and increase the efficiency of agricultural and forestry production, conserve remnants of native vegetation, and restore environmental liabilities. Its specific objectives are the socioeconomic inclusion of family farming, the reduction of emissions, and carbon sequestration through the control of deforestation and the development of a low carbon economy in the region of the State. As actions in progress, the following stand out: consultancy for the development of economic analyzes and investment opportunities arising from the PCI strategy; the development of a guide with jurisdictional approaches to support initiatives and companies with their emission reduction commitments; the development of a platform to bring together the initiatives underway in the state that are aligned with the PCI, as well as the financing strategy for forest conservation and low carbon agriculture in the state.	Coordinated by the Government of the State of Mato Grosso Funded by the Initiative for Sustainable Trade – IDH and REM Mato Grosso Program
AmazonFACE	The program started in 2015 and aims to simulate the future atmosphere of the Amazon and evaluate all the processes that the increase in atmospheric CO2 can alter. In addition, an experiment based on FACE technology for outdoor CO2 enrichment is the first infrastructure of its kind in a tropical country. Its perspective is to assess the effects of the increase in CO2 on the adaptive capacity of the Amazon forest, the biodiversity it shelters, and the ecosystem services it provides.	Coordinated by the National Institute for Research in the Amazon – INPA Funders/Partners: Unicamp, USP, Embrapa, Alterra Wageningen University, University of Exeter, Technical University of Munich and University of Edinburgh, and FNDCT FINEP/MCTI
ATTO - Torre Alta da Amazônia	It is a joint scientific project between Brazil and Germany created in 2011 to understand the complex interactions of the Amazon rainforest with the atmosphere	Coordinated by the National Institute for R

	and climate. It is the largest research tower globally at 325m high. It aims to pro vide scientific results on the integrated understanding of the Amazon system a nd significantly reduce uncertainties about its impacts on global carbon and wa ter cycles, atmospheric chemistry, and the scenario of climate changes. Its perspective contributes to monitoring and understanding how the Amazon i nfluences the global climate, providing continuous, high-quality meteorological measurements needed to improve regional and global weather forecasting. Furt hermore, it facilitates the study of the evolution and impact of extreme climate events and monitoring of the Amazon forest's carbon balance and its resilienc e/vulnerability to extreme weather events.	esearch in the Amazo n – INPA Funders/Partners: FN DCT FINEP/MCTI, Ger many, France, and Sw itzerland

[1] https://www.gov.br/mma/pt-br/assuntos/servicosambientais/florestamais/copy_of_SumarioExecutivo_PilotoFloresta.pdf
https://www.greenclimate.fund/news/gcf-s-first-redd-results-based-payment-boosts-financial-incentive-to-protect-forests

[2] https://www.gov.br/agricultura/pt-br/assuntos/sustentabilidade/plano-abc/arquivo-publicacoes-plano-abc/final-isbn-plano-setorial-para-adaptacao-a-mudanca-do-clima-e-baixa-emissao-de-carbono-na-agropecuaria-compactado.pdf

3) Proposed alternative scenario with a brief description of expected outcomes and components of the project

Overview

This CBIT project aims to strengthen the climate transparency system of Brazil in order to meet the requirements of the ETF under the Paris Agreement. With the aim of producing high-quality climate information, the country will improve and streamline its climate data management cycle, including as related to planning, data collection, data processing and analysis, information publishing and sharing, data preservation and data reuse. Such climate information will be used for international reporting and serve as an essential input for national decision-making.

The project is organized in three components. **Component 1** focuses on designing and building an integrated climate data system for Brazil, DataClima+, connecting existing databases with new ones. It will also formalize the institutional framework needed for supporting data collection, management and reporting of an integrated climate transparency framework so that national efforts are coordinated and efficient. **Component 2** will enhance the modules of the integrated climate data platform for complying with the ETF and its MPGs: GHG emissions, adaptation, NDC tracking, and support needed and received. It will achieve this through project actions that strengthen databases, tools, templates and institutional and human capacity for each module. In the case of NDC tracking and support needed and received, new integrated IT modules will be created. Finally, **Component 3** will support national policy- and decision-makers to more effectively incorporate climate data and projections into their regulatory and planning processes. It will achieve this by strengthening databases, tools,

templates and institutional and human capacity for assessing the effectiveness of different sectoral policy scenarios for achieving national climate goals (SINAPSE module). It will also establish institutional arrangements for integrating SINAPSE not only into sectoral and sub-national planning and budgeting instances but also into efforts to prepare a national long-term strategy in accordance with the Paris Agreement, article 4, paragraph 19.

The CBIT project has been designed to achieve expected benefits through three GEF Strategy 2020 influence models: (i) Transforming policy and regulatory environments; (ii) strengthening of institutional capacity and decision-making processes; and (iii) convening multi-stakeholder alliances.[22]

The following table summarizes the current context and the transformation that the project aims to achieve to support Brazil to implement an ambitious transparency framework that meets the requirements of the Paris Agreement. Creating such an ambitious transparency framework for a country of Brazil's geographic size, large population, complex governmental structure and complex GHG emission profile will require broad and deep actions accompanied by sufficient GEF funding, as indicated in Table B above. The following table also links the desired transformation to the corresponding outputs that will contribute to this change. The outputs are presented in the following sub-sections.

Table 4A. Desired transformation as a result of the CBIT project

The current context	Desired change of behaviour through project (outcome)
Insufficient institutional arrangements to allow for collection and management of c limate transparency data. Multiple disconnected online platforms f or the ETF modules.	The Brazilian government measures, tracks and reports climate data through a ro bust, integrated and efficient transparency system. Behavioural change achieved through: - Clear understanding of data needs (output 1.1) - Creation of an integrated national climate data system, DataClima+ (output 1.2), which connects all ETF modules - Development of a coordination mechanism for the system (output 1.3) - Establishing of institutional arrangements for providing necessary data (out put 1.4) - Building of capacity to use the system (output 1.5) - Promotion of the use of the system (output 1.6)
Incomplete and inaccurate climate data, i nsufficient for complying with the ETF an	The Brazilian government produces more accurate and complete climate data an d makes it available through DataClima+.

d its MPGs.	Behavioural change achieved through: - Enhancement of the GHG emissions module, SIRENE (output 2.1) - Enhancement of the adaptation module, AdaptaBrasil MCTI (output 2.2) - Creation of NDC tracking module (output 2.3) - Creation of the module on support needed and received (output 2.4)
Limited integration of climate change con siderations into national policy- and decis ion-making.	National policy-makers incorporate climate data and policy sectoral analysis into national planning and policy-making efforts. Behavioural change achieved through: - Enhanced platform for assessing future impacts of policy options (output 3. 1) - Incorporation of national transparency system into national planning (output 3.2) - Incorporation of national transparency system into process for elaborating t he long-term strategy (output 3.3)

Differences, complementarities and synergies with the GEF project 10801: "Fifth National Communication, Biennial Update Report and Biennial Transparency Reports to the United Nations Framework Convention on Climate Change (UNFCCC)"

This CBIT project has been designed to complement and build synergies with the GEF combined project 10801 described in the baseline section. This section describes complementarities and synergies between the two projects. Chapter 6 explains coordination between the two.

To summarize the differences between the two projects, the GEF 10801 project focuses on supporting Brazil with developing specific UNFCCC and Paris Agreement reports for specific deadlines: BUR5 (Dec 2022), NC5 (Dec 2024), BTR1 (Dec 2024) and BTR2 (Dec 2026). It provides this support through a series of outputs focusing on capacity-building and enriching technical databases for successful report preparation. The CBIT project objective is broader, focusing on supporting Brazil with increasing its institutional capacity for achieving overall compliance with the requirements of the Paris Agreement ETF, through the development of a national transparency system, DataClima+. The CBIT project has a long-term systemic view, focusing on data integration and completeness

as key step in strengthening national institutional capacity on climate transparency. While the 10801 project has a short-term and siloed view, building capacities to develop four reports for responding to multi-lateral climate commitments, the CBIT project aims at setting the institutional arrangements that will be responsible for the preparation of future reports, and also for the integration of climate considerations into public and private decision making, a fundamental feature for achieving Brazil's NDC objective of climate neutrality (net-zero emissions) in 2050.

Previous GEF NC/BUR projects (see baseline) provide an important foundation for Brazil to build upon in meeting the requirements of the ETF. As the creation of these reports is time bound, identified gaps and needs are only documented and compensated through the usage of default values or expert assumptions that increase the uncertainty of the results. This work will continue through the 10801 project, with the CBIT project serving to address the gaps that are identified through the improvement plans in 5NC, BUR5 and BTR1. Noting that the 10801 project will start approximately one year before the proposed CBIT project,[1] the development of this CBIT project concept has taken into account the importance of not only building upon the 10801 project but in developing complementarities and synergies between the two projects, as for a period of time they will be executed in parallel.

A key area of complementarity and synergy is on the development of databases for four ETF modules. As table 4B notes (see below), through the 10801 project Brazil will develop excel databases at different levels of maturity for tracking NDC progress and support needed and received. The CBIT project will build synergies with this work by transforming these databases into IT modules that will be part of the DataClima+ system. This work will include:

- Enhancing the databases where required to provide a greater richness of data beyond that needed for preparing UNFCCC and Paris Agreement reports;
- Converting the databases into a common IT programming architecture and incorporating them into an integrated data system which is user-friendly (for instance, as with regards to inserting new data and using the data);
- Ensuring data integration between the databases of the four ETF modules (mitigation, adaptation, NDC tracking, support needed and received) and with the SINAPSE sub-platform, for ensuring cross-fertilization, greater quality control and assurance, and ultimately leading to richer UNFCCC and Paris Agreement reports and enhanced inputs for national policy-making;
- Making all data publicly available through public dashboards, facilitating greater national transparency on climate action.

Another area of complementarity is on capacity building. Capacity-building activities undertaken through the 10801 project focus on supporting report preparation. These are specific, one-off training events. The CBIT capacity-building activities will complement those by working with a Brazilian academic institution to develop a national capacity-building programme that continues beyond the life-time of both projects. This programme will complement the 10801 project activities by focusing on building the capacity of key stakeholders to input data into DataClima+ and use its results for preparing Convention and Paris Agreement reports and undertaking national policy-making.

A third area of complementarity is on supporting Brazil to develop capacity to report on participation in market and non-market mechanisms in accordance with the Paris Agreement's article 6. The CBIT project will complement the GEF 10801 project work by developing a corporate GHG emission inventory feature and database as part of SIRENE. This is an important first step in facilitating the participation of private sector actors in carbon pricing mechanisms.

To ensure effective coordination between the projects, both will be executed by the Ministry of Science, Technology and Innovations, General Coordination of Climate Science and Sustainability (CGCL). This is the ministry which has produced all of the country's UNFCCC transparency reports. Further information on coordination is contained in chapter 6. Table 4B summarizes the differences, complementarities, and synergies between the two projects.

Table 4B. Differences, complementarities and synergies between the GEF 10801 and CBIT projects

Outputs as per GEF project 10801 [2]	Relevant output(s) in the CBIT project	Differences, complementarities and synergies between the projects
Output 1.1.11 Improvement plan developed and updated for the subsequent inventories Output 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	Output 1.1. Data requirements, sources and gaps for preparing UNFCCC transparency reports and supporting gender-sensitive national policy-making are identified and disseminated to national stakeholders Output 2.1. A database, tools and templates are available to national stakeholders and their capacity is enhanced for using the national GHG inventory report module (SIRENE module)	The CBIT project will build upon this improvement plan and gap analyses from the NC/BUR/BTR project. It will also address outstanding elements in the improvement plans from previous editions of the National Inventory presented at INC, SNC, TNC, and 4NC.
Outcome 4.1. An enhanced public awareness strategy on climate change is developed, including the compilation and update of relevant information	1.6 A stakeholder communication and engagement strategy for DataClima+ is designed and implemented with key stakeholders	GEF project 10801 consists of actions with opinion leaders to disseminate information on technical and scientific advances achieved by the project components. The CBIT project communication activities focus on promoting DataClima+ with key stakeholders, as a one-stop-shop for information on climate change, including that developed through th

		e 10801 project.
Output 4.2.1. Capacity building activities to strengthen human, scientific, technical, and institutional capacity regarding GHG inventory development, mitigation actions, vulnerability and adaptation, MRV, and subjects related.	Output 1.5. A national capacity building programme for DataClima+ is designed and made accessible to national stakeholders	GEF project 10801 consists of targeted one-off capacity-building activities for technical aspects related to the preparation of four transparency reports under the UNFCCC and the Paris Agreement . The CBIT project creates a capacity-building programme with a Brazilian academic institution that goes beyond the project's lifetime. This programme will focus on training key stakeholders to use DataClima+ institutional arrangements for preparing future UNFCCC and Paris Agreement reports, and for informing national policy-making.
Output 4.2.2 Development of an interconnected database for mitigation options and other relevant information to ensure the systematization of data required for BUR and BTR, and the suitable dissemination of information to the general public	Output 3.1. A database, tools and templates are available to national stakeholders and their capacity is enhanced for assessing the effectiveness of sectoral policy scenarios for achieving national climate goals (SINAPSE module), building upon the other DataClima+ modules	GEF project 10801 develops a database of mitigation actions being executed through-out the country for reporting in the BUR and BTR. The CBIT project enhances the functions, usability and data robustness of the SINAPSE IT module of DataClima+, to support national policy-makers in evaluating the impacts of different climate policy scenarios.
Output 4.2.3 Improvement of the National Emissions Registry System (SIRENE)	Output 2.1. A database, tools and templates are available to national stakeholders and their capacity is enhanced for using the national GHG inventory report module (SIRENE module)	GEF project 10801 will improve the national emissions registry system (SIRENE), with data enriched due to application of an enhanced methodological approach, moving from tier 1 to tier 2 for the most relevant emission categories. The CBIT project will systematize these improvements and introduce further enhancements. These include the development of a corporate GHG emissions inventories database that is reconciled with top-down inventories presented in the NCs/BTRs, integration of the SIRENE platform within DataClima+ to ensur

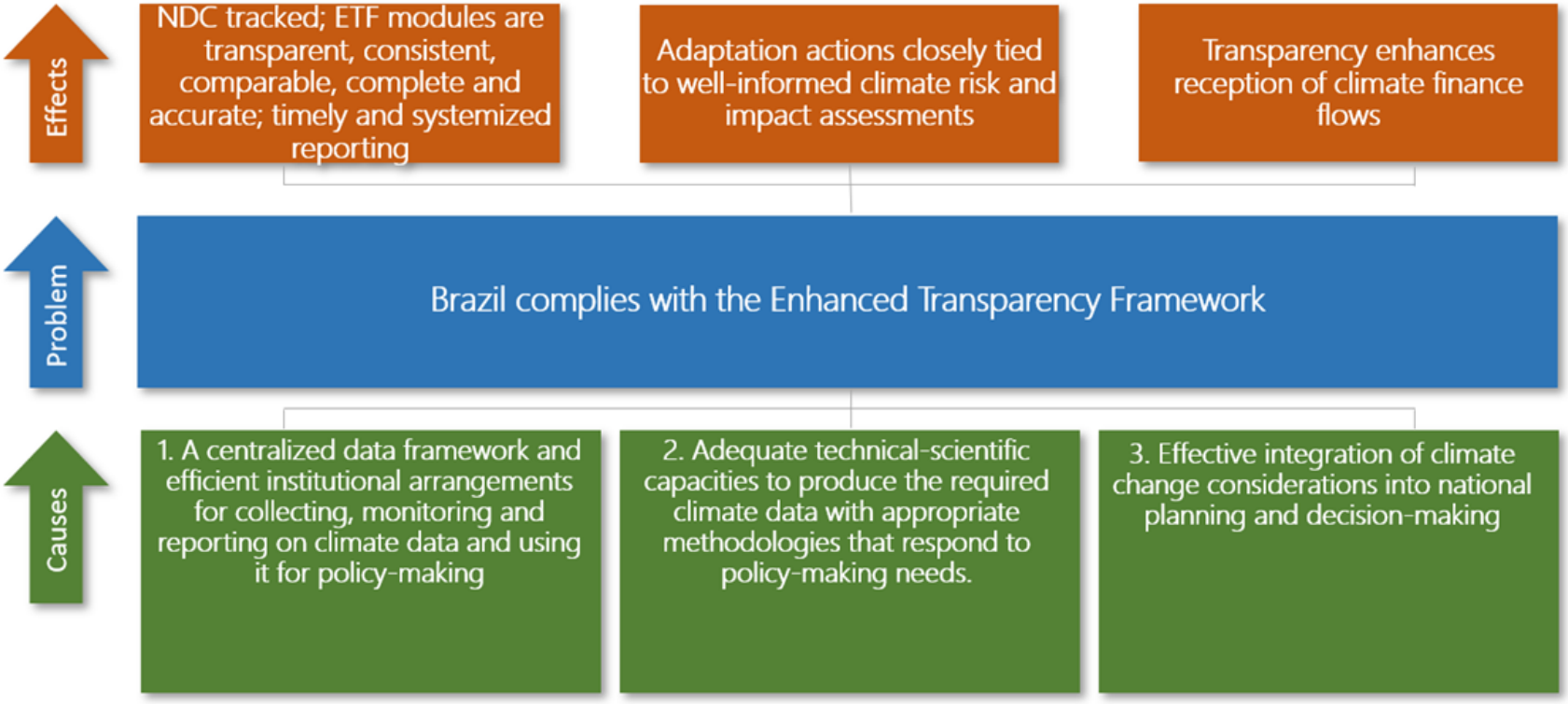
		e data connectivity and harmonization with other ETF module s, and train key stakeholders to use this DataClima+ module.
Output 4.2.4 Improvement of adapt ation platform (AdaptaBrasil MCTI) with updated data	Output 2.2. A database, too ls and templates are availa ble to national stakeholders and their capacity is enhan ced for using the adaptatio n module (AdaptaBrasil MC TI module)	GEF project 10801 will enhance AdaptaBrasil MCTI to cover da ta for the entire country, moving beyond the specific indicators currently presented. It will update the existing AdaptaBrasil mo dule with latest information generated in the preparation of the NC/BUR/BTR. The CBIT project will improve the AdaptaBrasil architecture, ad ding new functionalities to increase the resolution of the platfo rm. Among other, the project will include new adaptation secto rs (e.g., human health, infrastructure) and impacts (e.g., fire, fl ood and extreme weather events), as well as additional scales, analyses and features, with the aim of enriching adaptation an d vulnerability analyses and enhancing policy-making. It will al so integrate the AdaptaBrasil MCTI module within DataClima+ to ensure data connectivity and harmonization with other ETF modules, and train key stakeholders to use this DataClima+ m odule.
Output 6.1.1 Strengthening the insti tutional framework for preparing G HG inventories on a biennial basis, as well as collecting and systemizin g all data related to domestic MRV, mitigations actions and their effect s, needs, constraints and gaps, sup port received, impacts assessment s, and adaptation. Output 1.1.1 Procedures and arrang ements described to collect data, in cluding information on the role of th e partner institutions, as well as the development of an improvement pl an for the preparation of national G	Output 1.4. Institutional arr angements for entities to pr ovide data to DataClima+ a re established	GEF project 10801 will identify and develop strengthened instit utional arrangements for preparing UNFCCC and Paris Agreem ent reports. The CBIT project will formalizing these institutional arrangeme nts through data sharing agreements, memorandums of under standing and a ministerial resolution.

an for the preparation of national G HG inventories		
Output 6.2.3 Enhancement on the analysis of the mitigation actions progress and the Nationally Determined Contribution (NDC) tracking progress	Output 2.3. Tools and templates are available to national stakeholders and their capacity is enhanced for using the NDC tracking module	GEF project 10801 will collect and organize data on mitigation action progress and NDC tracking for reporting in four transparency reports under the UNFCCC and the Paris Agreement . It will also establish principles, procedures and methodologies for tracking mitigation action progress and NDC efforts. The CBIT will use the data collected by the 10801 GEF project, and build upon the principles, procedures and methodologies, to develop an DataClima+ IT module for NDC tracking. This will be the first federal government platform on tracking NDC progress. The CBIT project will also integrate the NDC tracking module within DataClima+ to ensure data connectivity and harmonization with other ETF modules, and train key stakeholders to use this DataClima+ module. The IT module will provide a consistent format for national and international tracking of NDC progress, accessible to all stakeholders.
Output 6.3.2 Information on support received updated and development of a consistent database	Output 2.4. Tools and templates are available to national stakeholders and their capacity is enhanced for using the means of implementation module to track support needed and received	GEF project 10801 will develop excel databases based on information provided by the Ministry of Economy, for completing four UNFCCC and Paris Agreement reports. The CBIT project will transform these databases into an IT module of DataClima+ on support needed and received. This will include facilitating connectivity with Ministry of Economy, Ministry of Foreign Affairs, and ABC databases to ensure automatic updating of data, and integration with the data of the other IT modules (mitigation, adaptation, NDC tracking), thus enhancing the robustness of the databases through cross-fertilization.

