Implementing Ecuador?s Climate Transparency System

Part I: Project Information

GEF ID

Project Type
MSP

Type of Trust Fund
GET

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

Project Title
Implementing Ecuador?s Climate Transparency System

Countries
Ecuador

Agency(ies)
UNEP

Other Executing Partner(s)
Ministry of Environment and Water (MAAE)

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, Stakeholders, Civil Society, Academia, Private Sector, Type of Engagement, Information Dissemination, Gender Equality, Gender Mainstreaming, Sex-disaggregated indicators, Capacity, Knowledge and Research, Capacity Development

Rio Markers

Climate Change Mitigation
Climate Change Mitigation 1

Climate Change Adaptation
Climate Change Adaptation 1

Duration
36 In Months

Agency Fee($)
188,860.00

Submission Date
5/11/2021

A. Indicative Focal/Non-Focal Area Elements

Programming Directions	Trust Fund	GEF Amount($)	Co-Fin Amount($)
CCM-3-8	GET	1,988,000.00	1,080,057.00
	Total Project Cost ($)	**1,988,000.00**	**1,080,057.00**

B. Indicative Project description summary

Project Objective

To strengthen the national transparency system in Ecuador to meet the requirements of the Enhanced Transparency Framework (ETF) under the Paris Agreement on Climate Change

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)
Component 1. Strengthening institutional aspects of the National Climate Change Registry (RNCC)	Technical Assistance	Outcome 1. The Government of Ecuador develops policies and tracks climate ambition based on a robust RNCC	Output 1.1. MAAE is able to establish a fully operational National Climate Change Registry Output 1.2. The National Planning Council is able to incorporate climate data into national planning processes and instruments	GET	673,000.00	350,303.00

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)
Component 2. Enhancing the National Climate Change Registry	Technical Assistance	Outcome 2. The MAAE produces more accurate climate information and reports in alignment with the requirements of the ETF	Output 2.1. MAAE has access to tools for increasing the accuracy and precision of the mitigation module of the RNCC Output 2.2. MAAE has access to processes, information flows, indicators and methodologies for operationalizing the adaptation module of the RNCC Output 2.3. MAAE has access to a roadmap and guidelines for the operationalization of the means of implementation module in the RNCC	GET	605,000.00	

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)
Component 3. Capacity building and public engagement	Technical Assistance	Outcome 3. Stakeholders provide inputs to and draw information from the RNCC for their decision-making processes	Output 3.1. Stakeholders demonstrate increased awareness of the work, benefits and impact of the RNCC as a result of gender-sensitive public engagement Output 3.2. Stakeholders demonstrate strengthened understanding of the RNCC following a national capacity building programme and a repository of climate change information	GET	489,273.00	629,245.00
Monitoring and Evaluation	Technical Assistance			GET	40,000.00	
				Sub Total ($)	**1,807,273.00**	**979,548.00**

Project Management Cost (PMC)

GET	180,727.00	100,509.00
Sub Total($)	**180,727.00**	**100,509.00**
Total Project Cost($)	**1,988,000.00**	**1,080,057.00**

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($)
Recipient Country Government	Ministry of Environment and Water	In-kind	Recurrent expenditures	1,080,057.00
			Total Project Cost($)	**1,080,057.00**

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($)
UNEP	GET	Ecuador	Climate Change	CBIT Set-Aside	1,988,000	188,860	2,176,860.00
			Total GEF Resources($)		**1,988,000.00**	**188,860.00**	**2,176,860.00**

E. Project Preparation Grant (PPG)

PPG Required **true**

PPG Amount ($)

50,000

PPG Agency Fee ($)

4,750

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
UNEP	GET	Ecuador	Climate Change	CBIT Set-Aside	50,000	4,750	**54,750.00**
				Total Project Costs($)	**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	50			
Male	50			
Total	100	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

The direct beneficiaries of the project are those whose capacity is strengthened in the project's capacity building sessions. While most workshops contribute to strengthening the capacity of the participants, it is the capacity building sessions under output 3.2 which are specifically considered here. The onsite workshops are planned to be twelve (12), with an average of 15 participants in each. As the workshops are thematic and sectorial, an overlap is expected where individuals will partake in several. Thus, the estimate is 100 unique individuals trained. There are also planned online sessions, but the overlap between the online and onsite is expected to be close to 100%. As the gender division within the institutions to be trained is reasonably even, the assumption is for a 50/50 split.