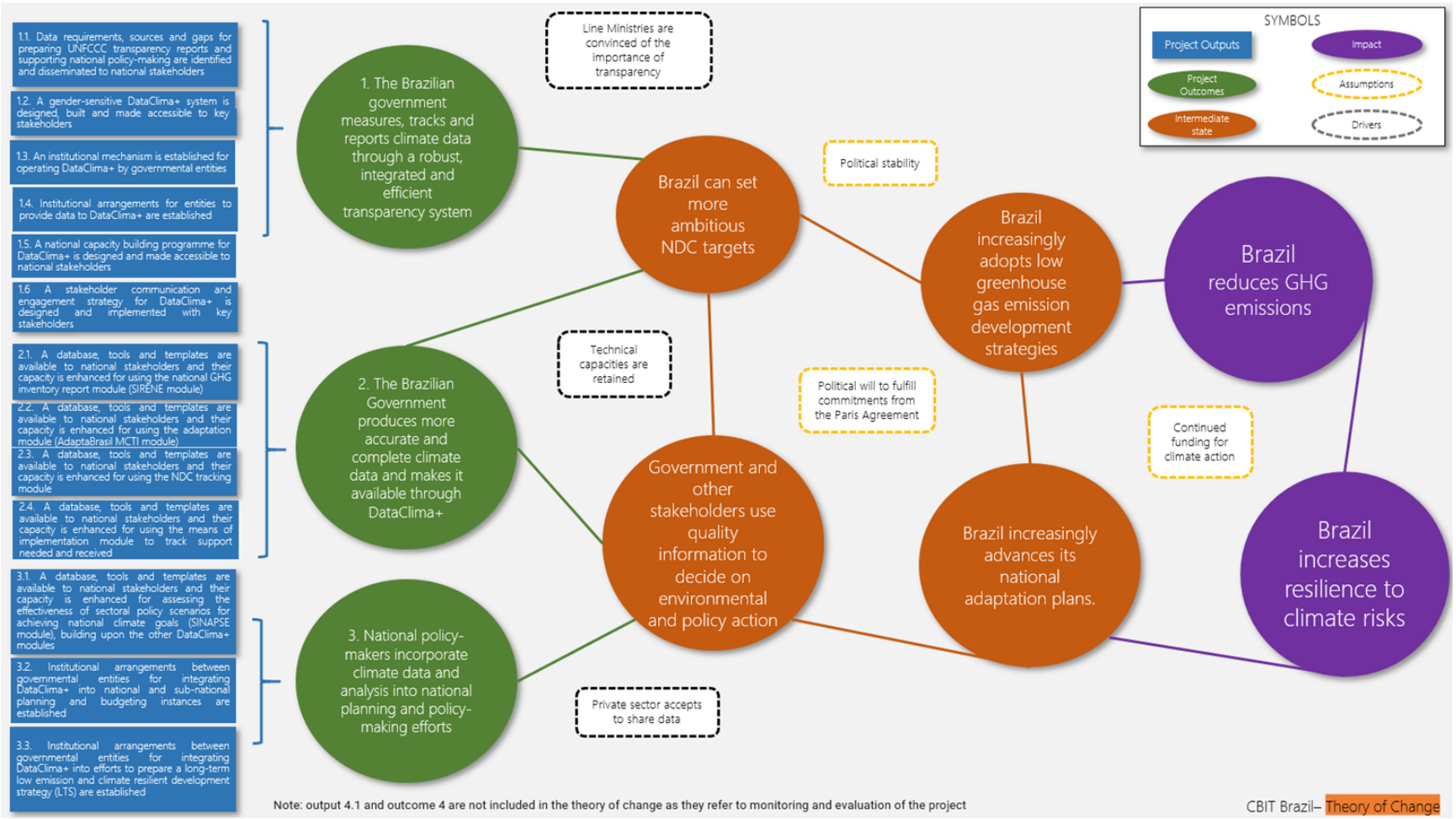
[1] It is estimated that the 10801 project will commence execution in the middle of 2022. This proposed CBIT project, if the concept is approved at the 62nd GEF Council meeting, would most likely start execution in the second half of 2023.

[2] As per information contained in the submitted project document.

Solution tree



Theory of change



The theory of change depicted above is dependent on a series of assumptions and drivers. As per UNEP glossary of results definitions, **assumptions** refer to external conditions necessary for project results to lead to next-level results, over which the project has no control. These include elements such as political stability in the country, continuing political will to fulfil the country's climate commitments and continued international funding for climate action. **Drivers** are defined as external conditions over which the project does have a certain level of control. In this project, this will include the retention of technical capacities and the conviction of line ministries and the private sector of the importance of transparency (e.g., through the communication and engagement strategy as well as capacity building in component 1).

Furthermore, Annex E displays a table describing constraints and gaps, and capacity needs to the national climate agenda reported through NC4 and information on how these elements will be covered by the GEF 10801 project, the CBIT project, or other.

The following sections present the concept foreseen for the components and outputs in this CBIT project. Suggested deliverables are included for each of the outputs; these will be further refined during the project preparation grant phase.

Component 1: Integrated climate data platform

Outcome 1: The Brazilian government measures, tracks and reports climate data through a robust, consistent and efficient transparency system.

Barrier that the project will address through this component: B1. Absence of a centralized data framework and insufficient institutional arrangements for collecting, monitoring and reporting on climate data and using it for policy-making.

Output 1.1. Data requirements, sources and gaps for preparing UNFCCC transparency reports and supporting gender-sensitive national policy-making are identified and disseminated to national stakeholders

Purpose of output: support the Brazilian government to develop a detailed understanding of the requirements of a connected and efficient national transparency system. Furthermore, support the government to develop a strategy to achieve a full-functioning integrated system, prepared through an inclusive and gender-sensitive process.

Tentative deliverables:

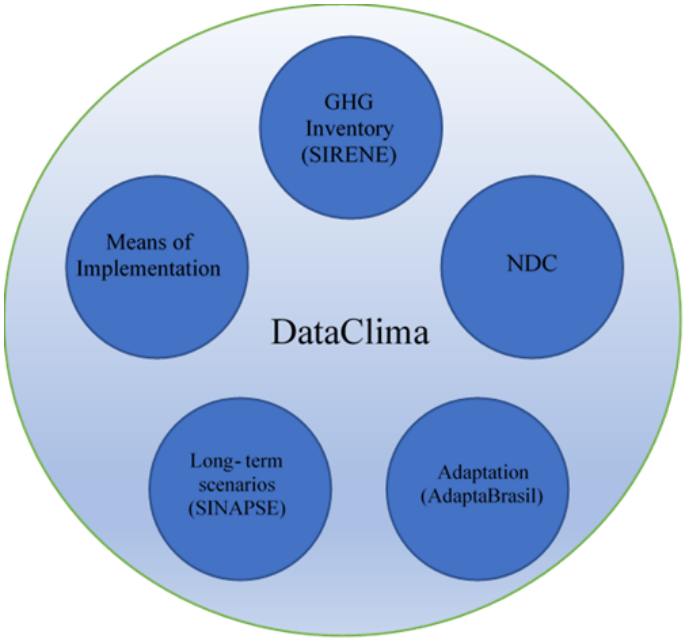
1.1.1	ETF compliance strategy, including a data collection plan by module, identification of comprehensive informati on required to run the system, templates required for collection, and mapping the entity / sector / government l evel providing the data, and their current status (e.g., periodically received, occasionally received, rarely receive d, needed but not received, etc.), as well as identification of methodologies and actors for data processing to e nsure data quality and assurance.
1.1.2	Report mapping which modules(s) will provide which piece of information to each report to the Convention (na tional communications, biennial update/transparency report, revisions of nationally determined contributions, p reparation of a long-term low GHG emissions development strategy)
1.1.3	Protocol, tentative workplan and timelines for the preparation of future national communications and biennial t ransparency reports to the Convention
1.1.4	Roadmap for the integration of the DataClima+ institutional system into report preparation processes

Output 1.2. A gender-sensitive DataClima+ system is designed, built and made accessible to key stakeholders

Purpose of output: design, build and make operational the DataClima+ system. DataClima+ will be the Brazilian Federal Government's national climate transparency system. An online platform, hosted by MCTI, it will house the four ETF modules and the module on long-term scenarios (see figure 5). As noted in the problem description and baseline, currently these modules either don't exist or exist as separate unlinked platforms which have different IT architectures and programming languages. Through this output, an integrated data management system will be created which brings together these data modules and ensures that the data of each is interlinked to facilitate cross-fertilization.

DataClima+ will serve as a centralized platform for data input by key data providers. It will also serve as a central location for climate data usage, facilitating the work of key stakeholders in preparing Convention and Paris Agreement reports and incorporating climate considerations into national policy-making. DataClima+ will also be accessible to the public, enhancing transparency and shedding light on national climate efforts and vulnerabilities.

Figure 5 - Conceptual visualization of DataClima+



Tentative deliverables:

1.2.1	Detailed design of a gender-sensitive DataClima+ platform, including identification of responsible authorities, mission, and functions, installed and required capacities, requirements on how to ensure the system and dat a collection is gender sensitive, and at least two alternatives (platforms, applications, or others) proposed for sharing and integrating institutional data, drawing on experiences, good practices and lessons learned made available through the CBIT Global Coordination Platform
1.2.2	Detailed design for the NDC Tracking Module and the Means of Implementation Module, including roadmap f or their operationalization
1.2.3	Specification of necessary resources (human and physical assets, including hardware and software, databas es, source codes, licenses, design documents as applicable).
1.2.4	Technical proposal on how to integrate the different databases as five interconnected modules of DataClima + (SIRENE, AdaptaBrasil MCTI, NDC tracking, Means of Implementation, and SINAPSE)
1.2.5	DataClima+ web platform (i.e., platform designed, developed and made available for use)
1.2.6	Incorporation of the five modules in the DataClima+ platform
1.2.7	DataClima+ operational manual (description of functions, maintenance, updating and usage protocols)

Output 1.3. An institutional mechanism is established for operating DataClima+ by governmental entities

Purpose of output: establish institutional arrangements which institutionally embed DataClima+ within existing federal government structures, ensuring the effective, sustainable and long-term operation of DataClima+.

DataClima+ will be hosted and managed by the Ministry of Science, Technology and Innovations. The Ministry will use existing national funding streams to ensure the platform's annual operation beyond the project lifetime, based on a detailed cost estimate and operational plan developed through this output. Furthermore, this output will support the creation of a Transparency Technical Committee, chaired by MCTI, which will serve as DataClima+'s advisory body with regards to DataClima+'s:

- Design, creation and operationalization (output 1.2);
- Data provision (output 1.3), content development (component 2) and related quality assurance and goal;
- Data usage (output 1.1 and component 3);
- Capacity-building (output 1.5) and stakeholder communication and engagement (output 1.6);
- Operation, maintenance and improvements post project.

In addition to MCTI, potential other stakeholders to participate in the committee may include: other ministries, and the Brazilian Research Network on Global Climate Change (RedeClima). The committee's constitution will be determined during the project preparation grant phase.

Tentative deliverables:

1.3.1.	Report: Cost estimates and operational plan for DataClima+ operations post project
1.3.2.	Ordinance of the Ministry of Science, Technology and Innovations institutionalizing DataClima+ as an offi cial data system of the Federative Republic of Brazil
1.3.3.	Transparency Technical Committee statute and competences
1.3.4.	Transparency Technical Committee annual workplans (one per year during CBIT project execution)
1.3.5.	Transparency Technical Committee quarterly meetings and publicly available meeting minutes

Output 1.4. Institutional arrangements for entities to provide data to DataClima+ are established

Purpose of output: establish institutional arrangements between existing federative entities to ensure the effective and efficient provision of data to populate and maintain up-to-date DataClima+. The GEF 10801 project is expected to strengthen the institutional framework for preparing BTRs with a clear definition of roles and responsibilities of the bodies involved in their preparation, considering their specific components, such as the National GHGI, Mitigation Actions, domestic MRV, Support Received, NDC implementation, impacts assessments and adaptation, among others. Thus, the GEF 10801 project will identify clear roles and responsibilities of the different bodies, and this CBIT project will formalize such results through MoUs, Ministerial decisions and other regulations eventually needed.

Tentative deliverables:

1.4.1.	Prioritized inventory of information required by sector and institutions at the national level
1.4.2.	Template(s) and draft(s) for Data Sharing Agreements (DSA) and Memoranda of Understanding (MoU) with sect oral institutions at the national level
1.4.3.	Draft ministerial resolution setting sectoral arrangements for the collection of information in the energy, industry, waste and AFOLU sector
1.4.4.	DSAs / MoUs subscribed (target: x% of the total requirements in the Data Collection Plan from output 1.1)

Output 1.5. A national capacity building programme for DataClima+ is designed and made accessible to national stakeholders

Purpose of output: Build institutional and human capacity to use DataClima+ for preparing transparency reports and developing climate-sensitive public policy. Other capacity building needs identified in NC4 will be addressed through the GEF 10801 project, especially concerning GHG inventory elaboration, monitoring of implemented mitigation actions, and reporting of actions related to vulnerability and adaptation. See annex E for further information.

Tentative deliverables:

1.5.1.	DataClima+ user manual (one chapter per module)
1.5.2.	Workshops and in-person and online training sessions (target: at least 150 representatives of public and private sector institutions, CSOs and academia trained on the use, maintenance and updating of DataClima+)
1.5.3.	MCTI staff trained on the use, maintenance and updating of DataClima+
1.5.4.	Roadmap for continuous capacity building actions for DataClima+ and its modules, including the identification o f a strategic partnership with a Brazilian academic institution
1.5.5	MoU signed with a Brazilian academic institution of the Rede Clima for the design and implementation of course s, training modules and provision of learning material

Output 1.6. A stakeholder communication and engagement strategy for DataClima+ is designed and implemented with key stakeholders

Purpose of output: ensure that key stakeholders are aware of DataClima+ and understand its value in supporting Brazil to meet its international climate commitments and promote climate-sensitive development. In addition, engage key stakeholders in the design of the platform and its different modules, to ensure that it responds to key stakeholder needs, thus contributing to the development of all other project outputs.

Tentative deliverables:

1.6.1.	Multi-stakeholder consultation, communication, and engagement strategy
1.6.2.	Multi-stakeholder consultation and engagement activities (as per the strategy)
1.6.3.	Communication materials (website/newsletters/policy briefs/publications) and campaign (as per the strategy)
1.6.4.	Recommendations for a long-term consultation mechanism
1.6.5	Launching events of DataClima+ and respective reports: 1 national event for 200 participants; 5 regional events f or 50 participants per region

Component 2: Accurate climate transparency modules

Outcome 2: The Brazilian Government produces more accurate and complete climate data, available through DataClima+.

Barrier that the project will address through this component: B2. Insufficient technical-scientific capacities to produce the required climate data with appropriate methodologies.

Output 2.1. A database, tools and templates are available to national stakeholders and their capacity is enhanced for using the national GHG inventory report module (SIRENE module)

Purpose of output: Build on the improvement and systematization of GHG emission information performed under the GEF 10801 project (including as related to agriculture and LULUCF) by incorporating a tool for displaying private sector (corporate) GHG inventories, taking into account the GHG protocol corporate accounting and reporting standard,[1] which are provided by entities that prepare a corporate-level GHG emissions inventory. . This tool will also seek to establish a quality assurance (QA) process of sectorial emissions with corporations' participation. Moreover, build the capacities of relevant stakeholders on preparing and updating corporate GHG emission inventories. MCTI staff will be trained on the use, maintenance and updating SIRENE's module. Supporting the report of entity-level GHG emissions will not only help improve the data for National GHG inventory but may also enable large emitting sources (LES) to annual report GHG emissions, thus providing a building block for carbon pricing policy options such as establishing carbon trading, carbon taxes or defining emissions caps.

Tentative deliverables:

2.1.1.	Corporate GHG emissions inventories feature for SIRENE module, including a quality assurance mechanism
2.1.2.	Connection of SIN-ABC to the SIRENE module and DataClima+, for linking data, information and MRV processes on tracking and reporting of agriculture and land-use, land-use change and forestry emissions
2.1.3.	User manual, policy briefs and good practices publications on preparing, using, maintaining and updating nation al and corporate GHG emission inventories
2.1.4.	Workshops and in-person and online training sessions for 200 representatives of public (at national and sub-nati onal levels) and private sector institutions (especially corporations), CSOs and academia on preparing and updat ing corporate GHG emission inventories
2.1.5.	Training sessions for MCTI staff on the use, maintenance and updating SIRENE's module

Output 2.2. A database, tools and templates are available to national stakeholders and their capacity is enhanced for using the adaptation module (AdaptaBrasil MCTI module)

Purpose of this output: enhance the transparency of information on adaptation, including with regards to: enhanced information on climate-related risks and impacts in different sectors; develop information to support identification of nationally-appropriate adaptation solutions; tracking of adaptation actions undertaken and needed.

Tentative deliverables:

2.2.1	AdaptaBrasil MCTI expansion plan to include new sectors (e.g., human health, infrastructure) and impacts (e.g., fire, flood and extreme weather events), scales, analyses and features
2.2.2	AdaptaBrasil MCTI information, functionalities and databases, with a view to further detailing the current database into more specific or segmented risks and impacts categories, including additional sectors, as appropriate (e.g., human health, infrastructure, ecosystem services, system-wide economic impacts, etc.)
2.2.3	Database, methodologies and indicators for the tracking and registering of existing adaptation efforts
2.2.4	Database of climate change adaptation options (planned, in implementation and/or further possibilities), including policies, programs, actions and technologies with different approaches and levels of governance
2.2.5	AdaptaBrasil MCTI module user manual and fact sheets
2.2.6	Workshops and in-person and online training sessions for 200 representatives of public (at national and sub-national levels) and private sector institutions, CSOs and academia on the use of AdaptaBrasil MCTI module
2.2.7	Training sessions for MCTI staff on the use, maintenance and updating of AdaptaBrasil MCTI module
2.2.8	Dissemination program for users of AdaptaBrasil MCTI in the civil society

Output 2.3. Tools and templates are available to national stakeholders and their capacity is enhanced for using the NDC tracking module

Purpose of output: support Brazil to develop a DataClima+ module on NDC tracking, to support key stakeholders in tracking progress to achieve NDC mitigation targets and reporting related progress to Parties of the UNFCCC and the Paris Agreement.

As noted in table 4B above, GEF project 10801 will collect and organize data on mitigation action progress and NDC tracking for reporting in four UNFCCC and Paris Agreement reports. It will also establish principles, procedures and methodologies for tracking mitigation action progress and NDC efforts.

The CBIT will use the data collected by the 10801 project, and build upon the developed principles, procedures and methodologies, to create a DataClima+ IT module for NDC tracking. This will be the first federal government platform on tracking NDC progress. As part of the development of the module, the project will develop indicators to facilitate an objective analysis of NDC advancements. To undertake NDC tracking, mapped mitigation actions will be compared to the pre-established business as usual scenario, which will be reproduced through DataClima+'s SINAPSE module (output 3.1) and connected to this module to facilitate evaluation of effort. This module will provide a consistent format for national and international tracking of NDC progress, accessible to all stakeholders.