Part II. Project Justification

1a. Project Description

1) Global environmental and/or adaptation problems, root causes and barriers that need to be addressed

The Paris Agreement (2016) introduces the Enhanced Transparency Framework (ETF), which increases the climate change transparency ambition and reporting requirement for all the parties, including those in non-annex I countries. While the Paris Agreement set the foundations of the ETF, it was first in COP24 (2018) in Katowice that specific Modalities, Procedures and Guidelines (MPGs) for the ETF were agreed upon. The MPGs set a requirement to prepare a number of transparency reports, most notably the biennial transparency report (BTR), which require substantive information that include an updated greenhouse gas (GHG) inventory and the tracking of the country?s National Determined Contribution (NDC). It is thus important for developing countries to make decisions regarding the institutionalization of its Measuring, Reporting and Verification (MRV) Systems to ensure their capacity to provide high-quality data at the right time.

In the particular context of Latin America and the Caribbean countries, NDC tracking typically involves elements on adaptation, GHG emissions, climate finance and GHG reductions. A holistic and integral approach towards data management is thus required to provide transparency information that also considers other global initiatives such as the Sustainable Development Goals (SDGs) and integrates swiftly into the country?s own national planning.

The main barriers for strengthening Ecuador's transparency framework to meet the demands of the Enhanced Transparency Framework under the Paris Agreement were identified in Ecuador?s Third National Communication (2017). They can be grouped into the following categories[1][1]:

B1. Insufficient institutional arrangements to allow for the collection of required data.

This barrier fundamentally reflects the early stages of adoption of an integral MRV system at the country level. While many parts of the system exist, and some of them are implemented on-demand at the time of preparing a National Communication of a Biennial Update Report, there is still no integrated system that works as a unit and that has a clear interconnection in all of its parts.

Reliable, regular data flows required for a national transparency framework include defining the need for and uses of data, managing the delivery of existing information and the compilation of new data specifically developed to fill previous gaps. In Ecuador, the source for several data sets still requires to be established, and only a few organizational mandates for the collection of data are already in place to secure the timely delivery of inputs. As will be discussed later, these gaps affect all the main components of a transparency system, to different extents: some elements, like the GHG inventory, have more developed procedures for the collection of data that has already been identified ? but even the inventories still have significant gaps that compromise the certainty of their results[2][2]. Other systems (adaptation, NDC tracking, support needed and received) are even less developed.

Moreover, coordination between official entities, public research institutions and academia is still limited, often resulting in ?research islands? that remain isolated.

B2. Limited technical capacities to design, implement and manage a complex, country wide climate transparency system.

The level of ambition required to implement a fully integrated transparency system demands significant resources, and this is often a challenge in developing countries like Ecuador. The overall expertise required to design, implement and manage a transparency system is usually beyond the resources of the environment authorities, even in more developed countries. Ecuador lacks financial as well as technical resources, coordination skills[3][3] and tools that are important for the smooth functioning of the transparency system, which encompasses managing large amounts of data that comes in periodically and requires to be classified, analyzed, summarized, checked, and archived.

B3. Limited integration of climate change considerations into political decision making.

The purpose of an efficient, fully integrated transparency system is not the reporting in itself, but rather its usage to inform decision making processes that start in high level national development plans and spill over to more concrete (geographically and sectorial) structures. As reported in its Third National

Communication (NC3), Ecuador still needs to integrate climate variables, projections, baseline studies and recommended actions from its National Climate Change Strategy into its policies and budgets[4][4].

More generally, climate transparency is still not mainstream. Provision of data is still perceived as a burden or as a risk (e.g. collection of data for fiscal purposes), and the reports generated from existing transparency mechanisms are unlikely to inform political decisions and are seldomly consulted outside the environment sector or the academy.

Summary of barriers and root causes, and how they map into the project structure.

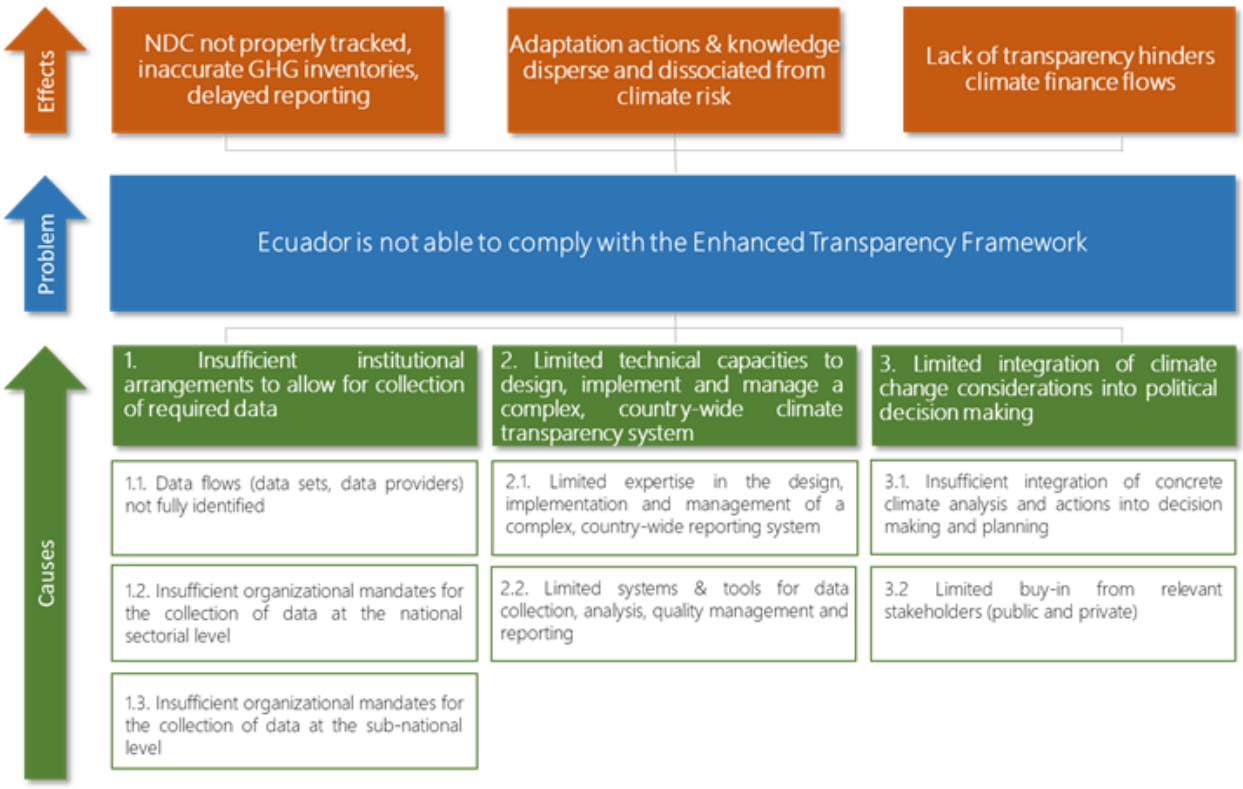
Table 1. Summary of barriers and root causes

Barrier & root cause	Relevant baseline section	Addressed by project output
B1. Insufficient institutional arrangements to allow for collection of required data		
B1.1. Data flows (data sets, data providers) not fully identified	e), f), g)	1.1
B1.2. Insufficient organizational mandates for the collection of data at the national sectorial level	e), f), g)	1.1
B1.3. Insufficient organizational mandates for the collection of data at the sub-national level	h)	1.1
B2. Limited technical capacities to design, implement and manage a complex, country wide climate transparency system		
B2.1. Limited expertise in the design, implementation and management of a complex, country-wide reporting system	d), e), f), g)	1.1, 3.2
B2.2. Limited systems & tools for data collection, analysis, quality management and reporting	d), e), f), g)	2.1-2.3
B3. Limited integration of climate change considerations into political decision making		

B3.1. Insufficient integration of concrete climate analysis and actions into decision making and planning	i)	1.2
B3.2. Limited buy-in from relevant stakeholders (public and private)	d), e), f), g)	3.1, 3.2

These barriers challenge Ecuador's reporting to the UN Framework Convention on Climate Change (UNFCCC), particularly considering that the new requirements demand more elaborated and frequent reports.