Tentative deliverables:

2.3.1	Detailed design of the NDC tracking module, including with regards to expansion of data developed under the 10 801 project, translation of this data to an integrated IT platform, development of tracking indicators, establishme nt of baseline scenario
2.3.2.	NDC tracking module incorporated into DataClima+
2.3.3.	NDC tracking module user manual and policy briefs
2.3.4.	Workshops and in-person and online training sessions for 200 representatives of public (at the national and sub-national levels) and private sector institutions, CSOs and academia on the use, maintenance and updating of the NDC tracking module (mitigation)
2.3.5.	Training sessions for MCTI staff on the use, maintenance and updating of the NDC tracking module (mitigation)
2.3.6.	Peer-exchange sessions for staff of different ministries and other relevant stakeholders on tracking NDC progres s

Output 2.4. Tools and templates are available to national stakeholders and their capacity is enhanced for using the means of implementation module to track support needed and received

Purpose of output: support Brazil to strengthen its identification of support received and needed for implementing its climate commitments, building upon a time-series excel database on support received developed through the elaboration of the first BTR (GEF 10801 project). This output will transform that excel database into a fully integrated IT sub-platform as part of DataClima+ for supporting key stakeholders to report and view support needed and received. It will also explore how labelling and taxonomy of climate finance can be improved within DataClima+

Tentative deliverables:

2.4.1.	Means of Implementation module, including linking existing Ministry of Economy, Ministry of Foreign Affairs, and ABC accounting databases on support needed and received to DataClima+, and efforts to enhance labelling and taxonomy of climate finance
2.4.2.	Means of Implementation module user's manual and policy briefs
2.4.3.	Workshops and in-person and online training sessions for 200 representatives of public (at the national and sub-national levels) and private sector institutions, CSOs and academia on the use, maintenance and updating of the Means of Implementation module (on support needed and received)
2.4.4.	Training activities for public institutions on the use, maintenance and updating of the means of implementation module
2.4.5.	Peer-exchange sessions for staff of different ministries and other relevant stakeholders on reporting support ne eded and received

Component 3: National policy-making informed by climate data

Outcome 3: National policy-makers incorporate climate data and analysis into national planning and policy-making efforts

-

Barrier that the project will address through this component: B3. Limited integration of climate change considerations into national planning and decision-making.

-

Output 3.1. A database, tools and templates are available to national stakeholders and their capacity is enhanced for assessing the effectiveness of sectoral policy scenarios for achieving national climate goals (SINAPSE module), building upon the other DataClima+ modules

Purpose of output: enhance the National Simulator of Sectoral Policies and Emissions (SINAPSE) with additional coverage and features, to support national and sub-national decision- and policy-makers in incorporating climate data into national decision-making and planning processes.

Tentative deliverables:

3.1.1	Enhanced and additional features for SINAPSE on mitigation actions, including analysing action synergies and trade-offs concerning adaptation aspects (co-benefits, resilience, vulnerability, etc.), elaborating NDC trajectory to enable the development of a multiple year target based on a single year NDC target to support the elaboration of low-emission public policies, while envisaging Internationally Transferred Mitigation Outcomes (ITMO) adjustments
3.1.2	New features for SINAPSE on adaptation actions, including considering effectiveness, feasibility and limits criteria, as well as analyses of synergies and trade-offs, both within the adaptation strategies itself, and with mitigation strategies
3.1.3	SINAPSE user manual, including guidelines on how SINAPSE can support key stakeholders by serving as a tool for identifying mitigation and adaptation benefits for sectoral plans and projects, facilitating their access to climate finance
3.1.4	Workshops and in-person and online training sessions for 250 representatives of public (at the national and sub-national levels) and private sector institutions, CSOs and academia trained on the use of SINAPSE, including on how to elaborate, provide input to and update SINAPSE climate projections
3.1.5	Training activities for staff of different ministries, policy-makers and other relevant stakeholders trained on how to integrate climate data and projections into policy- and decision-making processes
3.1.6	Report and database on modelling synergies and trade-offs between alternative pathways to achieve the nationally determined contribution, including carbon neutrality

Output 3.2. Institutional arrangements between governmental entities for integrating DataClima+ into national and sub-national planning and budgeting instances are established

Purpose of output: create institutional arrangements which ensure that Brazilian climate data made available through the national transparency system support national and sub-national planning and budgeting instances. The national documents and planning processes to be informed include subsequent NDCs, the NDC Implementation Strategy, the long-term low emission and climate resilient development strategy (LTS), the PNVC (National Green Growth Program). (Additional planning processes to be identified during the PPG phase).

Tentative deliverables:

3.2.1	Stakeholder consultation report on institutional arrangements (and legal framework, if needed) for the integratio n of SINAPSE into sectoral and sub-national planning and budgeting (example direction where this could go: all major policies / sectoral plans required to be assessed through SINAPSE to assess their impacts in terms of emi ssions and adaptation)
3.2.2	Draft institutional arrangements for the integration of SINAPSE into sectoral and sub-national planning and budg eting instances
3.2.3	Validation workshop report on final institutional arrangements (and legal framework, if needed) for the integratio n of SINAPSE into sectoral and sub-national planning and budgeting
3.2.4	Institutional arrangements presented for adoption by the relevant federative entities (to be determined during the PPG stage)

Output 3.3. Institutional arrangements between governmental entities for integrating DataClima+ into efforts to prepare a long-term low emission and climate resilient development strategy (LTS) are established

Purpose of this output: create institutional arrangements which ensure that Brazilian climate data made available through the national transparency system support the development of a long-term climate strategy in accordance with the Paris Agreement, article 4, paragraph 19.

Tentative deliverables:

3.3.1	Stakeholder consultation report on institutional arrangements and legal framework for the integration of SINAPS E into the preparation of a long-term low emission and climate resilient development strategy (LTS)
3.3.2	Peer-exchange activities for staff of different ministries, policy-makers and other relevant stakeholders on develo ping and updating long term strategies, building on experiences from other countries
3.3.3	Draft institutional arrangements (and legal framework, if needed) for the integration of SINAPSE into the preparat ion of a long-term low emission and climate resilient development strategy (LTS)
3.3.4	Validation workshop report on final institutional arrangements for the integration of SINAPSE into the preparatio n of a long-term low emission and climate resilient development strategy (LTS)
3.3.5	Institutional arrangements presented for adoption by the relevant federative entities (to be determined during the PPG stage)

[1] https://ghgprotocol.org/corporate-standard.

Component 4. Monitoring and Evaluation

Outcome 4: Project is effectively monitored and evaluated

Output 4.1. Monitoring and evaluation products are delivered

Purpose of the output: ensure that the project is effectively monitored and evaluated during its execution.

In line with the GEF Evaluation requirements and UNEP's Evaluation Policy, GEF Full-Sized Projects and any project with a duration of 4 years or more will be subject to an independent Mid-Term Evaluation or management-led Mid-Term Review at mid-point. All GEF funded projects are subject to a performance assessment when they reach operational completion. This performance assessment will be either an independent Terminal Evaluation or a management-led Terminal Review. In case a Review is required, the UNEP Evaluation Office will provide tools, templates, and guidelines to support the Review consultant. For all Terminal Reviews, the UNEP Evaluation Office will perform a quality assessment of the Terminal Review report and validate the Review's performance ratings. This quality assessment will be attached as an Annex to the Terminal Review report, validated performance ratings will be captured in the main report.

If an independent Terminal Evaluation (TE) of the project is required, the Evaluation Office will be responsible for the entire evaluation process and will liaise with the Task Manager and the project implementing partners at key points during the evaluation. The TE will provide an independent assessment of project performance (in terms of relevance, effectiveness and efficiency), and determine the likelihood of impact and sustainability. It will have two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote learning, feedback, and knowledge sharing through results and lessons learned among UNEP staff and implementing partners. The direct costs of the evaluation (or the management-led review) will be charged against the project evaluation budget. The TE will typically be initiated after the project's operational completion. If a follow-on phase of the project is envisaged, the timing of the evaluation will be discussed with the Evaluation Office in relation to the submission of the follow-on proposal.

The draft TE report will be sent by the Evaluation Office to project stakeholders for comment. Formal comments on the report will be shared by the Evaluation Office in an open and transparent manner. The project performance will be assessed against standard evaluation criteria using a six-point rating scheme. The final determination of project ratings will be made by the Evaluation Office when the report is finalized. The evaluation report will be publicly disclosed and will be followed by a recommendation compliance process. The evaluation recommendations will be entered into a Recommendations Implementation Plan template by the Evaluation Office. Formal submission of the completed Recommendations Implementation Plan by the Chief Technical Advisor is required

within one month of its delivery to the project team. The Evaluation Office will monitor compliance with this plan every six months for a total period of 12 months from the finalization of the Recommendations Implementation Plan. The compliance performance against the recommendations is then reported to senior management on a six-monthly basis and to member States in the Biennial Evaluation Synthesis Report.

Monitoring and Evaluation (M&E) activities and related costs will be determined during the project preparation grant phase. The following table provides an indicative list of proposed M&E activities. The project budget for M&E activities is USD$ 40,000.

Table 5. Monitoring and Evaluation activities

M&E activity	Timeframe
Inception Meeting	Within 2 months of project start-up
Inception Report	1 month after project inception meeting
Measurement of project progress and performance indica tors	Annually
End-point measurement of project outcome indicators, GE F Core indicators	End Point
Half-yearly progress reports	Within 1 month of the end of reporting period i.e., on or before 31 January
Project Steering Committee (PSC) meetings	Once a year minimum
Reports of PSC meetings	Annually
Project Implementation Review (PIR) report	Annually, part of reporting routine
Monitoring visits to field sites	As appropriate
Terminal Review / Evaluation	Typically initiated after the project's operational completion
Project Operational Completion Report	Within 2 months of the project completion date
Co-financing report (including supporting evidence for in-kind co-finance)	Within 1 month of the PIR reporting period, i.e., on or before 31 July
Publication of lessons learnt and other project document s	Annually, part of half-yearly reports & Project Final Report

4) Alignment with GEF focal area and/or Impact Program strategies

This CBIT project is addressing GEF Focal Area Climate Mitigation 3-8 “Foster enabling conditions for mainstreaming mitigation concerns into sustainable development strategies through capacity building initiative for transparency”.

The GEF-7 Climate Change Focal Area Strategy aims to support developing countries to make transformational shifts towards low emission and climate-resilient development pathways. The CBIT, as per paragraph 85 of the COP decision adopting the Paris Agreement, complies with this Focal Area Strategy by:

- Strengthening national institutions for transparency-related activities in line with national priorities;
- Providing relevant tools, training and assistance for meeting the provisions stipulated in Article 13 of the Agreement; and
- Assisting in the improvement of transparency over time.

This CBIT project aims to strengthen institutions to coordinate, manage and implement climate transparency activities in line with national priorities. It will:

- Provide a detailed design of the DataClima+ system, including for the integration of the different databases as interconnected modules, and operationalize the DataClima+ platform (1.2);
- Establish institutional arrangements which institutionally embed DataClima+ within existing federal government structures (1.3);
- Develop institutional arrangements between federative entities to ensure the effective and efficient provision of data to populate and maintain DataClima+ up-to-date (1.4);
- Build institutional and human capacity to use DataClima+ for preparing transparency reports and developing public policy (1.5);
- Ensure that key stakeholders are aware of DataClima+ and understand its value, and engage them in the design of the platform and its different modules (1.6);
- Create institutional arrangements which ensure that Brazilian climate data made available through the national transparency system support national and sub-national planning and budgeting instances (3.2); and
- Create institutional arrangements which ensure that Brazilian climate data made available through the national transparency system support the development of a long-term climate strategy (3.3).

The project also aims to build databases, tools, templates and capacity for using the national GHG inventory report module (SIRENE module) (Output 2.1), the adaptation module (AdaptaBrasil MCTI module) (Output 2.2), the NDC tracking module (Output 2.3) the means of implementation module to track support needed and received (Output 2.4); and for assessing the effectiveness of sectoral policy scenarios for achieving national climate goals (SINAPSE module), building upon the other DataClima+ modules (Output 3.1), to support national and sub-national decision- and policy-makers in incorporating climate data into national decision-making and planning processes.

Moreover, the improvement of transparency over time will be enabled by several strategies:

- Ensuring financial sustainability after the project lifespan by mainstreaming transparency activities into national and subnational strategies as well as in budgeting processes: through the establishment of institutional arrangements for integrating DataClima+ into national and sub-national planning and budgeting instances (Output 3.2) and institutional arrangements for integrating DataClima+ into efforts to prepare a long-term low emission and climate resilient development strategy (Output 3.3).
- Establishing institutional arrangements which embed DataClima+ within federal government structures, ensuring an effective coordination in the provision of data, data quality assurance and control, and operation of DataClima+; as well as an effective and efficient provision of data to populate and maintain up-to-date DataClima+ (Output 1.4). will enable the continuous enhancement of transparency. This will also be possible due to the design and implementation of a national capacity building programme on DataClima+ which will target the preparation of transparency reports and public policy-making (Output 1.5).
- Developing the database and related tools, templates and capacity for the MRV of NDC implementation progress will enhance synergies among government actions and allow for its updating in the future (Output 2.3);
- Elaborating and implementing a stakeholder communication and engagement strategy will help raise awareness and engagement of stakeholders on climate change matters and also disseminate the Paris Agreement (Output 1.6);
- Ensuring national policy- and decision-makers more effectively incorporate climate data and projections into their regulatory and planning processes, which will allow for better informed policy-making while mainstreaming climate change transparency in the country's overall planning and policy landscape – national policies and strategies will be designed and updated in a transparent manner, based on the quality information to be provided by DataClima+ and constantly updated further on (Outputs 3.1, 3.2 and 3.3).

5) Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing

The CBIT programme is designed to improve mandatory reporting of Parties to the UNFCCC. As such, this project is financed on full agreed cost basis. In the case of this programme, eligible activities are described in the GEF document "Programming directions for the Capacity Building Initiative for Transparency" (GEF/C.50/06). The activities of this project are consistent with the scope of the programming directions. Co-financing is not a necessary requirement for this project. However, there is a foundation of activities that are provided as co-financing which have been considered when estimating in-kind co-finance of USD 500,000 as indicated in table C.

Brazil has already achieved substantive progress concerning climate transparency and reporting to the UNFCCC. It continues to undertake improvements in its different information systems, methodologies and databases. However, the ETF under the Paris Agreement poses greater challenges through more demanding requirements, thus calling for more resources and efforts that enable the country to comply with the new modalities, procedures and guidelines. The CBIT project aims to bridge this increased gap through its additional GEF financing.

Although different institutional arrangements are in place, they are insufficient for adequately collecting, monitoring and reporting on climate data and using it for policy-making. Funds are lacking to finance the development of tools, institutional arrangements and capacity-building that would allow the country to have an integrated climate data platform, which would allow the Brazilian government to measure, track and report climate data through a robust, consistent and efficient transparency system (proposed under Component 1). Through a roadmap for continuous capacity building actions for DataClima+ and its modules, implemented via a strategic partnership with a Brazilian academic institution that is part of the Brazilian Research Network on Global Climate Change, the need of building institutional and human capacity is addressed in a sustainable manner, going beyond the project lifespan (output 1.5).

Moreover, the different databases and systems currently available for climate data management require improvements to produce more accurate and complete climate data. While the National Emissions Registry System (SIRENE) provides security and transparency to the process of GHG inventories preparation, being an advanced system, it is still unable to distinguish or display private sector (corporate) GHG inventories. In addition, SIRENE is not connected to other sub-systems of the MRV system (on adaptation, support, NDC tracking, long-term scenarios). Funding and capacity are lacking to ensure connectivity and further engagement of relevant stakeholders so that climate data can inform evidence-based decision-making. Component 2 under this CBIT project is expected to deliver accurate climate transparency modules, available through DataClima+.

The platform focused on adaptation, AdaptaBrasil MCTI, is a recent major advance in providing information on the impacts of climate change, but there's room for improvement. To serve as an effective design-making tool, it needs to provide enhanced resolution and more specific information on climate related risks, to broaden the climate related risks analyses, to cover additional sectors, track national adaptation efforts and provide a database of adaptation options. Furthermore, it needs to enable the evaluation of different adaptation options, considering criteria such as effectiveness, feasibility and limits, as well as analyses of synergies and trade-offs between adaptation and mitigation strategies. Funds are lacking to enable the development of such improvements and to ensure connectivity to other modules of the MRV system with a view to promote coherent national reporting and policy-making.

The modules focused on tracking progress in NDC implementation and support needed and received are still to be developed. Brazil currently doesn't count with a NDC tracking system that allows the country to measure progress of mitigation actions announced in the NDC and their impact in terms of GHG emission reductions.

Regarding support needed and received, even though the Ministry of Economy tracks funds received for certain projects and investments, this ministry's accounting system is not connected to the other climate data modules already mentioned. Funds and capacity are lacking to provide for the desired connectivity, coordination between ministries and the use of consistent metrics to ensure transparent reporting and help policy-makers identify the scale and strategic allocation of funds to achieve maximum impact in mitigation and adaptation actions.

Finally, the objective of having national policy-making being informed by climate data is currently being supported by the development, at an early stage, of the National Simulator of Sectoral Policies and Emissions (SINAPSE), a new tool for projecting scenarios. This CBIT project intends to ensure the dissemination of SINAPSE and that it informs the future elaboration of a long-term low greenhouse gas emission development strategy. Furthermore, SINAPSE doesn't consider adaptation and resilience co-benefits of different trajectories explored, nor synergies between multiple policy combinations, nor the social implications or economic costs. Finally, SINAPSE doesn't connect to the other modules of the national MRV system. Component 3 is expected to generate the outcome of having national policy-makers incorporating climate data and analysis into national planning and policy-making efforts. More broadly, the lack of connectivity between the four modules means that policy-makers are unable to draw one central database for climate data. Instead, they need to go to three different databases (SIRENE, AdaptaBrasil MCTI, SINAPSE), which have different data structures, layouts and underlying IT programming languages.

At the end of the CBIT project, the country will rely on an integrated climate data platform to fulfil the reporting requirements of the ETF under the Paris Agreement and for supporting policy-making, with a view to inform long-term low-emission and climate-resilient development planning. Hence, the CBIT project will address the identified needs and gaps, advancing the development of a functional robust, consistent and efficient transparency system.

Supporting Brazil to enhance its capacity to comply with the modalities, procedures and guidelines of the enhanced transparency framework through the aforementioned activities will require a level of GEF project funding commensurate with the project's context and ambition. A country with a population of more than 210 million, with a territory of more than 8 million km², it also has five distinct climatic zones and significant socio-economic challenges. Few countries in the world have such complex GHG emission profiles or diversities of climate vulnerability. Climate data collection is thus of a large scale and extremely diverse. Another significant challenge is in collecting climate data across such a large territory, containing 26 federative states, one federal district and more than 5000 municipalities. For instance, federal states can directly receive international funding, meaning that the MRV of support received and tracking of NDC actions need to delve into the efforts of a plethora of national and sub-national actors.

Notwithstanding this context, the project is highly ambitious in aiming to support Brazil in developing its first integrated national transparency system, through the online platform DataClima+. This is a major step forward for the country. Significant GEF funding will be required to develop an integrated online platform, within the aforementioned complex and enormous data environment, which harmonizes and connects data across four existing separate platforms (on mitigation, adaptation, support received and climate projections) and a new one created through the project (on NDC tracking). While the GEF 10801 project will develop offline databases for a given timeframe as starting points for certain modules, significant investment will be required to transform these into online modules which have the same IT architecture and data structure as part of an integrated system that can be periodically updated for the preparation of subsequent reports. The allocation of funding across the four project outputs is based on an estimation of the human resource and IT infrastructure costs for the work described in detail in chapter 3, based on costs undertaken through other projects in Brazil by MCTI, as well as UNEP's experience as implementing agency for 12 other CBIT projects in Latin America and the Caribbean.

6) Global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF)

This project will indirectly lead to increased mitigation and adaptation efforts through improved tracking of Brazil's climate efforts. This project will increase the quality and availability of climate data for Brazil through the transparency system that is to be improved. Moreover, given the linkage between the NDC and the SDGs, and the integration of this linkage into the progress tracking systems, Brazil will have better information of how its climate work is contributing to sustainable development. These effects will translate to a higher ambition when presenting future NDCs and in the long-term low emission strategy.

This project will monitor the main indicators from the CBIT tracking tool, especially Indicator 3-*Quality of MRV Systems*, and Indicator 5-*Qualitative assessment of institutional capacity built for transparency-related activities* proposed under Article 13 of the Paris Agreement. The baseline and target will be set during the project development phase.

7) Innovation, sustainability and potential for scaling up.

Innovation

Transitioning to the ETF will require that developing countries improve their MRV systems to comply with the enhanced scope and depth of reporting, which calls for innovation and sustainable institutional arrangements. This CBIT project builds on the innovative approaches and lessons learned during the development of databases, platforms and systems already in place in Brazil, to create an integrated and robust transparency system that encompasses mitigation, adaptation, means of implementation and long-term low-emission and climate-resilient development planning.