Figure 1. Problem tree



The following section presents a deeper discussion of the scenario in which these barriers currently materialize.

2) Baseline scenario and any associated baseline projects

a) Administrative organization of Ecuador: central government and GADs

Ecuador is a unitary, decentralized, representative, and intercultural republic. The 2008 Constitution introduced a series of reforms that bring forward the role of planning and defines decentralization and deconcentration as central aspects of the State. In terms of decentralization, two of the key elements are i) the establishment of clearly defined competences by the level of government, and ii) the rationalization of the resource transfers in accordance with territorial and equity criteria that are objective, concrete, measurable and predictable. Recipients of these funds are the so called Decentralized Autonomous Governments (?GADs?, from its Spanish acronym), and their roles are regulated by the Organic Code for Territorial Organization, Autonomy and Decentralization (COOTAD, from its Spanish acronym).

COOTAD set various types of competencies and established the Council of National Competencies, that would organize the decentralization process. Competencies may be exclusive (when only one government level would retain full titularity) or concurrent (when titularity may belong to more than one government level)[5][5]. Thus, the central level retains exclusive competencies in the areas of defense, security, international relationships and economic policy, health, education, planning at the national level, migration, protected natural areas, biodiversity, national public companies, housing, natural disaster management and protection, energy resources and hydrocarbons, among others. Other topics (such as river basins management, planning at the local level, public services, transport and transit, among others) are delegated to GADs.

b) General institutional framework of Climate Change in Ecuador

In 2008, Ecuador was the first country in the world to recognize the rights of nature in the Constitution of the Republic, which is an aspect that strengthens the conservation and sustainable development approaches. Article 261 of the Constitution gives the exclusive competency of natural resources to the Central Government.

Mitigation and adaptation to climate change were declared as State policies, through Executive Decree No. 1815 of 1 July 2009. That same year, the Ministry of Environment approved the Ministerial Agreement 104, on 29 October 2009, in which it re-adjusted its organic structure for the creation of the Under-Secretariat of Climate Change (SCC), as the unit in charge of exercising the rectory on the subject, through various lines of action: mitigation, adaptation, vulnerability understanding, knowledge management / generation, understanding of the climatic phenomenon, capacity building in the subject, climate finance, among others.

Based on Executive Decree No. 495 of 2010, Ecuador currently counts with a Climate Change Interinstitutional Committee (CICC acronym in Spanish), which, among other functions, has the role of coordinating, dictating, and facilitating the comprehensive execution of national policies relevant to climate change, the National Strategy for Climate Change, and the commitments assumed with respect to the application and participation in the United Nations Framework Convention on Climate Change and its instruments. Therefore, it has the responsibility of coordinating the National Climate Change Policy, that is, in climate adaptation, mitigation, and means of implementation. The CICC is currently comprised of the Ministry of Environment and Water[6][6] (acting as the Chair of the Committee), and comprised by other ministries (transportation, energy, economy and finance, among others) and municipal, provincial and rural representatives. It has presented yearly Work Plans since 2018, focusing mainly in the implementation of Ecuador?s NDC and National Adaptation Plan.

Ecuador prepared a National Climate Change Strategy (ENCC) in 2012, which covers the 2012-2025 period and serves as a management instrument that guides and dictates the actions and measures needed to prepare the nation to face the events produced by climate change. In the ENCC, five mitigation sectors and eight focus areas for adaptation are prioritized[7][7]. These sectors are thus reflected on all national reports to the UNFCCC.

In 2017, the Organic Code of the Environment was issued through the Official Registry Supplement No. 983. The Organic Environment Code (COA) is the country's overarching environmental legislation, addressing elements such as climate change, protected areas, wildlife, forest heritage, environmental quality, waste management, environmental incentives, coastal marine zone, mangroves, access to genetic resources, biosecurity, biocommerce, etc. The COA sets the Ministry of Environment (as of March 2020, Ministry of Environment and Water, MAAE) as the national authority in charge of overseeing, planning, regulating, controlling, managing, and coordinating environmental matters. This is done through a National Decentralized Environmental Management System, with provincial GADs retaining execution functions within their territories.

c) Status of Ecuador regarding the Paris Agreement and reports already submitted

Ecuador submitted its First National Communication in 2000, prior to the institutionalization of its CICC and was made for the most part by international consultants. Its Second National Communication was presented in 2012. It was created by international consultants and with the revision and approval of Sectorial Working Groups of the CICC. The country submitted its First Biennial Update Report (BUR) in 2016, while its Third National Communication was submitted in 2017.

Ecuador ratified the Paris Agreement through Executive Decree No. 98 on 29 July, 2017. In March 2019, Ecuador made public its first NDC with a focus on mitigation and adaptation on 11 sectors, for the period 2020 ? 2025. Moreover, Decree 840 of 6 August 2019 stated that the commitments established by Ecuador in its NDC are mandatory for the competent entities according to the sectors covered by the measures proposed in such NDCs. Ecuador is planning to start the process of updating the NDC in 2024, so that it is presented in 2025. In terms of goals, Ecuador has set a 9% reduction target (unconditional scenario) and a 20.9% reduction target (conditional to receiving support) for the energy, agriculture, industry and waste sectors. Land use, land-use change and Forestry (LULUCF) has a separate set of goals, namely, a 4% target for an unconditional reduction and 20% subject to support received.

A summary of the work and reports presented to UNFCCC (and those expected in the future) is presented below. Note that the second BUR is expected for 2022, whereas the first BUR was issued in 2016, i.e. a 6-year gap took place in between reports.

Table 3. Official reporting to UNFCCC

Year	Milestone	Comments
2001	First National Communication (NC1)	Inventories for 1990, 1994, 2000
2011	Second National Communication (NC2)	
2016	First Biennial Update Report (BUR1)	Inventories for 1990, 1994, 2000, 2006, 2010 (?INGEI 2010?), as well as mitigation actions and initial progress in terms of a climate change MRV.

2017	Third National Communication (NC3)	Includes inventories for 1990, 1994*, 2000*, 2006*, 2010, 20012 (?INGEI 2012?), 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. * indicate revised estimate
2019	Nationally Determined Contribution (NDC)	Chapters on national circumstances, GHG inventories (Inventories for 1990, 1994 (revised), 2000 (revised), 2006 (revised), 2010, 2012 (?INGEI 2012?)), as well as details on mitigation but also adaptation actions, cross-cutting themes (e.g. gender), and barriers, challenges and opportunities. The NDCs gained legally binding status in August of the same year.
2022*	Fourth National Communication (NC4)	Expected completion date. Project supported by the GEF with UNDP as implementing agency
2022*	BUR2	Project supported by the GEF with UNDP as implementing agency
2022*	National Adaptation Plan	Project supported by the GCF with UNDP as implementing agency
2024*	First Biennial Transparency Report (BTR1)	The first BTR must be submitted by all Parties no later than 31 December 2024.
2025*	NDC update	To start in 2024, including a stocktaking process of the commitments in the NDC.