The following innovative aspects of this CBIT project are noteworthy:

- The Data Clima+ system will be operationalized through an integrated web platform that will be a one stop shop for climate transparency data (Component 1); it will be tailored to the domestic needs and priorities whilst ensuring a best practice approach to national MRV with effective stakeholder engagement. Transparency in data sources, definitions, methodologies and assumptions will build trust among countries and stakeholders.
- Modules for tracking progress in NDC implementation and support needed and received will be developed to conform with the ETF, since Brazil currently doesn't count with this tools with such ends.
- The integration of the different databases and systems will demand ambitious cooperation efforts and innovative institutional arrangements and mechanisms among government ministries and agencies, research institutions, the academia, as well as CSOs and the private sector.
- The gender-responsive approach towards the DataClima+ system design (output 1.2) will allow the system to capture gender biases in planning and policy documents such as the NDCs and Adaptation Plans.
- Another innovative aspect is related to capacity-building activities, where a national capacity building programme (output 1.5) will be designed and implemented in partnership with a Brazilian academic institution which will develop and implement a roadmap for continuous capacity building actions for

DataClima+ and its modules, by designing and implementing courses, training modules and providing learning materials.

Furthermore, the project will incorporate relevant, innovative solutions drawing upon lessons learned from other CBIT projects through the CBIT Global Coordination Platform.

Sustainability

As described previously, the current approach for preparing reports to comply with the UNFCCC requirements is highly dependent on international capacity and ad-hoc financial support. This project will address this by building the human and institutional capacities to manage and update DataClima+, thus improving the national transparency framework over time, including through a continuous national capacity building programme that will ensure that the capacity is retained into the institutions. The developed capacity building material will also be available. Through the link to the CBIT global project, the project team will be kept up to date with development and requirements of the transparency systems.

Moreover, sustainability shall be enabled by the following strategies:

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- • On ensuring the sustainability of the data system, DataClima+ will be hosted and managed by the Ministry of Science, Technology and Innovations. The Ministry will use existing national funding streams to ensure the platform's annual operation beyond the project lifetime, based on a detailed cost estimate and operational plan developed through Output 1.3;
- • The Ministry of Science, Technology and Innovations will also issue an ordinance institutionalizing DataClima+ as an official data system of the Federative Republic of Brazil (Output 1.3);
- • On the on-going provision of data, the project will establish institutional arrangements for effective and efficient provision of data to populate and maintain up-to-date DataClima+ (Output 1.4). This will also be possible due to the design and implementation of a national capacity building programme on DataClima+ which will target the preparation of transparency reports and public policy-making (Output 1.5). In particular, the fact that this project will be led by MCTI, that has a team focused on climate data and the preparation of national communication and biennial reports, will ensure that DataClima+ is sustainable.
- • The project will also ensure sustainability of impact post project by mainstreaming transparency activities into national and subnational strategies as well as in budgeting processes: through the establishment of institutional arrangements for integrating DataClima+ into national and sub-national planning and budgeting instances (Output 3.2) and institutional arrangements for integrating DataClima+ into efforts to prepare a long-term low emission and climate resilient development strategy (Output 3.3).
- • Component 3 will support national policy- and decision-makers to more effectively incorporate climate data and projections into their regulatory and planning processes, which will allow for better informed policy-making while mainstreaming climate change transparency in the country's overall planning and policy landscape – national policies and strategies will be designed and updated in a transparent manner, based on the quality information to be provided by DataClima+ and constantly updated further on (Outputs 3.1, 3.2 and 3.3).

Scaling up

The activities of this CBIT project can be potentially scaled up, thus contributing to actions undertaken at different scales and in various sectors. DataClima+ will have a modular structure that may allow the inclusion of new elements to accommodate for national planning and reporting needs. Through this CBIT project, Brazil will actively exchange lessons learned with peers, mainly by means of activities undertaken through the CBIT Global Coordination Platform. Through the global platform, the experiences, lessons learnt and best practices garnered during this project can be shared with other developing countries undertaking CBIT projects around the world, thereby offering the opportunity for scaling up and replicating activities in countries that undergo similar processes of enhancing their transparency systems.

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[1] https://g1.globo.com/jornal-nacional/noticia/2020/11/12/ibge-brasil-tem-quase-52-milhoes-de-pessoas-na-pobreza-e-13-milhoes-na-extrema-pobreza.ghtml.

[2] These barriers are further discussed in the baseline section.

[3] Fourth National Communication of Brazil to the United Nations Framework Convention on Climate Change / Secretariat for Research and Scientific Training. Brasilia: Ministry of Science, Technology and Innovations, 202. *Hereinafter* NC4 (2021), p. 404-405

[4] NC4 (2021), p. 404-405.

[5] NC4 (2021), p. 71.

[6] MRE, 2016.

[7] Available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Brazil%20First/Brazil%20First%20NDC%20(Updated%20submission).pdf

[8] Official communication to the UNFCCC available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Brazil%20First/2021%20-%20Carta%20MRE.pdf

[9] MMA, 2016.

[10]Available at: https://www.gov.br/mma/pt-br/diretrizes-para-uma-estrategia-nacional-para-neutralidade-climatica.pdf/

[11] Reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries.

[12] See Annex D for further information.

[13] NC4 (2021), p. 74.

[14] https://www.gov.br/mcti/pt-br/acompanhe-o-mcti/sirene/sobre-o-sirene.

[15] Ibid., p. 86

[16] https://www.gov.br/mcti/pt-br/acompanhe-o-mcti/cgcl/clima/paginas/adaptabrasil-mcti.

[17] Idem.

[18] NC4 (2021), p. 371.

[19] https://www.gov.br/agricultura/pt-br/assuntos/noticias/governo-federal-institui-sistema-para-monitorar-plano-abc-2021-2030.

[20] https://www.gov.br/mma/pt-br/assuntos/servicosambientais/florestamais/copy_of_SumarioExecutivo_PilotoFloresta.pdf
https://www.greenclimate.fund/news/gcf-s-first-redd-results-based-payment-boosts-financial-incentive-to-protect-forests

[21] https://www.gov.br/agricultura/pt-br/assuntos/sustentabilidade/plano-abc/arquivo-publicacoes-plano-abc/final-isbn-plano-setorial-para-adaptacao-a-mudanca-do-clima-e-baixa-emissao-de-carbono-na-agropecuaria-compactado.pdf

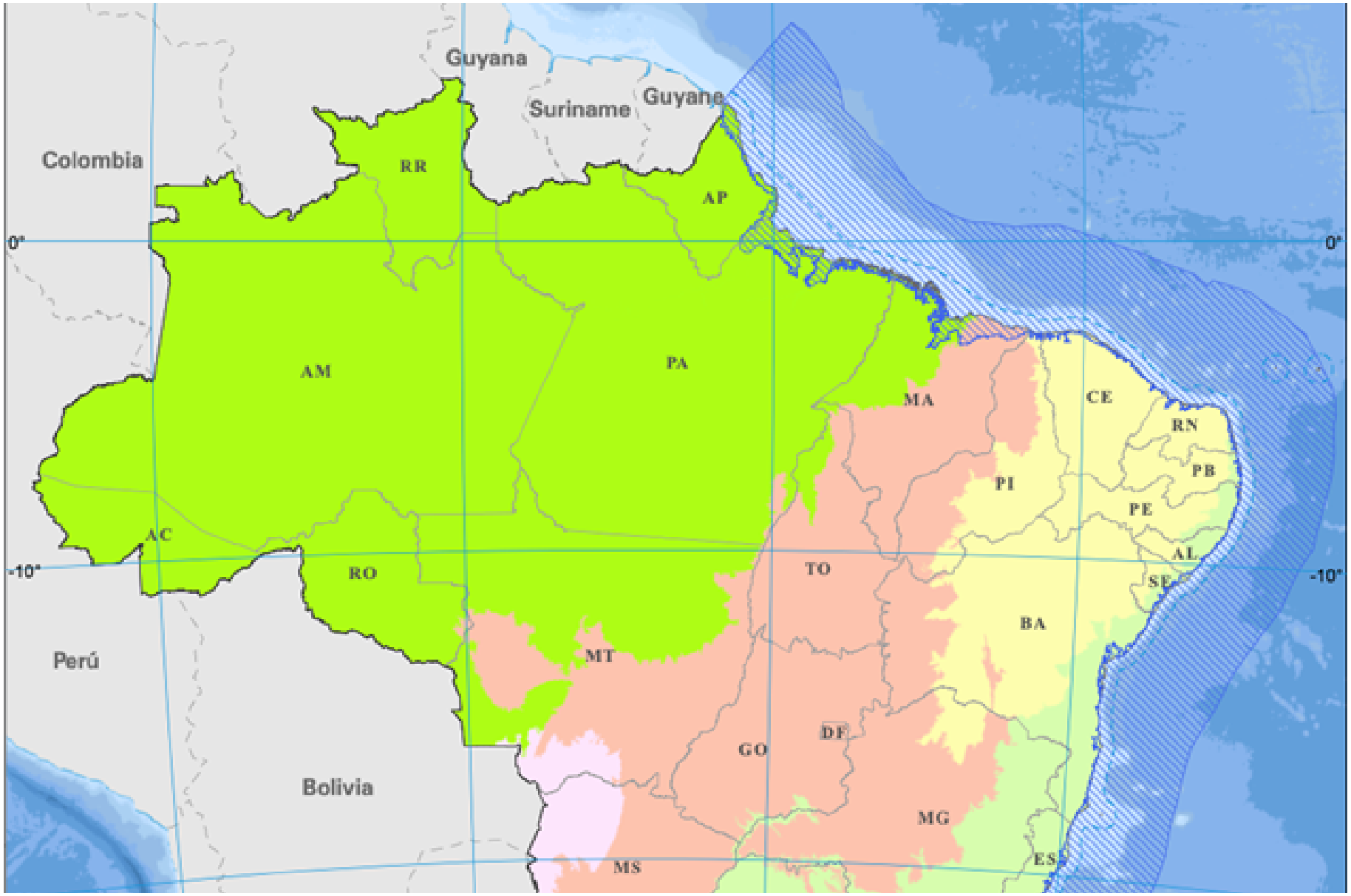
[22] http://www.thegef.org/sites/default/files/publications/GEF-2020Strategies-March2015_CRA_WEB_2.pdf

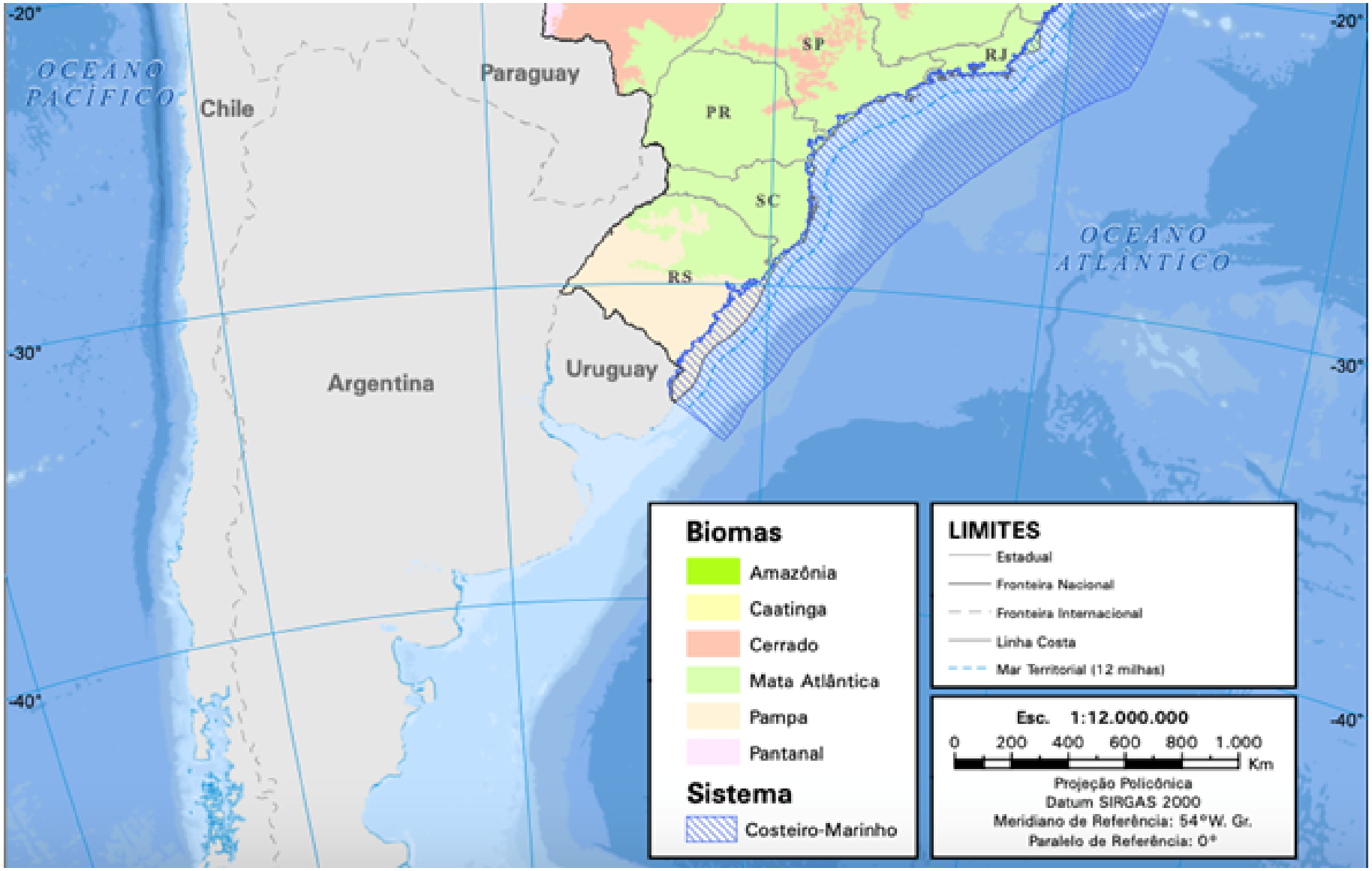
[23] https://ghgprotocol.org/corporate-standard.

1b. Project Map and Coordinates

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

Figure 6 - Map of Brazil[1]





Geocoordinates of Brasilia: 15.7975° S, 47.8919° W.

[1] Source IBGE, 2019 Biomas e Sistema Costeiro-Marinho do Brasil - 1:250 000; available at: https://geoftp.ibge.gov.br/informacoes_ambientais/estudos_ambientais/biomas/mapas/biomas_e_sistema_costeiro_marinho_250mil.pdf

2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

Indigenous Peoples and Local Communities

Civil Society Organizations

Private Sector Entities

If none of the above, please explain why: Yes

This document has been prepared through extensive consultation with representatives of the Brazilian Federal Ministry of Science, Technology and Innovations (MCTI). The UNEP Task Manager is based in Brasilia, Brazil, facilitating meetings and discussion with MCTI. The elaboration of the document has been discussed in more than six (6) virtual meetings, and the document has been revised by Ministry representatives.

In the project identification phase, key documents have been reviewed to develop this concept. These documents - including National Communications, Biennial Update Reports, and the nationally determined contribution - have been developed through a participatory stakeholder approach. Thus, while the preparation of this PIF itself has not held consultations with none of the groups mentioned above, their perceptions are taken into account through basing the project on documents developed with their inputs. Moreover, as described below, stakeholder participation is planned for the project preparation grant phase.

In addition, provide indicative information on how stakeholders, including civil society and indigenous peoples, will be engaged in the project preparation, and their respective roles and means of engagement

During the project preparation phase, a stakeholder consultation workshop will be held where representatives from governmental entities, academia, the private sector and civil society and indigenous peoples will be invited to participate. Gender-balanced participation will be assured. The workshop will present the project and ask for inputs on the project and its planned activities. It will also serve to deeply understand the current baseline and challenges of Brazil's climate transparency and identify synergies with current initiatives. These inputs will then be integrated into the project design as a whole, and in the activities in particular.

Table 6. Key stakeholders (preliminary list)

Name of key stakeholder	Responsibility/expertise	Expected role and relevance for the project
Ministries and Government agencies		
MCTI	It is responsible for developing and mana ging SIRENE, AdaptaClima MCTI and SIN APSE MCTI; it prepares NCs and BURs to the UNFCCC.	It is the Project Executing Agency and will be res ponsible for the implementation of this CBIT Pro ject, in coordination with all relevant stakeholder s to be further identified at PPG stage.

Ministry of Environment	Promoting the adoption of principles and strategies for the knowledge, protection and recovery of the environment, the sustainable use of the natural assets, and the valuation of environmental services and the insertion of the 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.	
Ministry of Mines and Energy (MME)	Its competence includes geology, mineral and energy possessions; utilization of hydraulic energy, mining and metallurgy; oil, fuels, electric energy, including nuclear.	
Ministry of Economy	Its main objective is to formulate and implement the Brazilian economic policy, dealing with a variety of fiscal and monetary policy issues. Also, its mission is to build a competitive Brazil, fair and rich in opportunities, in partnership with the productive sectors, through actions that result in the improvement of population life quality. Finally, its mission is to promote participatory planning and improvement of public management.	
Ministry of Regional Development	The Ministry of Regional Development (MDR) integrates the various public policies of urban infrastructure and the promotion of regional and productive development. It brings together initiatives that were under the responsibility of the former City Ministries and National Integration (MI), with adaptations to optimize program, resource and funding management.	

Ministry of Agriculture, Livestock and Food Supply (MAPA)	It is responsible for public policies that promote agriculture and livestock activities, foster agribusiness and regulate related services.	The ministries and government agencies will be engaged to provide feedback on the different steps of developing DataClima+ and its different modules. They are expected to participate in the capacity-building programmes, as well as in consultation and validation meetings, exchanges and workshops. Moreover, they shall be engaged to establish institutional arrangements and data sharing agreements to enable the functioning of a robust national climate transparency framework. They will also be key stakeholders of component 3, with expectation that they draw on DataClima+ to elaborate public policies.
Ministry of Education	The Ministry of Education has as its competence the national education policy; child education; education in general, comprising elementary education, high school, higher education, youth and adult education, vocational and technological education, special education and distance education, except military education; educational evaluation, information and research; university research and extension; teaching and financial assistance to needy families for the schooling of their children or dependents.	
Ministry of Foreign Affairs (MRE)	Its mission is to assist the President in foreign policy formulation, to ensure its implementation, to conduct diplomatic relations with other national state governments, international organizations and bodies, and to promote the Brazilian state and society´s interests abroad.	
Ministry of the Civil House	Responsible for the direct advice of the Chief of Executive Power 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, in addition to taking care of the publication of official acts of the government.	
Ministry of Women, Family and Human Rights (MMFDH)	The Ministry of Women, Family and Human Rights (MMFDH) is responsible for the Interministerial and intersectoral articulation of policies for the promotion and prote	

	ction of women and human rights in Brazil.
Ministry of Health	Its mission is to provide conditions for the promotion, protection, and recovery of the population's health, reducing illnesses, controlling of endemic and parasitic diseases and improving health surveillance.
Ministry of Infrastructure (MI)	It is competent on subjects concerning the national policy for rail, road, waterway, airport and air transport.
Institute for Applied Economics Research (IPEA)	Ministry of Planning's research institute on economics and planning policies.
Brazilian Institute of Geography and Statistics (IBGE)	The national organization for demography and statistics.
National Institute for Space Research	INPE is a National Institute of Science and Technology (INCT) which produces science and technology in the space areas and the terrestrial environment.
EMBRAPA – Brazilian Agricultural Research Corporation	It is a public institution under the aegis of the MAPA. It carries out research, development and innovation for the sustainability of agriculture and animal husbandry.
Energy Research Office (EPE)	It 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. Their studies cover the areas of engineering, economics, modelling, policy and environment and where they overlap.
National Indian Affair Foundation (FUNAI)	A Government agency in charge of indigenous affairs, including the legal right to demarcate Indigenous Territories.

Interministerial Climate Change Committee	It provides guidance on matters related to climate change actions, plans and policies and national and international commitments. It further promotes dialogue with the national congress, subnational governments, civil society, the business sector and the scientific-academic sector.	
Regional and local entities		
State Secretariats of Environment (all Brazilian states)	They formulate and coordinate the states' environmental policies	The CBIT Project will involve coordination and consultation with regional entities involved in climate transparency activities. This may involve the establishment of institutional arrangements needed for the smooth functioning of DataClima+. They will also be key stakeholders of component 3, with expectation that they draw on DataClima+ to elaborate public policies.
State Secretariats of Science and Technology (all Brazilian states)	They formulate and coordinate the states' policies on science and technology	
Brazilian Association on State level Environment Entities (ABEMA)	A civil society organization aimed at the institutional strengthening of SISNAMA (National Environment System) and SNRH (National Water Resources System).	
Private Sector		
Brazilian Business Council for Sustainable Development (CEBDS)	A business association that comprises companies that abide by sustainability principles.	The private sector will play a key role in identifying the prioritized sectors and stakeholders with which the government shall establish arrangements in order to enhance the different modules of DataClima+, especially SIRENE regarding corporate GHG inventories.
CNI – Brazilian National Confederation of Industry	It has the mission of representing the industry sector, fostering an environment that favours business, competitiveness and sustainable development. It is the leading business organization engaged in promoting growth and competitiveness of the Brazilian Industry.	

Agriculture and Livestock Confederation (CNA)	It takes farmers' demands to the Federal Government, National Congress and High Courts.	
Civil Society Organisations		
Brazilian Forum on Climate Change (FBMC)	It facilitates coordination between civil society and government at the national level. It creates awareness and mobilizes society towards discussing and taking a stand on problems caused by climate change.	Civil society organizations will play a key role in ensuring the effective development of DataClima+, ensuring transparency of climate data. They are expected to participate in the capacity-building programmes, as well as in consultation and validation meetings, exchanges and workshops. Many civil society institutions have already been identified and other institutions are expected to be identified and approached during the design phase of this project.
National Confederation of Rural Workers (CONTAG)	It is the main labour union confederation of rural workers in Brazil. It is comprised of 27 federations, representing approximately 20 million rural workers.	
General Workers' Union (UGT)	A civil society organization representing workers' trade unions to represent and defend workers' rights.	
National Council on Extractivist Populations (CNS)	A civil society organization defending the land use model of sustainable extractivist reserves and of its population.	
Missionary Indigenous Council (CIMI)	An organization created by the Brazilian Catholic Church in 1972 with the goal of fighting for the right of the indigenous communities to maintain cultural diversity. It seeks to strengthen the autonomy of such communities to build alternative, multi-ethnic, popular and democratic projects to face the overall trend integrate indigenous peoples to the dominating society.	
Socio-environmental Institute (ISA)	A Brazilian NGO dedicated to indigenous affairs.	
Climate and Society Institute (ICS)	An NGO aimed at engaging civil society in the implementation of climate change policies.	

Academia		
Brazilian Climate Change Research Network (Rede CLIMA)	A scientific network with the aim of generating and disseminating knowledge in order to address the challenges inherent to causes and effects of global climate change.	Academia is expected to play a key role in this CBIT project. A strong partnership with academic and research institutions will be pursued. An academic institution will be selected to conduct the national capacity building programme for Data Clima+.
Brazilian Society for the Progress of Science (SBPC)	It is a civil entity whose objective is to further scientific and technological progress as well as the educational and cultural development of Brazil.	
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. Gender Equality and Women's Empowerment

Briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis).

Brazil is a signatory to several international conventions and agreements in support of women's rights, which provide an international framework for women's rights in the country, notably: the Convention on the Elimination of All Forms of Discrimination against Women - CEDAW (1979), the Inter-American Commission of Women, the Inter-American Convention to Prevent, Punish and Eradicate Violence Against Women - “Convention of Belém do Pará ” (1994), IV World Conference on Women (Beijing, 1995) and Agenda 2030 and the United Nations Sustainable Development Goals (2015). Brazil also participates in subregional and regional forums for the promotion and defence of women's rights.

At the national level, the main structures of the Brazilian government in promoting gender equality and empowering women involve the institutionalization of gender issues in public policies through the creation of the Special Secretariat for Policies for Women in 2003, now the National Secretariat of Policies for Women under the Ministry of Women, Family and Human Rights. Among its main policies are the National Policy for Integral Attention to Women's Health, the National Policy Plan for Women, the Gender Equality Program, among others. Systems for reporting violence against women are in place through the Maria da Penha Law (2006), the National Policy and Pact to Combat Violence against Women (2007), and a law on feminicide (2015). On political participation, since 1997, by law, each party or coalition must fill, in the proportional elections, a minimum of 30% and a maximum of 70% for candidacies of each sex.

Regarding gender data, Brazil counts with the National Gender Information System - SNIG (IBGE, 2014), which aims to structure a broad Gender Statistics Program at IBGE and disseminates its results through compiled reports and a country database, to compile statistical data recommended by the United Nations Statistical Commission, named the Minimum Set of Gender Indicators (CMIG).

Gender indices indicate that, in 2017, women constituted 51.7% of the Brazilian population, with a majority in all Brazilian regions (IBGE, 2018; BRASIL, 2020). The schooling of women grew at all levels of education, and in the 2000s they became the majority of enrolled and graduates both in elementary and secondary education and in higher education.

On the Global Gender Gap Report 2021 (World Economic Forum, 2021)[1], Brazil ranked 93rd globally with a marker of 0.695. The marking of 0.993 was indicated in the 2020 UNDP Gender development index (GDI), which puts the country in the first and highest group of being gender equitable, and a Gender Inequality Index (GII) of 0.408, which ranks it 95th.

According to the 2021 World Economic Forum GGGI, Brazil has already closed gaps on the Health and Survival and Educational Attainment subindexes. On health, 98% of the gap has been closed, and parity has been achieved at all levels of education. When it comes to education, despite no gaps in enrolment rates in either primary, secondary or tertiary education, only 10.7% of Brazilian women in university are enrolled in Science, Technology, Engineering, and

Mathematics programmes versus 28.6% of men. This calls for policies to incentivizing women's enrolment in technical studies which can contribute to opening new and better economic opportunities for them.

Nevertheless, only 13.8% of the Political Empowerment gender gap has been closed to date, ranking Brazil 108th on the 2021 index, with a 4-rank drop since 2020. There are very few women parliamentarians (15.2%, 17.9% gap closed so far) and ministers (10.5%, 11.7% gap closed so far), and a woman has been in a head-of-state role for only five years of the last 50 (12% gap closed so far).

Moreover, the economic gender gap remains large, even though it has narrowed in recent years - women's participation in the labour market amounts to 67%, and the country has reached score 89 concerning such sub-index. Gender gaps also persist in terms of Economic Participation and Opportunity, where only 66.5%
of the gap has been closed (ranking 89th), a slight improvement over the previous edition. These gaps manifest primarily in terms of wage and income. To date, 54.2% of the wage equality gap and 56.7% of the income gap have been closed. To a lesser extent, gender gaps also continue in Labour force participation, where 61.9% of adult women and 80.1% of men are in the labour force (77.2% gap closed), as well as in terms of women's presence in senior roles, where women are 39.4% of all managers (65.1% gap closed). The Human Development Report of the United Nations Development Program (UNDP, 2019) records that, in Brazil, women receive up to 25% less than men doing similar jobs.

Black women are at a disadvantage compared to white women and white men in all indicators, according to IPEA. They represent the least socially protected, with 56.0% of social security coverage (against 70% of coverage among white men). Among women, the evolution of the proportion of the number of white and black elderly women occurs unevenly. Between 1995 and 2009, white women aged 60 and over grew by 4% (from 10% to 14%). Black women, on the other hand, had only 0.9% of variation in their longevity. The average income of a family headed by a white man is R $ 997, while in a family headed by a black woman it is only R $ 491. In 2009, black workers earned, on average, R $ 364.80, and white workers, R $ 421.60. Of the households that receive the Bolsa Família benefit, 70% are from black families. In 2009, 65.5% of employed women, aged 16 or over, had at least 9 years of study, compared to only 48.7% of black women. The enrolment rate of white women in higher education is 23.8%, while, among black women, this rate is only 9.9% (Source: IPEA, 2011). In this sense, there is a gap to be bridged that combines gender, race and formal education.

The economic empowerment of rural women in Brazil faces many challenges, most of them work predominantly for self-consumption and without earning monetary income - in a job that is essential for food security and that generates unaccounted wealth. They are primarily responsible for the preservation of natural assets and guardians of traditional knowledge, but remain in the minority in access to land, technical assistance and rural assistance services, credits and financing and other productive resources.[2]

The issue of land and territories is inextricably connected to the subject of women and the environment in Brazil. The 1988 Federal Constitution was an important milestone in the process of recognizing and enforcing rights for women in the countryside and the forest. It is recognized in the Constitution's article 189, the rural women's right to land. Almost 30 years later, the National Institute of Colonization and Agrarian Reform (INCRA), published Ordinance No. 981/2003, which determines joint title for men and women married or in a stable relationship, and Normative No. 38/2007, which adjusts mechanisms for enrolling candidates in the National Agrarian Reform Program - PNRA[3]. Only then, women passed from 12.6% holders of agrarian reform lots[4] to 48% between 2008 and 2010.

In 2004, the National Policy for Women set policy guidelines for action, emphasizing sustainable development in rural areas and urban areas, with guarantees of environmental justice, sovereignty and food security. In its first version, from 2004, the PNPM included rural workers across its chapters. The II National Policy Plan for Women - II PNPM[5] reaffirmed the space of women from the countryside and the forest in the field of Brazilian public policies.

From the middle of the first decade of the 2000s, by incorporating the struggle for sustainable development, rural women's movements and the Brazilian State itself opened space for the recognition and strengthening of some forms of production and productive organization in the field historically adopted by rural workers: agroecology, family farming and collectivized work in associations and cooperatives.[6] The relationship between gender and agroecology has started to gain strength more recently, with emphasis on the specificity of women's work in sustainable management and conservation of biodiversity.

Gender aspects in the project

The GEF and UNEP have made strong commitments to gender-responsive approaches throughout their work, and it is therefore highly important that this CBIT project aligns to these mandates. The project will thus follow CBIT Programming Directions, the GEF Policy on Gender Mainstreaming and UNEP's own Gender Policy.

Gender considerations will be present from the very design of a gender-responsive transparency framework. The process will tackle gender in two fronts. On the one hand, DataClima+ will assess (and include in its cost estimates) which data should be collected to endow its modules with the resolution required to capture gender biases. This shall include sex-disaggregated data generation and/or analysis. As such, the system will be designed to assess how costs, benefits and risks arising from NDCs, Adaptation Plans, LTS and mitigation actions are allocated, enabling the identification of potential inequalities before they take place. A specific deliverable is being proposed under "*Output 1.2. The gender-sensitive DataClima+ system is designed*" to ensure that this dimension is included: "*1.2.1 Detailed design of a gender-sensitive DataClima+, including responsible authorities, mission, and functions, installed and required capacities, requirements on how to ensure the system and data collection is gender sensitive, and at least two alternatives (platforms, applications, or others) proposed for sharing institutional data, drawing on experiences, good practices and lessons learned made available through the CBIT Global Coordination Platform*".

Furthermore, the CBIT project and DataClima+ will seek to promote equitable governance, by the following strategies:

- Offering opportunities to include women and girls in decision-making processes for planning and implementing integrated actions;

- Institutionalizing a gender perspective to foster gender equity through regulatory and legal frameworks, programs and plans;

- Promoting peer-to-peer and inter-institutional exchanges involving decision-making bodies and organisations with relevance for gender and climate change;

- Promoting equitable consultation processes and participatory approach; and,

- Promoting training activities as well as communication materials with a gender perspective.

- A Gender Action Plan will be developed at PPG stage describing the gender response measures to be implemented through the project to address gender issues, mitigate negative impacts and risks, and take advantage of opportunities to promote women's empowerment. To achieve a holistic approach to project implementation, a gender perspective will be incorporated into relevant activities, results and products of the project rather than including isolated gender-oriented activities in different components. The gender action plan will be tracked by the Project Management Unit during project implementation, and the hiring of a gender expert will be considered during the project preparation phase. Budget will be assigned for gender related activities and results as well as for dedicated gender expertise where needed. Responsibility will be assigned concerning the implementation and oversight of the gender action plan to the PMU and PSC respectively.

Finally, Brazil will benefit from the CBIT Global Coordination Platform activities on gender, mainly under the output "*Assistance provided to countries with integrating the UNFCCC Gender Action Plan into enhanced transparency frameworks*" of the GEF project "Global Capacity Building Initiative for Transparency (CBIT) Platform Phase II A: Unified Support Platform and Program for Article 13 of the Paris Agreement".

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[1]Global Gender Gap Report 2021 (World Economic Forum, 2021), available at: https://www3.weforum.org/docs/WEF_GGGR_2021.pdf

[2] Menicucci, 2012.

[3]Cintrão, R. & Siliprandi, E. 2011. The progress of rural women. In: Barsted, LL & Pitanguy, J. The Progress of Women in Brazil 2003–2010. Rio de Janeiro: CEPIA; Brasília: UN Women. 436p.

[4]Agrarian Reform Census. 1997. Advanced Studies, 11 (31), 7-36. https://dx.doi.org/10.1590/S0103-40141997000300002

[5]BRAZIL. 2008. II National Policy Plan for Women

[6] Madsen, 2015

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment? Yes

closing gender gaps in access to and control over natural resources;

improving women's participation and decision-making; and/or Yes

generating socio-economic benefits or services for women.

Will the project’s results framework or logical framework include gender-sensitive indicators?

Yes

4. Private sector engagement

Will there be private sector engagement in the project?

Yes

Please briefly explain the rationale behind your answer.

Private sector representatives are essential to consult in the establishment of an integrated climate transparency framework, as they are key entities to implement many of actions needed to mitigate and adapt to climate change. This includes both small private actors, and big farmers, but also companies within industry, and confederations such as the Brazilian Business Council for Sustainable Development, the Brazilian National Confederation of Industry, and the Agriculture and Livestock Confederation. These will be engaged at PPG stage and in several project activities and outputs.

The private sector will play a key role in identifying the prioritized sectors and stakeholders with which the government shall establish arrangements in order to enhance the different modules of DataClima+, especially SIRENE with regard to reporting corporate GHG inventories (output 2.1). Under component 1, the private sector will be engaged through Data Sharing Agreements to enhance the accuracy of data collected and included in the integrated system.

Moreover, private sector actors are expected to participate in capacity building activities, as they will be data providers as well as users of the system and modules to be established and enhanced.

5. Risks to Achieving Project Objectives

Indicate risks, including climate change, potential social and environmental risks that might prevent the Project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the Project design (table format acceptable)

Risk is defined as the effect of uncertainty on a project objective. It is formulated in terms of "future events". Risks will be validated during the project preparation grant phase through detailed stakeholder consultations and tools including the UNEP Safeguard Risk Identification Form (SRIF), the gender analysis and the theory of change. A qualitative 1-5 scale has been used to characterize risks with regards to likelihood (probability of occurrence: 1 = not likely, 5 = expected) and potential negative impact on achieving project objectives (1 = negligible; 5 = extreme). In accordance with the combination of likelihood and impact, each risk is assessed as low (green), moderate (yellow), substantial (orange) or high (red) as indicated in the table below. COVID risks are identified in the sections following the below table:

Table 7: Risk Categorization

		Likelihood				
		1	2	3	4	5
Impact	5					
	4					
	3					
	2					
	1					

Table 8. Initial identification of risks

#	Risk description	Risk category	Risk rating: likelihood	Risk rating: impact	Risk mitigation strategy	Whom	When
1	The COVID pandemic affects political priorities and the country's economy, resulting in less political appe	Political	3	3	The project team will mitigate this risk by monitoring closely any perceived COVID pandemic measures, and by adjusting the workplan if needed to postpone the need for political decisions until year 4. Communicati	MCTI project team	Throughout the project, with a key focus on year 1, when the pande

	tite and interest in promoti ng efforts on climate trans parency.				on and engagement strategy (output 1.6) and capacit y building (output 1.5) will serve as mitigation measur es for this aspect of the climate risk.		mic may have a stronger impact.
2	The COVID pandemic resul ts in isolation measures, re sulting in less interaction b etween government minist ries and other key stakehol ders	Social	1	4	The project team will mitigate this risk by monitoring closely any perceived COVID pandemic measures, an d by adjusting the workplan if needed to delay the exe cution until later in the project of activities that requir e significant stakeholder engagement. The team will also explore the use of alternative means, such as onl ine forums and workshops.	MCTI p roject t eam	Throughout the p roject, with a key focus on year 1, when the pande mic may have a stronger impact.
3	Government ministries and agencies, the private secto r, and other organizations manifest resistance in sha ring climate data to DataCl ima+.	Institut ional	2	4	To mitigate such risk, the project will an institutional mechanism for operating DataClima+ (output 1.3) as well as institutional arrangements between existing f ederative entities to ensure an effective coordination i n the provision of data, data quality assurance and co ntrol, and operation of DataClima+. (Output 1.4). The communication and engagement strategy will promot e engagement and buy-in (output 1.6). Where require d, higher level MCTI officials will establish high-level c ontact with other governmental entities to facilitate d ata sharing.	MCTI, project team	Throughout the p roject.
4	Lack of political will to fina nce operational costs of th e DataClima+ and to maint ain it operative after the int ervention of this CBIT proj ect.	Politic al, Fina ncial	1	1	MCTI has a long history in leading national efforts on climate transparency to the UNFCCC, including in pre paring national communications and biennial update reports. MCTI has a dedicated team which will contin ue post project.	MCTI, Project Manag er	Throughout the p roject.
5	Capacity built not retained.	Institut ional	1	3	The project will use a train-the-trainer approach withi n institutions and include the development of tools, p rotocols and other forms of capacity building materia l to provide continuous, training opportunities for futu re users. Moreover, by partnering with academic instit utions and including transparency in its curricula, cap acity building is expected to last beyond GEF funding.	MCTI, Project Manag er	Throughout the p roject.
6	Brazil does not take advan	Institut	1	1	The knowledge management system created for the	MCTI,	Throughout the p

	tage of lessons learned in other countries on tools and methodologies	ional			project, and especially the use of the information available on the CBIT Global Coordination Platform and the south-south peer exchange activities will mitigate this risk.	Global platform	roject.
7	Climate change: Climate change related events affects project implementation, or country priorities.	Environmental, climate change	1	1	As most of the project activities will take place within the capital of Brasilia, it is unlikely that any major weather event spurred on by climate change will affect implementation significantly. Some national travel is planned within the project, but these can be rescheduled in the case of major disturbance. On country's priorities, a significant climate change related weather event is likely to underline the importance of having monitoring and evaluation systems for climate action. Moreover, this project is financially insulated as it counts with its own funding.	MCTI in collaboration with INPE	Throughout the project.
8	Gender: gender inequalities prevent the implementation of gender-responsive elements in the project	Social	2	3	This risk is expected to be mitigated through the assignment of dedicated budget for gender activities and outputs. A Gender Action Plan will also be provided among the mitigation measures for this risk. A gender expert may be hired, which will be assessed at PPG stage.	Project Manager and Gender Expert (if appropriate)	Throughout the project.

COVID-19 risk

In 2020 and 2021 the pandemic took a heavy toll on public health in Brazil, although mass vaccination is being quite successful in prevent hospitals from becoming overwhelmed as of beginning 2022. Still, a pre-existing economic recession trend is seriously aggravated.[1] These factors are negatively affecting jobs, income, mortality rates, life expectancy, public and private investment, social vulnerability, gender-bias and several other development indicators.[2]

According to OECD Economic Forecast Summary (December 2021), Brazil national GDP growth is projected to slow down to 1.4% in 2022 and 2.1% in 2023. The vaccination campaign has accelerated and economic activity, underpinned by private consumption and investment, restarted as restrictions were lifted. Exports have benefited from the global recovery, the robust demand for commodities and a weak exchange rate. However, supply bottlenecks, lower

purchasing power, higher interest rates and policy uncertainty have slowed the pace of recovery. The labour market is recovering with some delay and unemployment remains above pre-pandemic levels.[3]

Demographic trends and lifestyle trends are gradually being shaped by the pandemic in different and interesting way: e.g., the emergence of home office and the fast digitalization of certain services are worth noting. Reduced mobility due to the COVID-19 pandemic in 2020 and 2021 will certainly result in a short-term reduction in urban-based GHG emissions. However, those apparently 'positive effects' of the reduced mobility on the environment have already been considered as a temporary effect and not very significant.