* *Expected completion date*

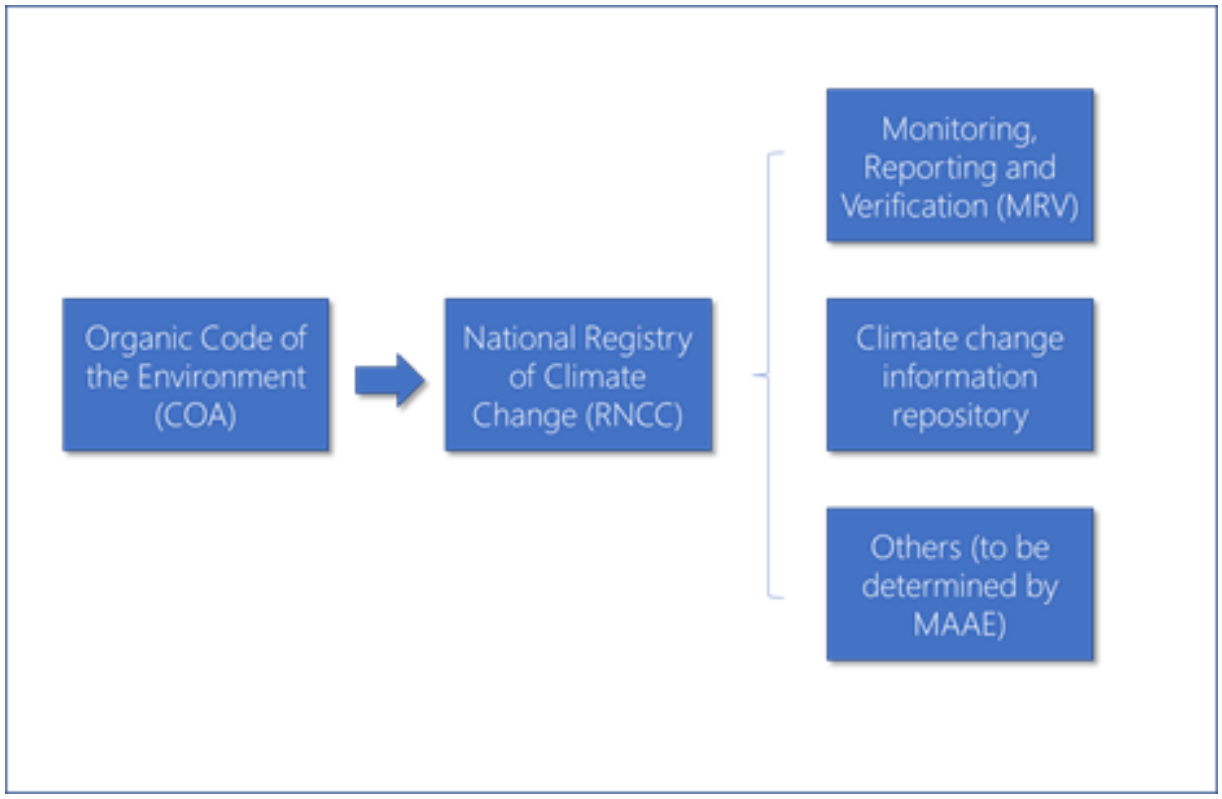
d) The National Registry of Climate Change (RNCC)

In article 254, the COA establishes the creation of the National Registry of Climate Change (RNCC), which is to be managed by the National Environmental Authority, i.e. the Ministry of Environment and Water (MAAE). The RNCC is the official overarching transparency framework in terms of Climate Change. The Regulatory Decree for the COA (2019) establishes additional aspects, which are presented in the table below.

Table 2. The RNCC as established by the 2019 Regulatory Decree of the COA

Article in the Regulatory Decree of the COA	Content
715	Nesting of the RNCC within the Unique Environmental Information System (SUIA) and establishment of the MAAE as the competent authority
716	The Regulatory Decree also states that the RNCC will consist of a) an MRV system, b) a Climate Change Information Repository, and c) other elements to be determined by the MAAE.
717	Defines the MRV system as the tool within the RNCC which aims at measuring, monitoring, reporting and verifying the impact of any mitigation and adaptation measures implemented, assessing their contribution to national and international climate change goals. In particular, the MRV should reflect: - GHG emissions, in a consistent and transparent manner and avoiding double counting; - changes in vulnerability and the management of climate risks, - financial flows required, received, executed for climate change management
718-719	Defines the Climate Change Information Repository as the tool within the RNCC to organize, store, preserve, and manage the interchange, development and filing of information related to climate and climate change, indicating minimum contents for the type of information to be stored. This includes data on programs, plans, projects, and strategies related to mitigation and adaptation at different government levels and sectors; assessment of financial needs prepared by private, public and academic sectors; an updated database on existent climate finance sources; published GHG inventories, climate projections; past actions undertaken, and others[8][8].
720	Requirement to share data upon request by the MAAE and mention of the need to interconnect the RNCC with other existing information systems.

Figure 2. Nesting and composition of the RNCC



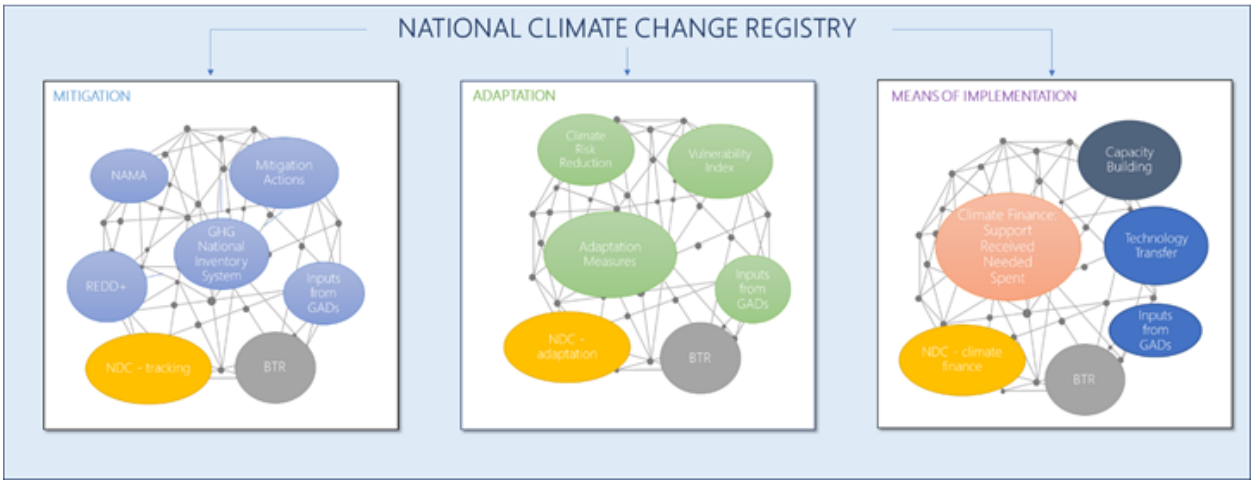
As the National Authority with competence in the matter, the MAAE has the mandate to coordinate the collection of required data from all relevant actors and government levels, and the intersectoral entities that get prioritized are mandated to participate and share information that is required by the MAAE in a timely manner, through the mechanisms that are set to this end[9][9]. However, with the only exception of the GHG inventory (discussed below), the intersectoral entities, the information required, and the mechanisms for sharing it remain undefined. Thus, although the country already has a regulatory framework that sets the mandate to implement a National Registry of Climate Change, the requirements in the COA and its regulatory decree are still very high level, without providing specific details on the design of processes, arrangements, timelines, and other guidance needed for its operationalization.

In 2019, Ecuador concluded the conceptualization of the RNCC to operationalize the COA and the country?s international commitments from the Paris Agreement. The RNCC is expected to be aligned with the modalities, procedures, and guidelines (MPGs) of the Enhanced Transparency Framework in

climate mitigation, adaptation, and means of implementation to fulfil with reporting obligations under the Paris Agreement and to keep track of the progress in terms of all matters related to Climate Change.

The National Climate Change Registry is expected to follow the structure depicted on Figure 2.

Figure 3. Proposed Ecuador?s National Climate Change Registry Structure



The system consists of three modules, which will be presented in the following sections.

e) Mitigation module

The Ministry of Environment and Water (MAAE) prepared a concept for the operationalization of a mitigation MRV, which includes specific criteria as well as differentiating measuring and management indicators depending on the type of action. The mitigation module of the National Climate Change Registry (RNCC) foresees several MRV systems: the National GHG Inventory System, REDD+, NAMAs, and other Mitigation Actions, as well as tracking and updating the NDCs on mitigation. It will provide inputs for the creation of Biennial Transparency Reports from the mitigation aspect.

While some of the MRV Systems within the Mitigation Component are already operational, the development of others is in progress or to be started. The status of each sub-system in the mitigation component is described below.

A. National GHG Inventory System

Inventory systems for GHG are usually the most developed items in national transparency systems. After performing ad-hoc estimates in 2001 and 2011, Ecuador developed a system that facilitates the collection, compilation, systematization, and processing of data for GHG inventories - a system that would become known as the National System for GHG Inventories (SINGEI, from its Spanish acronym). This is the main forerunner of the RNCC, and as the latter, is operated and managed by the Ministry of Environment and Water. In terms of interconnectivity, there is work underway to provide a link between REDD+ projects and the SINGEI[10][10].

Nevertheless, the SINGEI -the most developed system in the RNCC- is still lacking interconnectivity with the majority of the MRV systems of the Registry, and inventories are still based on the 1996 revised Intergovernmental Panel on Climate Change (IPCC) Guidelines for national inventories of GHG (see e.g. Table 5 below).