The following are the main challenges related to the COVID-19 pandemic identified for the project:

- - Low prioritization by public agents and local actors regarding the activities of the project in face of the urgencies resulting from the COVID-19 pandemic. Resource targeting to minimize the crisis caused by the pandemic can decrease the availability of efforts to implement the actions of the project. A change in stakeholder priorities can also take place as a result of the pandemic, shifting institutional efforts and resources towards the fight against COVID-19.
- - Challenges for engaging stakeholders and civil society due to the social distancing required by the pandemic. Thus, strong dialogue between the different governmental actors involved in the project and an intense participatory process is essential.
- - Challenges on data management, since the context of the pandemic can lead to possible distortions in the collection of data and baseline mapping of project plans and actions.
- - Lockdown and movement restrictions: mobility restrictions and the need for social distancing due to the pandemic could lead to reduced possibility for activities that have traditionally required in-person participation, such as workshops, meetings, trainings and consultations.
- - Slowdown of procurement processes, i.e. procurement processes can be paralyzed or slowed down depending on the evolution of the pandemic and the offices it affects.
- - Staff turn-over due to the illness: long leave periods to recover from the symptoms can cause delays in the execution of project activities.

Mitigation measures

Measures and protocols in relation to the pandemic are regulated by national and local entities, including at the state and municipal levels.

Key measures to mitigate risks will adopt a dynamic approach and include the following:

- In the event of mobility restrictions and the need for social distancing, alternative and innovate forms of meeting organization and communication will be implemented (i.e. using online platforms). The impacts of the pandemic in 2020 and 2021 have meant that such technologies are already becoming commonplace and acceptable for usage by a broad range of stakeholders. This approach is foreseen for the stakeholder consultation rounds that are to take place during the PPG phase, but also for the execution of the project, depending on the evolution of the pandemic. However, it is important to strategically

define the best communication model to be adopted in the different products of the project. The stakeholder communication and engagement strategy (output 1.6) will consider this, also taking into account restrictions in access to internet by relevant stakeholders. Also during the PPG phase, an additional mitigation measure will be the contracting of additional local support, to compensate for the lack of an on-site visit.

- - As for the procurement risk, the lack of an on-site visit due to reduced traveling will require the contracting of additional local support for the collection of data. However, UNEP has successfully applied this model in other projects and does not expect significant risks/delays for the PPG phase. After CEO approval, and before the beginning of project execution, the project timeline and dates of execution of all project activities will be re-evaluated taking into consideration any on-going risks due to COVID-19.

- - MCTI will cross-train staff so that if a staff member contracts COVID-19 and is on leave during their recovery, the project can continue.
- - Regarding the shift in public sector priorities during the outbreak, it is expected that any negative impacts attributable to the pandemic in the short-run are reversed by increased interest in climate change risk in the medium to long-term, as it becomes clear that the consequences of climate change can be far worse than those of the pandemic. A stakeholder communication and engagement strategy (output 1.6) and a national capacity-building programme on DataClima+ (output 1.5) and training on how to integrate climate data and projections into policy-and decision-making processes (under output 3.1) will serve as mitigation measures concerning this aspect.
-
- *Opportunity analysis*

- The COVID-19 crisis has demonstrated the importance of transparency in building trust which represent a great opportunity for this CBIT project. The timing of the project could enable Brazil to further guide activities which will be vital for maintaining momentum for action on climate change. In this context, an improved climate transparency system which can better track the progress of implementation, and thus evaluate the effectiveness of different measures, becomes a potentially powerful tool to "build back better". The CBIT project will provide an integrated data management system, tools and capacity to collect and analyse data for the implementation and tracking of mitigation and adaptation actions and use in policy-making and long-term planning. The increased transparency and available information will allow national policy planners and decision-makers to formulate climate-informed policies and include better-informed climate considerations in national planning and in post-COVID-19 recovery plans and strategies. The information that shall be generated and made available through a national MRV system to be implemented by CBIT will serve as key input to guide greener and more resilient investments and contribute to their mainstreaming in national planning processes.
-
- Moreover, the context provides an opportunity to have budget savings and reallocation in the CBIT project budget, as several events could be held virtually. Budget savings related to traveling and venue costs could be reallocated to more substantive activities. Additionally, COVID-19 introduces the opportunity to slowly introduce e-governance (online public service provision and delivery without physical interactions) over time, enabling service provisions in both rural and urban areas. In fact, given the long-term need of practicing social distancing, COVID-19 is likely to introduce policy changes to many global meetings and conferences including those of the UNFCCC, GEF, UNCBD, UNCCD to enable innovative and digital modalities to be fully employed, applied and rolled out to countries. This is likely to change the travel-intensive modalities of conducting Convention businesses, thus contributing to its long-term desired outcome.

The aspects below can enhance the objectives of the project:

- - The project has the opportunity to support Brazil in undertaking a green economic recovery post-pandemic.

- - The increased digitalization of the Brazilian population and local government working modalities presents an opportunity for the effective adoption of the digital modules and use of DataClima+. Just a year ago many local governments would struggle to connect to online calls. The pandemic has forced a quick upgrading of skills of all local administrators, which paves the way for more openness to adopting and using the project-created online planning tools.

- - Another key opportunity is for the project to build upon and support national initiatives promoting a green recovery from the pandemic. Since March 2020, the national government has adopted measures to support citizens and economic sectors most hit by the pandemic. With regards to promoting economic recovery, the government has not announced a single plan or strategy, but through its Ministry of Economy has announced a series of measures for support income resilience and recovery.

Climate risk assessment

At the June 2018 Council, the GEF's Scientific and Technical Advisory Panel (STAP) issued clarified and codified screening guidelines. With respect to climate risk, the guidelines ask:

(i) How will the project's objectives or outputs be affected by climate risks over the period 2020 to 2050, and have the impact of these risks been addressed adequately?

Following IPCC (2012),[4] hazard is defined as the potential occurrence of a natural or human-induced physical event that may cause loss of life, injury, or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, and environmental resources.[5] Exposure is employed to refer to the presence (location) of people, livelihoods, environmental services and resources, infrastructure, or economic, social, or cultural assets in places in which hazard events may occur. Vulnerability is defined as the propensity or predisposition to be adversely affected, and it encompasses a variety of concepts and elements including sensitivity or susceptibility to harm and lack of capacity to cope and adapt. In the context of the assessment of climate impacts, risk results from the interaction of vulnerability (of the affected system), the likelihood of the occurrence of a climate related hazard, and exposure to the latter.

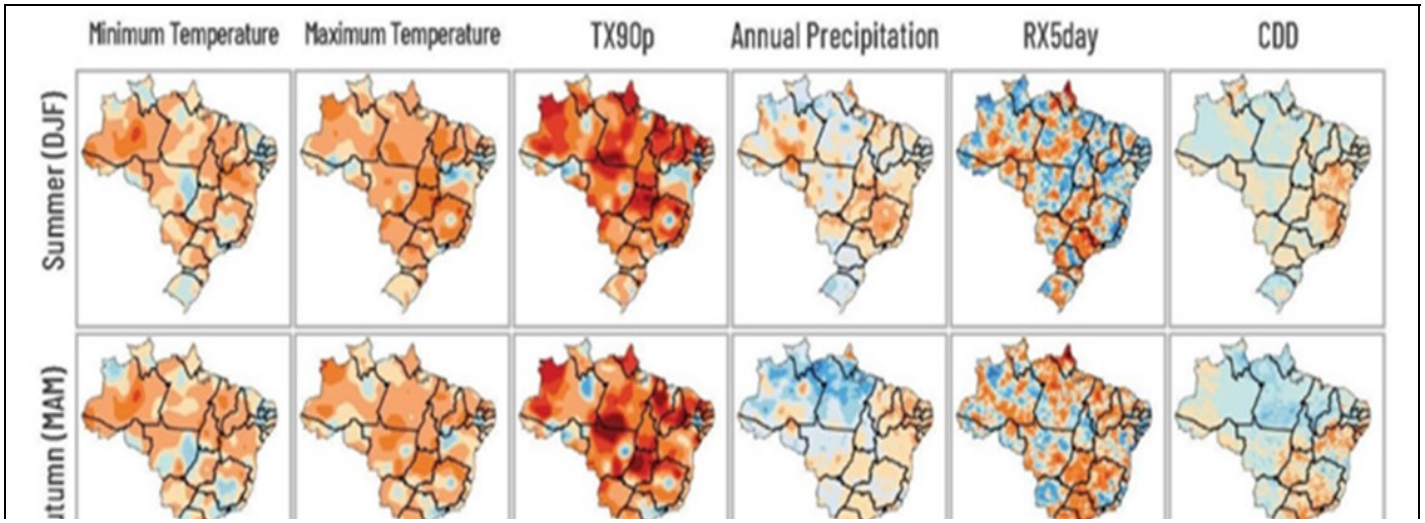
This section discusses climate risks in the context of a) the duration of the project and its activities, but also (and more importantly) in the context of b) the transparency system that will be established and is expected to exist well beyond the timeframe of this CBIT project. Climate risks are its very core: all its outputs have been designed and shaped precisely from the need to raise awareness on climate risks - and provide tools to mitigate them.

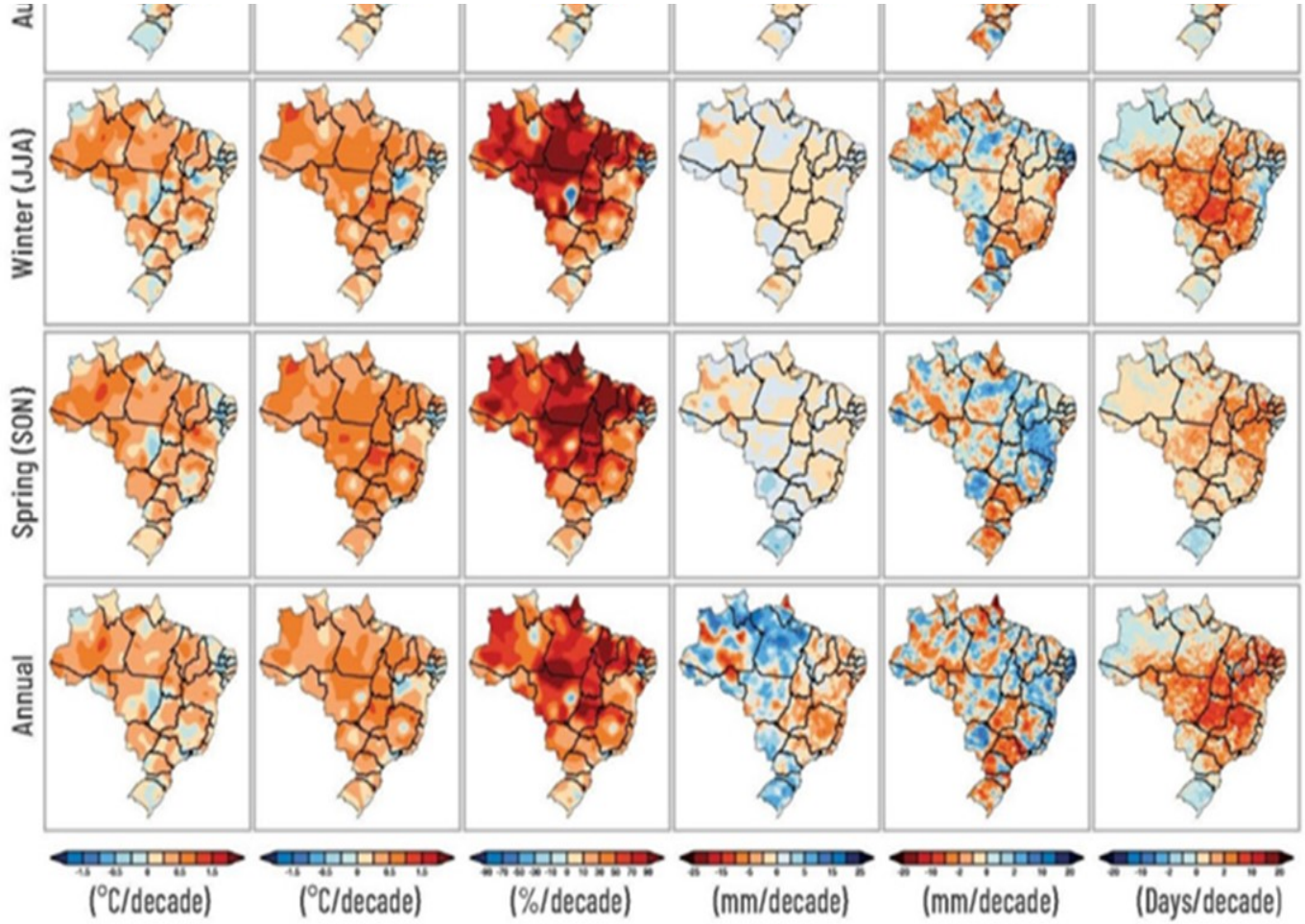
The NC4 highlighted important climatic risks such as a significant increase in temperature and in extreme drought events, floods, fires, and hotspots in all Brazilian biomes (Brazil, 2020). Such projections are in line with information in the Open Government Partnership Report (OGP), an initiative of the Federal Government that disseminates and supports the exercise of government practices related to transparency, access to public information, and social participation (mobilization and articulation).[6] According to the report, led by MCTI related to Commitment 9 of the Open Government and Climate, the incidence of extreme climatic events has increased significantly in Brazil. Only in the period between 2013-2017, its environmental impacts were registered in 68% of the municipalities and, within those, 50% were associated with extreme climatic conditions of droughts, floods, storms or floods.

Excess or scarcity of rainfall is primarily responsible for the physical processes that threaten Brazil's population and economic activities. Accordingly, NC4 identified droughts, floods, and coastal floods as the most critical climatic extremes events observed between 2014 and 2018. NC4 considers different scenarios of the negative impact of climate change at different IPCC representative concentration pathways (4.5 and 8.4) and refines them to small spatial scales of 20km lat-lon, using the Eta regional model, the English Hadley Centre Global Environmental Model (HadGEM2-ES), the Japanese global Model for Interdisciplinary Research on Climate (MIROC5), and the Brazilian Earth System Model (BESM). This results and data of the NC4 was drawn upon for the elaboration of this climate risk analysis.

Historically, droughts in Brazil are more predominant in the Northeast region. The years between 2012 and 2017 marked the worst drought in history in the Brazilian semiarid region, with six consecutive years of rainfall below average. However, in recent years, this has also become a problem in the Central-West and Southeast regions. One example is the water crisis that hit the Metropolitan Region (RM) of São Paulo between 2014 and 2016 (ibid.).

Figure 8 - Climatic trends in Brazil





Trends observed in minimum and maximum temperatures (degrees Celsius/decade); annual precipitation (mm/decade); number of days with maximum temperature above the 90th percentile - TX90p (% / decade); and maximum amount of a ccumulated precipitation in the period from 1980-2018.

Source: Brasil, 2020 apud CPC/NOAA - CHIRPS / CHC-SB

The analysis of hazards related to coastal zones shows interferences such as elevation of the relative sea-level, which causes changes in natural and man-made coastal environments, increases the vulnerability of people and goods, reduces habitable spaces, and causes vertical migration of the beach profile, among others (Brazil, 2020).

These hazards may be summarized as follows, drawing on the results presented in the 4th National Communication of Brazil to the UNFCCC:

• Increase in minimum and maximum temperatures of approximately 4.5 °C throughout national territory;

• Reduction in precipitation volume in the North region of up to 35% and an increase of up to 30% in the South region and in the southern strip of the Southeast;

• Increase in the number of consecutive dry days in the North and East of the Northeast region during summer and in the North of the Amazon and practically the entire Northeast region during winter. This situation shows precipitation reduction and precipitation volumes concentrated in a few days, that is, associated with extreme precipitation events;

• Magnitude increases in maximum rainfall accumulated in a short time (approximately five days) in the Central-West, Southeast, and South regions during summer and in the northwest of the Amazon and the entire southern strip of Brazil during winter;

• Substantial increase in extreme maximum temperatures in both summer and winter in all regions of the country, although this increase is less pronounced in the South during winter.

Source: Brazil, 2020 (*ipsis litteris).*

The analysis on climate tendencies in Brazil has shown vulnerabilities are directly related to changes in temperature and precipitation. According to the World Bank, Brazil's key vulnerabilities to climate change are:[7]

- Flooding: Floods in Brazil usually occur during La Niña years and years with warmer than average sea surface temperatures in the tropical South Atlantic. Urban areas are most susceptible to flooding.

-
- - Droughts: The northeast region has a long history of destructive droughts. It is highly susceptible to droughts due to its strong seasonal hydrological deficit, low adaptive capacity and persistent poverty. Dry season droughts are also more dangerous because of the potential for fueling wildfires, which are common in ecosystems and forests that are in close proximity to slash-and-burn type agriculture.
-
- - Frost: Another climate hazard that is commonly experienced in the temperate region of southern Brazil is frost, which commonly occurs during winter and can be a potential threat to agriculture and industrial plantations. Thus, under a future warmer climate, these regions are at risk of degradation.[8]

According to 2017 data, Brazil is the 79th country most impacted by extreme weather events. The country rose ten positions in relation to the 2016 ranking within the scope of the Global Climate Risk Index[9]. Climatic risks in the country are also shown in the Germanwatch ranking, which places Brazil in 27th position in the climate risk index. Another example is the Notre Dame Global Adaptation Initiative index, which places Brazil as the 68th country regarding sensitivity and exposure to climate vulnerability and ability to adapt to the negative impact of climate change. The same index also ranks Brazil 124th regarding "climate readiness", considering its vulnerability in the following sectors: food, water, health, ecosystem services, housing, and infrastructure.[10]

The proposed project will mostly take place on the capital, Brasilia. Potential climate-related effects that have been taken into consideration include:

- **Disruptions in data collection and data storage systems and infrastructure.** As the central activities in this project will take place in Brasilia (low vulnerability) and involve mostly historical data that already exists in cloud servers, it is highly unlikely that the activities themselves are affected by the type of extreme events that could strike the central region. However, the transparency system that is to be established by this CBIT project will outlive the latter's specific activities, requiring periodic collection and processing of data from all over the country. This CBIT project will thus ensure that the system has embedded procedures, guidelines and protocols for the collection of data that consider the various ranges of vulnerability to climate risks throughout the country – an element that will be introduced mainly in the context of Output 2.2 and Output 3.1.

- **Difficulties to undertake capacity building activities.** Training activities, workshops and meetings could be adversely impacted by extreme climate events. However, most activities are to take place in Brasilia, a city that can be easily reached from all over the country, has a low exposition to climate hazards and has one of the highest adaptation capacities in Brazil.

- **Change in stakeholder priorities.** When a vulnerable country is impacted by extreme climate change effects, political priorities, investor interests and co-financing availability might shift. While this may adversely affect the outputs of a CBIT project - since the latter targets institutions and needs political attention and interest to be successfully implemented - it is expected that any negative impacts attributable to climate change will result in an *increased* interest in the project's outputs. Moreover, the system that is to be established as part of this project will ensure that awareness of climate change impacts is embedded in national long-term planning, addressed through Component 3.

Thus, being four-year project based in a low vulnerability region of the country and focused almost entirely on the creation, compiling, storage and processing of climate information, **this project can be deemed low risk in terms of climate change**. Moreover, the objective of the project beyond its own duration is precisely to provide a transparency system that can both keep track of mitigation actions and enhance the adaptation efforts of Brazil.

(ii) Has the sensitivity to climate change, and its impacts, been assessed?

Yes. The text above has considered the project's sensitivity to climate change at different IPCC representative concentration pathways (4.5 and 8.4). The likelihood for the project to be affected by changes in climate is low, with low sensitivity in the short- to medium-term until 2050 and slightly increasing afterwards in the long-term. The activities under this project are not likely to be compromised by climate-related events, whereas the transparency framework that will be established by it (and remain operational long after the GEF project has ended) are expected to have a positive contribution to the resilience and adaptive capacities of Brazil.

(iii) Have resilience practices and measures to address projected climate risks and impacts been considered? How will these be dealt with?

As noted in responses to (i) and (ii), climate impacts pose a low risk for this project. Resilience practices were included in the project's activities as well as the outputs that will endure after its technical completion:

- **In terms of data collection and data storage systems and infrastructure,** the project will design resilient systems able to withstand the threats posed by the type of extreme events that, depending on the region, may affect the collection of the raw data as well as its processing and ulterior storage. This will be reflected mostly through the outputs preparing guidelines, procedures and protocols, namely, outputs 2.1-2.3.

- **In terms of difficulties to undertake capacity building activities.** During its execution, the project will ensure the safety of the personnel and the stakeholders. In the unlikely event that activities need to be postponed due to warnings, the safety and integrity of the people will always be a priority, and the project will only return in its course when safety can be assured. Online options will be preferred when possible to save resources for travel as a default position in the project.

- **In terms of stakeholder priorities.** Component 3 will link DataClima+ with the national planning process. This way, awareness of climate change impacts is expected to be explicitly taken into account in the national long-term planning and funding.

(iv) What technical and institutional capacity, and information, will be needed to address climate risks and resilience enhancement measures?

Technical measures considered will include cloud-based solutions and systematic backups of relevant information. Creating technical and institutional capacity, as well as systems that generate the required information to address climate risks, are among the objectives of this CBIT project. The development of an integrated platform, DataClima+, and the enhancement of its adaptation module, AdaptaBrasil MCTI, will enable the production of enhanced information on climate-related risks and impacts in different sectors, provide quality input for the identification of nationally-appropriate adaptation solutions; and allow for the tracking of adaptation actions undertaken and needed. An element to be considered to ensure DataClima+ and the project are gender-sensitive will be whether women are or have been more vulnerable to and affected/impacted by climate risks (to be further assessed at PPG stage). This CBIT Project will thus support Brazil in the monitoring, evaluation and update of its adaptation policies and plans.

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[1] https://www.oecd.org/economy/growth/Brazil-country-note-going-for-growth-2021.pdf

[2] https://portal.fiocruz.br/en/news/brazil-faces-worst-scenario-beginning-pandemic.

[3] https://www.oecd.org/economy/brazil-economic-snapshot/

[4] IPCC, 2012: *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation. A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change* [Field, C.B., V. Barros, T.F. Stocker, D. Qin, D.J. Dokken, K.L. Ebi, M.D. Mastrandrea, K.J. Mach, G.-K. Plattner, S.K. Allen, M. Tignor, and P.M. Midgley (eds.)]. Cambridge University Press, Cambridge, UK, and New York, NY, USA, 582 pp.

[5] Given the relatively short timeframe involved in this CBIT project (four years), the term *hazard* will focus on the occurrence of extreme events rather than on long-term climate variability. Hazards deriving from long-term variations in average temperature and precipitations will be relevant (and considered) in the implementation of Output 2.2 on enhancing the adaptation module, as well as Output 3.1, which will focus on the relationship of the transparency system and planning processes.

[6] See e.g. https://www.opengovpartnership.org/documents/brazil-end-of-term-report-2016-2018-for-public-comment/ - accessed on 13 Jun 2021.

[7] https://climateknowledgeportal.worldbank.org/country/brazil/vulnerability

[8] Ibid.

[9] For comparisons https://germanwatch.org/en/cri - accessed on 13 Jun 2021.

[10] See e.g. https://gain.nd.edu/our-work/country-index/ - accessed on 13 Jun 2021.

6. Coordination

Outline the institutional structure of the project including monitoring and evaluation coordination at the project level. Describe possible coordination with other relevant GEF-financed projects and other initiatives.

Project execution

The Brazilian Ministry of Science, Technology and Innovations (MCTI) will be the project's Executing Agency. MCTI's General Coordination of Climate Science and Sustainability (CGCL) will lead the project on behalf of the ministry. The possibility of an organization providing execution support to the ministry will be considered during the project preparation grant phase.

UNEP will be the Implementing Agency (IA) for this project and will provide overall supervision and guidance in line with GEF and internal guidance and the expertise gathered from previously implemented projects and other projects currently under implementation. UNEP developed this concept building upon its experiences, good practices and lessons learned in developing and implementing other CBIT projects in Latin America and the Caribbean and through-out the world. The design phase of this project will be coordinated by UNEP's Climate Change Mitigation Unit with the support of UNEP's Regional Office for Latin America and the Caribbean and its National Office in Brazil.

Through this project, Brazil will also actively participate in the GEF financed CBIT Global Coordination Platform implemented by UNEP.

-

Coordination with the GEF 10801 combined (BUR5, NC5, BTR1 and BTR2) project

Of key consideration is to ensure effective coordination between the GEF/UNDP 10801 combined (BUR5, NC5, BTR1 and BTR2) project and this GEF/UNEP CBIT project. On behalf of Brazil, both projects will be executed by MCTI's General Coordination of Climate Science and Sustainability, thus ensuring effective coordination of activities of both projects, the harnessing of synergies and the avoiding of duplications. On the implementing agency side, UNEP and UNDP reside in the same building in Brasilia (UN compound) and will ensure effective coordination, including with the support of the Brazil Office UN Resident Coordinator. Furthermore, UNEP and UNDP have effective communication and coordination on UNFCCC transparency (CBIT and UNFCCC enabling activity initiatives) at the global level. As both projects are closely related, during the project preparation grant phase a strategy will be developed to ensure coordination and synergies between the two projects. Activities part of this strategy may include:

- Inviting UNDP (the implementing agency of the 10801 project) to participate in the project steering committee of this CBIT project, for effective coordination to ensure that project delays in one or the other project do not adversely affect the execution of each;

- Revising and preparing together the annual workplans of both projects, to ensure complementarities and synergies. For instance, this may include ensuring that elements of the 10801 project that feed into the CBIT project will be developed in a timely manner, and vice-versa.

At a technical level, the CBIT project has been designed in close consultation with MCTI to avoid a duplication of efforts and for ensuring the harnessing of synergies. Table 4B and its accompanying text describes the differences, complementarities and synergies between the two projects.

7. Consistency with National Priorities

Is the Project consistent with the National Strategies and plans or reports and assesments under relevant conventions?

Yes

If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc

National strategies / plans / reports / assessments	GEF project alignment and contribution
National Adaptation Plan (NAP, 2016)	The purpose of this plan is to guide initiatives for management and reduction of long-term climate risks. This CBIT Project will allow for the enhancement of the Adapta Brasil MCTI module, thus contributing to provide more quality data and information to relevant authorities for designing and undertaking adaptation actions. Furthermore, connectivity to other modules of the MRV system (such as SIRENE and NDC tracking) will allow for coherent and well-informed policy-making and long-term planning considering the synergies and trade-offs between adaptation and mitigation strategies.
Nationally Determined Contribution (NDC)	In December 2020, Brazil submitted an updated NDC, which confirms the commitment to reduce its greenhouse gas emissions in 2025 by 37% and commits to reduce the countries' emissions in 2030 by 43%. The project is in line with the NDC proposal, since it will allow for its tracking and update. See the baseline section for further information. The development of a robust and integrated transparency framework which measures and tracks mitigation as well as adaptation efforts will enable Brazil to properly plan and review activities through which it can meet its mitigation targets and adaptation plans. Thus, this project will create and strengthen an enabling policy environment and institutional setting that will contribute to the implementation of measures to adapt to and mitigate climate change.
Brazil's Fourth and Fifth National Communication and BUR to the UNFCCC	Brazil's Fourth and Fifth National Communication identified capacity-building needs concerning the monitoring and reporting of GHG emissions, NDC tracking, means of implementation and adaptation efforts. This project is aligned with the national priorities and needs explained in the NCs, and the CBIT outputs identified are designed to address the gaps and capacity-building needs identified in previous National Communications, as detailed in the baseline section. See previous section for description of the complementarity and synergies between the NC5 and CBIT projects.
National Policy on Climate Change	This project is aligned with the objectives of the PNMC, among others, to promote s

National Policy on Climate Change	This project is aligned with the objectives of the PNMC, among others, to promote s ustainable development while protecting the climate system; to reduce GHG emissio ns from different sources, as well as to strengthen removals of these gases by sink s; to implement measures to adapt to climate change. A robust MRV system is need ed to enable the proper design and implementation of climate change adaptation an d mitigation strategies.
Technology Needs Assessment (T NA, 2021)	This project is consistent with the project 'Technology Needs Assessment for the Im plementation of Climate Action Plans in Brazil', which aims at reaching a national co nsensus for the elaboration of a Technology Action Plan (TAP), taking into considera tion priority sectors and key technologies, with a view to achieving mitigation target s, considering the Brazilian NDC and the country's strategy for the GCF. For instance, selected technologies for the AFOLU sector are directly related to the i mprovement of data collection and management processes to inform decision-maki ng. The following could be mentioned: precision agriculture, precision forestry and si lviculture, Satellite monitoring systems and agricultural genetic improvement with ro botic phenotyping.[1]
United Nations Development Assis tance Framework (UNDAF)	The project is aligned with UNDAF 2017-2021 for Brazil, under Outcome 3: Strengthe ned institutional capacity to promote public policies for the sustainable managemen t of natural resources and ecosystem services, and combating climate change and it s adverse effects, and ensure the coherence and implementation of these policies. I ndicator 3.3: Number of subnational and local governments with plans, strategies, p olicies, programs, projects or budgets to reduce the adverse effects of climate chan ge Under Outcome 7: Strategic partnerships established to strengthen and promote int ernational cooperation and contribute to the reduction of inequalities within and am ong countries. Indicator 7.4: Number of initiatives to promote gender and race equali ty (by actor of the cooperation agreement, by level of inclusion of the thematic in the agreement - priority, strong, weak; and by the cooperation object - institutional streng thening, specific initiatives) UNEP will facilitate coordination with the UN Country Team and Resident Coordinato r, ensuring they are informed of the project's progress and that it aligns with the Braz ilian UNDAF.

The project is directly connected to the respective Sustainable Development Goals (SDGs) and respective targets:

Table 10 – Sustainable development goals targeted by the project

Goals	Targets
Goal 5. Gender equality	· Guaranteeing full and effective participation of women and equal opportunities for leadership at all levels of decision-making in the public sphere, in its political and economic dimensions. This process must consider intersections with race, ethnicity, age, disability, sexual orientation, gender identity, territoriality, culture, religion and nationality, especially for women from the fields and the forests, from the waters and from urban peripheries. · Guaranteeing gender equality in access, skills of use and production of information and communication technologies, considering intersections with race, ethnicity, age, disability, sexual orientation, gender identity, territoriality, culture, religion and nationality, especially for women from the fields and the forests, from the waters and from urban peripheries. · Adopting and strengthening public policies and legislation aimed at promoting gender equality and empowering all women and girls, as well as promoting mechanisms for their effectiveness - at all federal levels - in their intersections with race, ethnicity, age, disability, sexual orientation, gender identity, territoriality, culture, religion and nationality, especially for women from the fields and the forests, from the waters and from urban peripheries.
Goal 13. Action Against Global Climate Change	· Increasing resilience and adaptive capacity to risks and impacts resulting from climate change and natural disasters. · The project provides that urban planning considers the reduction in the use of fossil fuels, air quality improvement and mitigation of greenhouse gas emissions, also considering issues related to minimizing exposure to risks associated with the intensification of climatic events. · Integrate the National Policy on Climate Change (PNMC) with national policies, strategies and plans. · The project seeks to align strategies with low emission development, incorporating aligned technologies that support the mitigation goals brought by the PNMC.
Goal 17. Partnerships and means of implementation	· Promoting the development, transfer, dissemination and diffusion of environmentally friendly technologies to developing countries, under favorable conditions, including concessional and preferential conditions, as mutually agreed. · Encouraging and promoting effective partnerships in the public, public-private, private and civil society spheres, based on the experience of the resource mobilization strategies of these partnerships.

[1] Report on The Technology Needs Assessment for the Implementation of Climate Action Plans in Brazil: Mitigation. Brasilia, 2021. Available at:

https://www.gov.br/mcti/pt-br/acompanhe-o-mcti/sirene/publicacoes/tna_brazil/arquivos/pdf/report-on-the-technology-needs-assessment-for-the-implementation-of-climate-action-plans-in-brazil-mitigation.pdf

8. Knowledge Management

Outline the knowledge management approach for the Project, including, if any, plans for the Project to learn from other relevant Projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

The CBIT project in Brazil will create knowledge through the development of protocols, guidelines and indicators for tracking GHG emissions, adaptation, NDC implementation and support needed and received. An essential part in managing this knowledge is through component 1, through which the project supports the integration of existing platforms to create a fully integrated national transparency system, DataClima+. This system will manage all data and knowledge developed through the project.

In addition, a national capacity building programme will be undertaken through a national academic institution in output 1.5. This will ensure that the knowledge flows in both directions (to and from academic and research institutions). Through the partnering with a local academic institution, using the training-the-trainers approach, and through having both online and onsite training sessions, the project will undertake robust actions for transferring knowledge to key climate data stakeholders in the country.

A gender sensitive approach will be adopted, following principles such as:

- Using male and female knowledge product and public education material developers for diversity of perspectives and approaches, as well as male and female reviewers of these products.
- Using gender-sensitive language and gender-balanced images (women not presented as victims but as agents of change).
- Checking context and content (use gender analysis; use convincing gender arguments based on reliable sources and qualitative and quantitative data including sex disaggregated data).
- Referring to (inter-)national policy framework, policies, strategies and plans, as applicable and appropriate.

Furthermore, this national project will facilitate Brazil's participate in the CBIT Global Coordination Platform. The project proposal will define how national CBIT information shall be shared and updated on the Global Coordination Platform. Sharing lessons learned and experiences under the platform will ensure alignment of this CBIT project with other national, regional and global transparency initiatives. The PPG phase will further explore how the project will learn from other CBIT projects, and how this project will help other developing countries in transitioning to the ETF. Furthermore, the project will also draw on experiences, good practices and lessons learned of countries in executing their CBIT projects, as made available on the CBIT Global Coordination Platform and through global platform activities, such as webinars and workshops.

9. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

Overall Project/Program Risk Classification*

PIF	CEO Endorsement/Approval	MTR	TE
Low			

Measures to address identified risks and impacts

Provide preliminary information on the types and levels of risk classifications/ratings of any identified environmental and social risks and potential impacts associated with the project (considering the GEF ESS Minimum Standards) and describe measures to address these risks during the project design.

Section 1: Project Overview

Identification	*To be determined (project at PIF stage)*
Project Title	*Strengthening the national transparency system in Brazil under the Paris Agreement (DataClima+)*
Managing Division	*Economy Division*
Type/Location	*National*
Region	*Latin America and the Caribbean*

List Countries	*Brazil*
Project Description	*This CBIT project aims to strengthen the climate transparency system of Brazil in order to meet the requirements of the enhanced transparency framework (ETF) under the Paris Agreement. With the aim of producing high-quality climate information, the country will improve and streamline its climate data management cycle, including as related to planning, data collection, data processing and analysis, information publishing and sharing, data preservation and data reuse. Such climate information will be used for international reporting and serve as an essential input for national decision-making.* *The project is organized in three components. Component 1 focuses on designing and building an integrated climate data platform for Brazil, DataClima+, for connecting climate databases. It will also establish the institutional framework needed for data collection, management and reporting of an integrated climate transparency framework so that national efforts are functional, coordinated and efficient. Component 2 will enhance the modules of the integrated climate data platform for complying with the ETF and its modalities, procedures and guidelines (MPGs): GHG emissions, adaptation, NDC implementation, and support needed and received. It will achieve this through actions that strengthen databases, tools, templates and institutional and human capacity for each module. Finally, Component 3 will support national policy- and decision-makers to more effectively incorporate climate data and projections into their regulatory and planning processes. It will achieve this by strengthening databases, tools, templates and institutional and human capacity for assessing the effectiveness of different sectoral policy scenarios for achieving national climate goals (SINAPSE module), as well as establishing institutional arrangements for integrating SINAPSE not only into sectoral and sub-national planning and budgeting instances but also into efforts to prepare a national long-term strategy in accordance with the Paris Agreement, article 4, paragraph 19.*
Relevant Subprogrammes	*Climate Mitigation Unit, Economy Division*
Estimated duration of project	*48 months*

Estimated cost of the project	*5,000,000 USD*
Name of the UNEP project manager responsible	*Asher Lessels*
Funding Source(s)	*Global Environment Facility (GEF)*
Executing/Implementing partner(s)	*Ministry of Science, Technology and Innovations*
SRIF submission version	*If it is not the first time, mark the time of your previous submission* *Concept Review [ ] During Project development [ ] PRC [ ]* *Other* _____
Safeguard-related reports prepared so far *(Please attach the documents or provide the hyperlinks)*	· Feasibility report [ ] · Gender Action Plan [ ] · Stakeholder Engagement Plan [ ] · Safeguard risk assessment or impact assessment [ ] · ES Management Plan or Framework [ ] · Indigenous Peoples Plan [ ] · Cultural Heritage Plan [ ] · Others _____

Section 2: Safeguards Risk Summary

A. Summary of the Safeguards Risk Triggered

Safeguard Standards Triggered by the Project	Impact of Risk[1] (1-5)	Probability of Risk (1-5)	Significance of Risk (L, M, H) *Please refer to the matrix below*
SS 1: Biodiversity, Ecosystems and Sustainable Natural Resource Management	1	1	L
SS 2: Climate Change and Disaster Risks	1	1	L
SS 3: Pollution Prevention and Resource Efficiency	1	1	L
SS 4: Community Health, Safety and Security	1	1	L
SS 5: Cultural Heritage	1	1	L
SS 6: Displacement and Involuntary Resettlement	1	1	L
SS 7: Indigenous Peoples	1	1	L
SS 8: Labor and working conditions	1	1	L

B. ESS Risk Level[2]

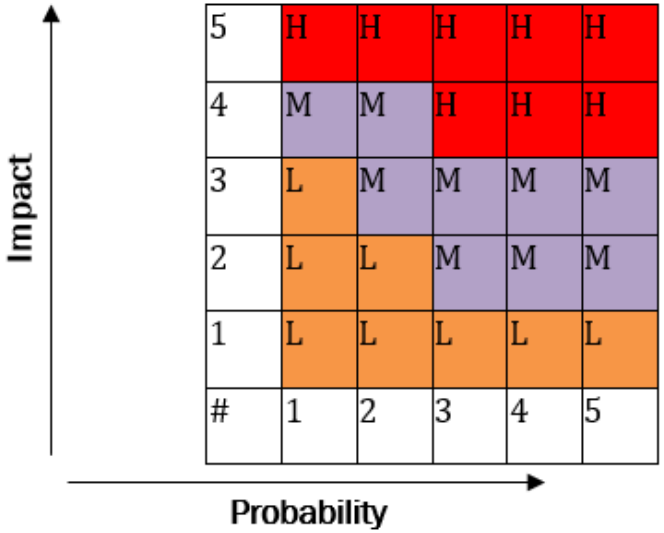
Refer to the UNEP ESSF (Chapter IV) and the UNEP's ESSF Guidelines.

Low risk ■

Moderate risk □

High risk □

Additional information required □



C. Development of ESS Review Note and Screening Decision

Prepared by

Name: Asher Lessels Date: 25 January 2022

Screening review by

Name: Alexandra Mutungi Date: 31 January 2022

Signature Cleared[3]

D. Safeguard Review Summary (by the safeguard team)

This is a low-risk project. However, UNEP ESSF guiding principles– resilience and sustainability; human rights, gender equality and women empowerment, accountability and leave no one behind–are still applicable for low-risk projects.

E. Safeguard Recommendations (by the safeguard team)

- No specific safeguard action required ■
- Take Good Practice approach[53] ☐
- Carry out further assessments (e.g., site visits, experts' inputs, consult affected communities, etc.) ☐
- Carry out impact assessments (by relevant experts) in the risk areas and develop management framework/plan ☐
- Consult Safeguards Advisor early during the full project development phase ☐
- Other _____

Section 3: Safeguard Risk Checklist

Screening checklist	Y/N/ Maybe	Justification for the response (please provide answers to each question)
Guiding Principles (these questions should be considered during the project development phase)		

GP1 Has the project analyzed and stated those who are interested and may be affected positively or negatively around the project activities, approaches or results?	Y	The project was developed in close collaboration with the Ministry of Science, Technology and Innovations. For this phase, stakeholders have been identified indirectly through existent documents (e.g. National Communications). Stakeholder consultations (group and individual) will be held during the project preparation phase.
GP2 Has the project identified and engaged vulnerable, marginalized people, including disabled people, through the informed, inclusive, transparent and equal manner on potential positive or negative implication of the proposed approach and their roles in the project implementation?	Y	This project is in the concept stage. Open consultation rounds will be held during the project preparation phase. No implications are expected for vulnerable people.
GP3 Have local communities or individuals raised human rights or gender equality concerns regarding the project (e.g. during the stakeholder engagement process, grievance processes, public statements)?	*N*	This project is in the concept stage. Open consultation rounds will be held during the project preparation phase
GP4 Does the proposed project consider gender-balanced representation in the design and implementation?	*Y*	Gender balanced stakeholder consultations will be a part of the project design. The national government team is gender-balanced.
GP5 Did the proposed project analyze relevant gender issues and develop a gender responsive project approach?	Y	At this stage, gender analysis was prepared at the concept level. A gender action plan will be prepared during the project preparation phase.
GP6 Does the project include a project-specific grievance redress mechanism? If yes, state the specific location of such information.	N	Due to the nature of the project, a GRM is not applicable.
GP7 Will or did the project disclose project information, including the safeguard documents? If yes, please list all the web pages where the information is (or will be) disclosed.	N	Documents will be available through the GEF portal once it is submitted.
GP8 Were the stakeholders (including affected communities) informed of the projects and grievance redress mechanism? If yes, describe how they were informed.	*N*	Due to the nature of the project, a GRM is not applicable. Extensive consultations with stakeholders foreseen for the project preparation phase.

GP9 Does the project consider potential negative impacts from short-term net gain to the local communities or countries at the risk of generating long-term social or economic burden?[5]	N	No negative impacts (short nor long-term) are foreseen from the transparency-related activities that are involved in this project.
GP10 Does the project consider potential partial economic benefits while excluding marginalized or vulnerable groups, including women in poverty?	N	The transparency support involved in this project will not lead to any redistributional impacts.
Safeguard Standard 1: Biodiversity, Ecosystems and Sustainable Natural Resource Management		
Would the project potentially involve or lead to:		
1.1 conversion or degradation of habitats (including modified habitat, natural habitat and critical natural habitat), or losses and threats to biodiversity and/or ecosystems and ecosystem services?	N	The transparency support involved in this project will not lead to conversion of habitats nor affect biodiversity.
1.2 adverse impacts specifically to habitats that are legally protected, officially proposed for protection, or recognized as protected by traditional local communities and/or authoritative sources (e.g. National Park, Nature Conservancy, Indigenous Community Conserved Area, (ICCA); etc.)?	N	Idem
1.3 conversion or degradation of habitats that are identified by authoritative sources for their high conservation and biodiversity value?	N	Idem
1.4 activities that are not legally permitted or are inconsistent with any officially recognized management plans for the area?	N	Not applicable to the project interventions.
1.5 risks to endangered species (e.g. reduction, encroachment on habitat)?	N	Not applicable to the project interventions.
1.6 activities that may result in soil erosion, deterioration and/or land degradation?	N	Not applicable to the project interventions.
1.7 reduced quality or quantity of ground water or water in rivers, ponds, lakes, other wetlands?	N	Not applicable to the project interventions.

1.8 reforestation, plantation development and/or forest harvesting?	N	Not applicable to the project interventions.
1.9 support for agricultural production, animal/fish production and harvesting	N	Not applicable to the project interventions.
1.10 introduction or utilization of any invasive alien species of flora and fauna, whether accidental or intentional?	N	Not applicable to the project interventions.
1.11 handling or utilization of genetically modified organisms?	N	Not applicable to the project interventions.
1.12 collection and utilization of genetic resources?	N	Not applicable to the project interventions.
Safeguard Standard 2: Climate Change and Disaster Risks		
Would the project potentially involve or lead to:		
2.1 improving resilience against potential climate change impact beyond the project intervention period?	Y	Work on the adaptation module of DataClima+ is expected to result in improved resilience of Brazil
2.2 areas that are now or are projected to be subject to natural hazards such as extreme temperatures, earthquakes, extreme precipitation and flooding, landslides, droughts, severe winds, sea level rise, storm surges, tsunami or volcanic eruptions in the next 30 years?	Y	Brazil's capital (Brasilia), where the main activities are expected to take place, is subject to some extreme events, including drought.
2.3 outputs and outcomes sensitive or vulnerable to potential impacts of climate change (e.g. changes in precipitation, temperature, salinity, extreme events)?	N	While data archiving infrastructure developed may be exposed to climate risk due to geographical nature of Brazil, the use of cloud-based solutions and remote servers significantly reduce this risk.
2.4 local communities vulnerable to the impacts of climate change and disaster risks (e.g. considering level of exposure and adaptive capacity)?	N	No.
2.5 increases of greenhouse gas emissions, black carbon emissions or other drivers of climate change?	N	No changes expected in GHG emissions as a result of this project. Improvements in Brazil's transparency system are expected to

		azil's transparency system are expected to enhance the country's mitigation actions, th us (indirectly) reducing GHG emissions.
2.6 Carbon sequestration and reduction of greenhouse e missions, resource-efficient and low carbon development, oth er measures for mitigating climate change	N	No changes expected in GHG emissions as a result of this project. Improvements in Br azil's transparency system are expected to enhance the country's mitigation actions, th us (indirectly) reducing GHG emissions.
Safeguard Standard 3: Pollution Prevention and Resource Efficiency		
Would the project potentially involve or lead to:		
3.1 the release of pollutants to the environment due to rou tine or non-routine circumstances with the potential for adver se local, regional, and/or transboundary impacts?	N	No pollutants of any kind are involved in th e project's interventions.
3.2 the generation of waste (both hazardous and non-haz ardous)?	N	No pollutants of any kind are involved in th e project's interventions.
3.3 the manufacture, trade, release, and/or use of hazardo us materials and/or chemicals?	N	Not applicable to the project interventions.
3.4 the use of chemicals or materials subject to internatio nal bans or phase-outs? (e.g. DDT, PCBs and other chemicals listed in international conventions such as the Montreal Proto col, Minamata Convention, Basel Convention, Rotterdam Con vention, Stockholm Convention)	N	Not applicable to the project interventions.
3.5 the application of pesticides or fertilizers that may hav e a negative effect on the environment (including non-target s pecies) or human health?	N	Not applicable to the project interventions.
3.6 significant consumption of energy, water, or other mat erial inputs?	N	Not applicable to the project interventions.
Safeguard Standard 4: Community Health, Safety and Security		
Would the project potentially involve or lead to:		

4.1 the design, construction, operation and/or decommissioning of structural elements such as new buildings or structures (including those accessed by the public)?	N	Not applicable to the project interventions.
4.2 air pollution, noise, vibration, traffic, physical hazards, water runoff?	N	Not applicable to the project interventions.
4.3 exposure to water-borne or other vector-borne diseases (e.g. temporary breeding habitats), communicable or noncommunicable diseases?	N	Not applicable to the project interventions.
4.4 adverse impacts on natural resources and/or ecosystem services relevant to the communities' health and safety (e.g. food, surface water purification, natural buffers from flooding)?	N	Not applicable to the project interventions.
4.5 transport, storage use and/or disposal of hazardous or dangerous materials (e.g. fuel, explosives, other chemicals that may cause an emergency event)?	N	Not applicable to the project interventions.
4.6 engagement of security personnel to support project activities (e.g. protection of property or personnel, patrolling of protected areas)?	N	Not applicable to the project interventions.
4.7 an influx of workers to the project area or security personnel (e.g. police, military, other)?	N	Not applicable to the project interventions.
Safeguard Standard 5: Cultural Heritage		
Would the project potentially involve or lead to:		
5.1 activities adjacent to or within a Cultural Heritage site?	N	Not applicable to the project interventions.
5.2 adverse impacts to sites, structures or objects with historical, cultural, artistic, traditional or religious values or to intangible forms of cultural heritage (e.g. knowledge, innovations, practices)?	N	Not applicable to the project interventions.
5.3 utilization of Cultural Heritage for commercial or other	N	Not applicable to the project interventions.

purposes (e.g. use of objects, practices, traditional knowledge, tourism)?		
5.4 alterations to landscapes and natural features with cultural significance?	N	Not applicable to the project interventions.
5.5 significant land clearing, demolitions, excavations, flooding?	N	Not applicable to the project interventions.
5.6 identification and protection of cultural heritage sites or intangible forms of cultural heritage		
Safeguard Standard 6: Displacement and Involuntary Resettlement		
Would the project potentially involve or lead to:		
6.1 full or partial physical displacement or relocation of people (whether temporary or permanent)?	N	Not applicable to the project interventions.
6.2 economic displacement (e.g. loss of assets or access to assets affecting for example crops, businesses, income generation sources)?	N	Not applicable to the project interventions.
6.2 involuntary restrictions on land/water use that deny a community the use of resources to which they have traditional or recognizable use rights?	N	Not applicable to the project interventions.
6.3 risk of forced evictions?	N	Not applicable to the project interventions.
6.4 changes in land tenure arrangements, including communal and/or customary/traditional land tenure patterns (including temporary/permanent loss of land)?	N	Not applicable to the project interventions.
Safeguard Standard 7: Indigenous Peoples		
Would the project potentially involve or lead to:		
7.1 areas where indigenous peoples are present or uncontacted or isolated indigenous peoples inhabit or where it is believed these peoples may inhabit?	N	The adaptation module will create a system to assess risks and vulnerability of areas where indigenous and other vulnerable peoples are present. However, no direct work expected in these areas.
7.2 activities located on lands and territories claimed by i	N	The adaptation module will create a syste

7.2 activities located on lands and territories claimed by i ndigenous peoples?	N	The adaptation module will create a syste m to assess risks and vulnerability of areas where indigenous and other vulnerable peo ples are present. However, no direct work e xpected in these areas.
7.3 impacts to the human rights of indigenous peoples or to the lands, territories and resources claimed by them?	N	No impact foreseen in indigenous peoples, the lands, territories nor resources.
7.4 the utilization and/or commercial development of nat ural resources on lands and territories claimed by indigenous peoples?	N	No such actions among the interventions in the proposed project.
7.5 adverse effects on the development priorities, decisio n making mechanisms, and forms of self-government of indi genous peoples as defined by them?	N	No – more accessible vulnerability informa tion is expected to have a positive impact i n vulnerable peoples.
7.6 risks to the traditional livelihoods, physical and cultura l survival of indigenous peoples?	N	No impact foreseen in indigenous livelihoo ds.
7.7 impacts on the Cultural Heritage of indigenous people s, including through the commercialization or use of their tra ditional knowledge and practices?	N	No impact foreseen in indigenous heritage.
Safeguard Standard 8: Labor and working conditions		
8.1 Will the proposed project involve hiring or contracting project staff ?	Y	A project team will be set up using ministry personnel. Consultants will be required to a ssist the ministry team.
If the answer to 8.1 is yes, would the project potentially involv e or lead to:		
8.2 working conditions that do not meet national labour la ws or international commitments (e.g. ILO conventions)?	N	All hiring will meet national labor legislatio n.
8.3 the use of forced labor and child labor?	N	Child Labor is banned and not practiced in Brazil
8.4 occupational health and safety risks (including violenc e and harassment)?	N	Not applicable to the project interventions.

8.5 the increase of local or regional unemployment?	N	Not applicable to the project interventions.
8.6 suppliers of goods and services who may have high risk of significant safety issues related to their own workers?	N	Not applicable to the project interventions.
8.7 unequal working opportunities and conditions for women and men	N	Gender Action Plan and Gender monitoring works will ensure gender balance opportunities

[1] Refer to UNEP Environmental and Social Sustainability Framework (ESSF): Implementation Guidance Note

to assign values to the Impact of Risk and the Probability of Risk to determine the overall significance of Risk (Low, Moderate or High).

[2] Low risk: Negative impacts minimal or negligible: no further study or impact management required.

Moderate risk: Potential negative impacts, but limited in scale, not unprecedented or irreversible and generally limited to programme/project area; impacts amenable to management using standard mitigation measures; limited environmental or social analysis may be required to develop an Environmental and Social Management Plan (ESMP). Straightforward application of good practice may be sufficient without additional study.

High risk: Potential for significant negative impacts (e.g. irreversible, unprecedented, cumulative, significant stakeholder concerns); Environmental and Social Impact Assessment (ESIA) (or Strategic Environmental and Social Assessment (SESA)) including a full impact assessment may be required, followed by an effective comprehensive safeguard management plan.

[3] This is signed only for the full projects latest by the PRC time.

[4] Good practice approach: For most low-moderate risk projects, good practice approach may be sufficient. In that case, no separate management plan is necessary. Instead, the project document demonstrates safeguard management approach in the project activities, budget, risks management, stakeholder engagement or/and monitoring segments of the project document to avoid or minimize the identified potential risks without preparing a separate safeguard management plan.

[5]For example, a project may consider investing in commercial shrimp farm by clearing the nearby mangrove forest to improve the livelihood of the coastal community. However, long term economic benefit from the shrimp farm may be significantly lower than the mangroves if we consider full costs factoring safety from storms, soil protection, water quality, biodiversity and so on.

Supporting Documents

Upload available ESS supporting documents.

Title	Submitted

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

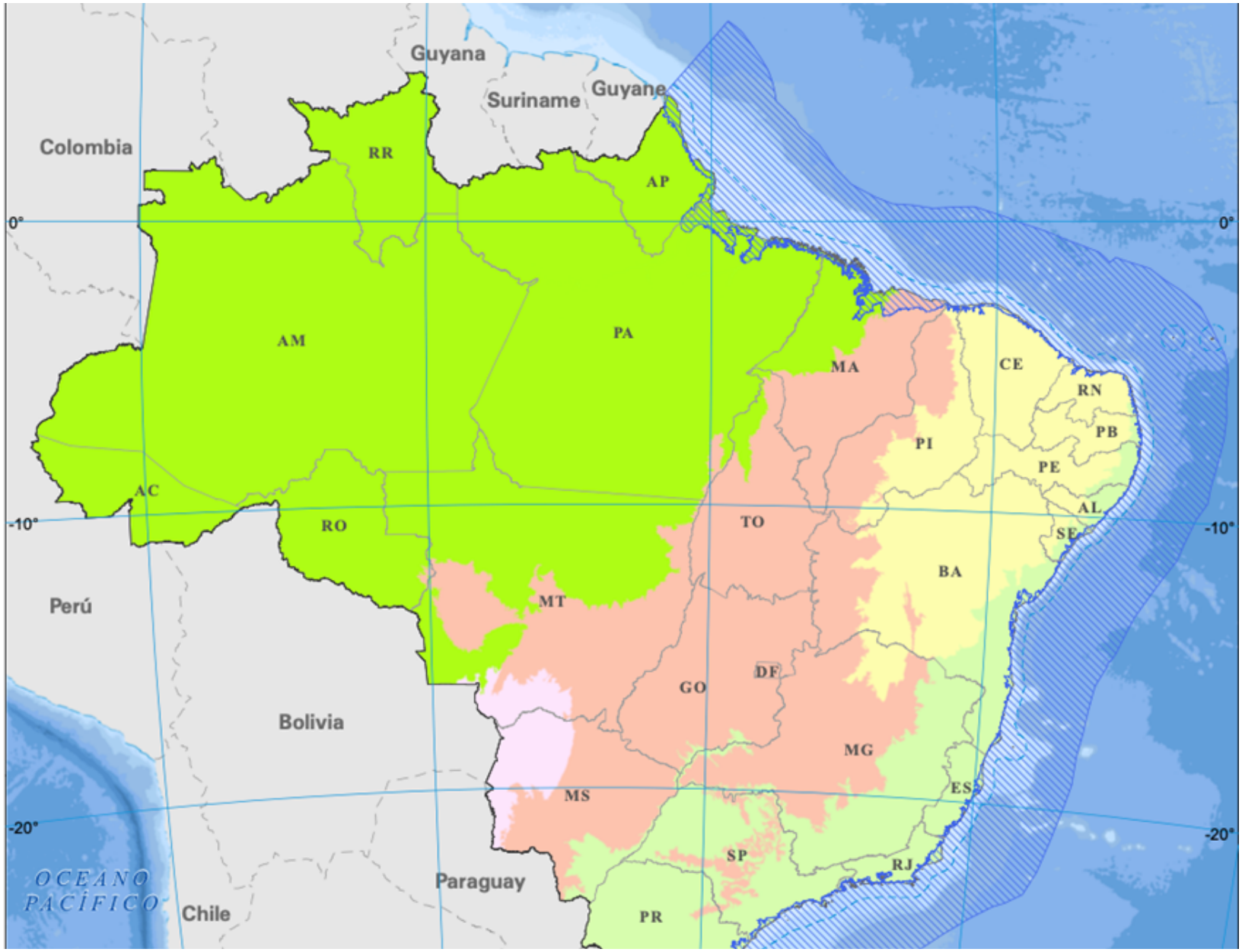
A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the Operational Focal Point endorsement letter with this template).

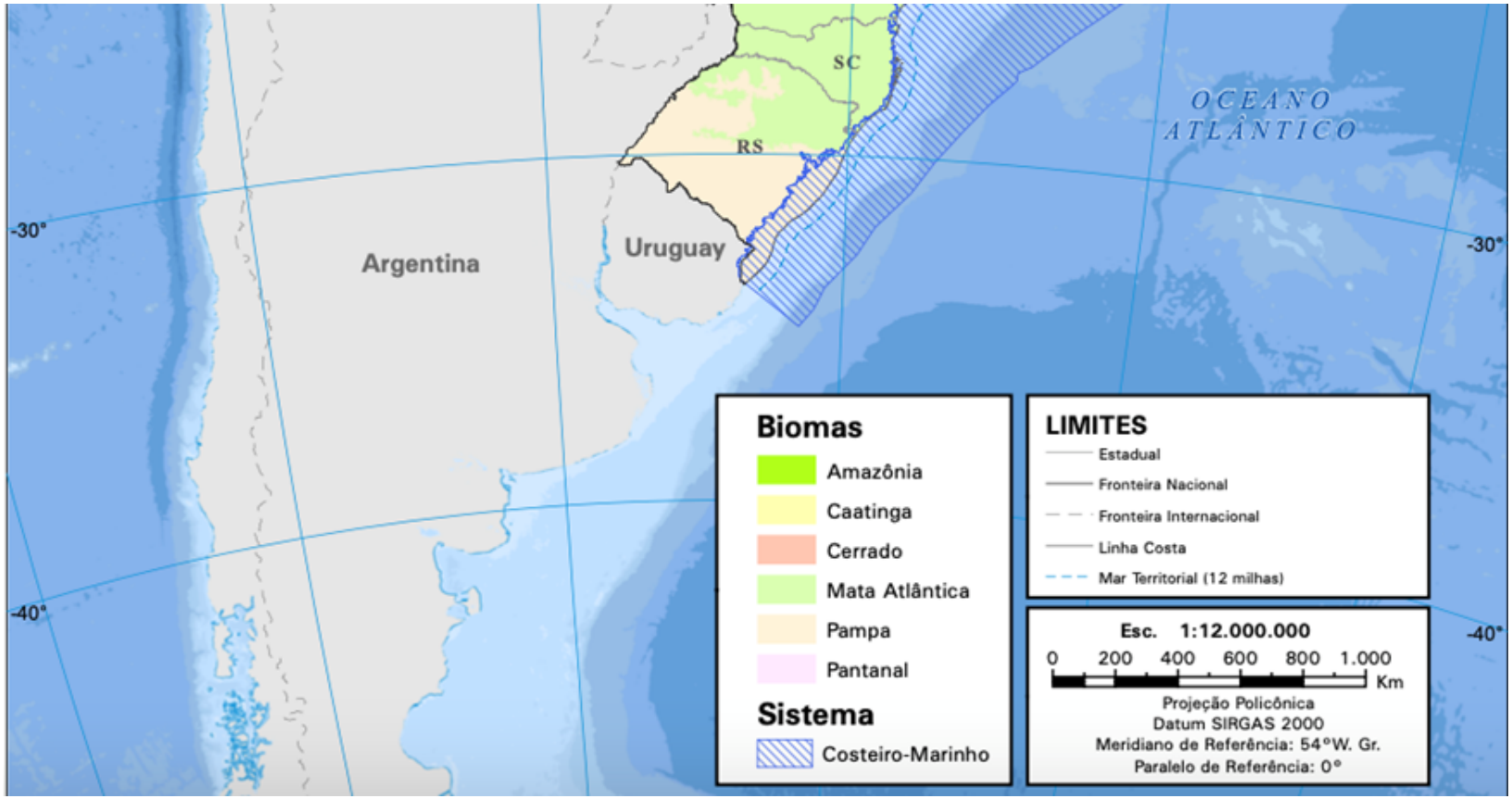
Name	Position	Ministry	Date
Marcus Barretto	General Coordinator for External Financing	Ministry of Economy	4/29/2022

ANNEX A: Project Map and Geographic Coordinates

Please provide geo-referenced information and map where the project intervention takes place

Figure 1. Map of Brazil[1]





Geocoordinates of Brasilia: 15.7975° S, 47.8919° W.

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[1] Source IBGE, 2019 Biomas e Sistema Costeiro-Marinho do Brasil - 1:250 000; available at: https://geoftp.ibge.gov.br/informacoes_ambientais/estudos_ambientais/biomas/mapas/biomas_e_sistema_costeiro_marinho_250mil.pdf