Its main milestones can be summarized as follows:

Table 4. GHG inventories milestones

Year	Instance	Published data
2001	NC1	Inventories for 1990, 1994, 2000
2011	NC2	Inventories for 1990, 1994, 2000, 2006
2014	Preparation of the NC3	Creation of the ?GHG Inventories Work Group? by the SCC, which later results in the organization of the SINGEI.
2016	BUR1	Inventories for 1990, 1994, 2000, 2006, 2010 (?INGEI 2010?)
2017	NC3	Inventories for 1990, 1994*, 2000*, 2006*, 2010, 2012 (?INGEI 2012?). * indicate revised estimate

The latest results from the GHG inventories are presented in the figures and tables below. The time series analysis shows that the most important sectors in terms of emissions are Energy and LULUCF; latest key categories (including LULUCF) are reproduced in the table below.

Figure 4. Evolution of GHG emissions (1994 - 2012)[11][11]

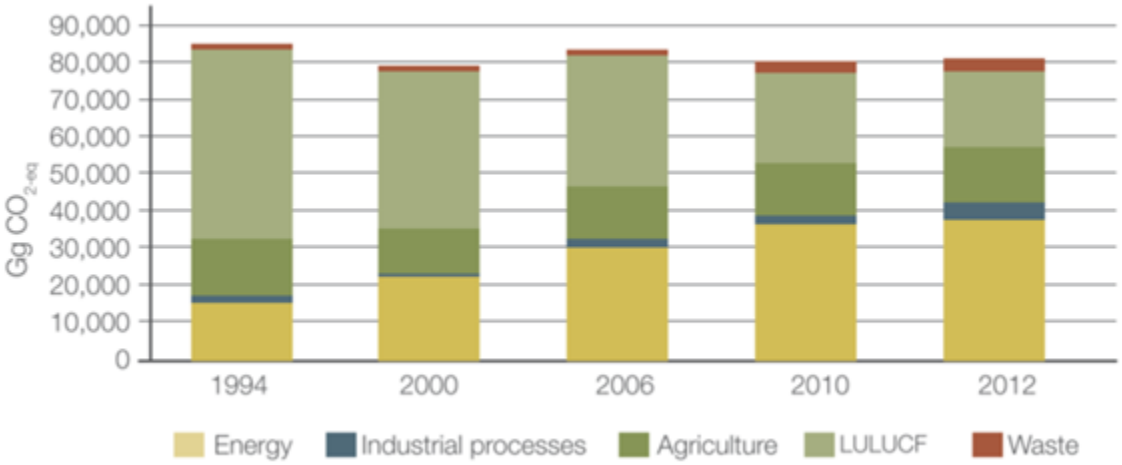


Figure 5. 2012 GHG emissions by sector[12][12]

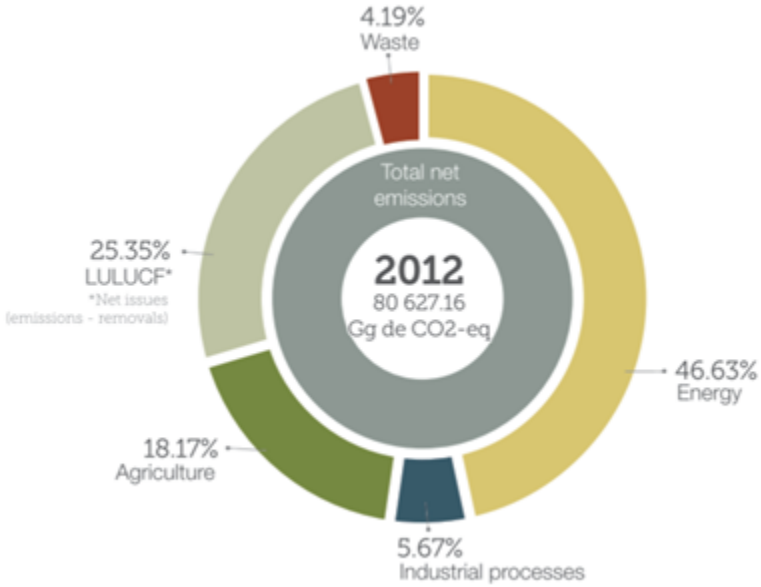


Table 5. Key categories in the 2012 GHG inventory[13][13]

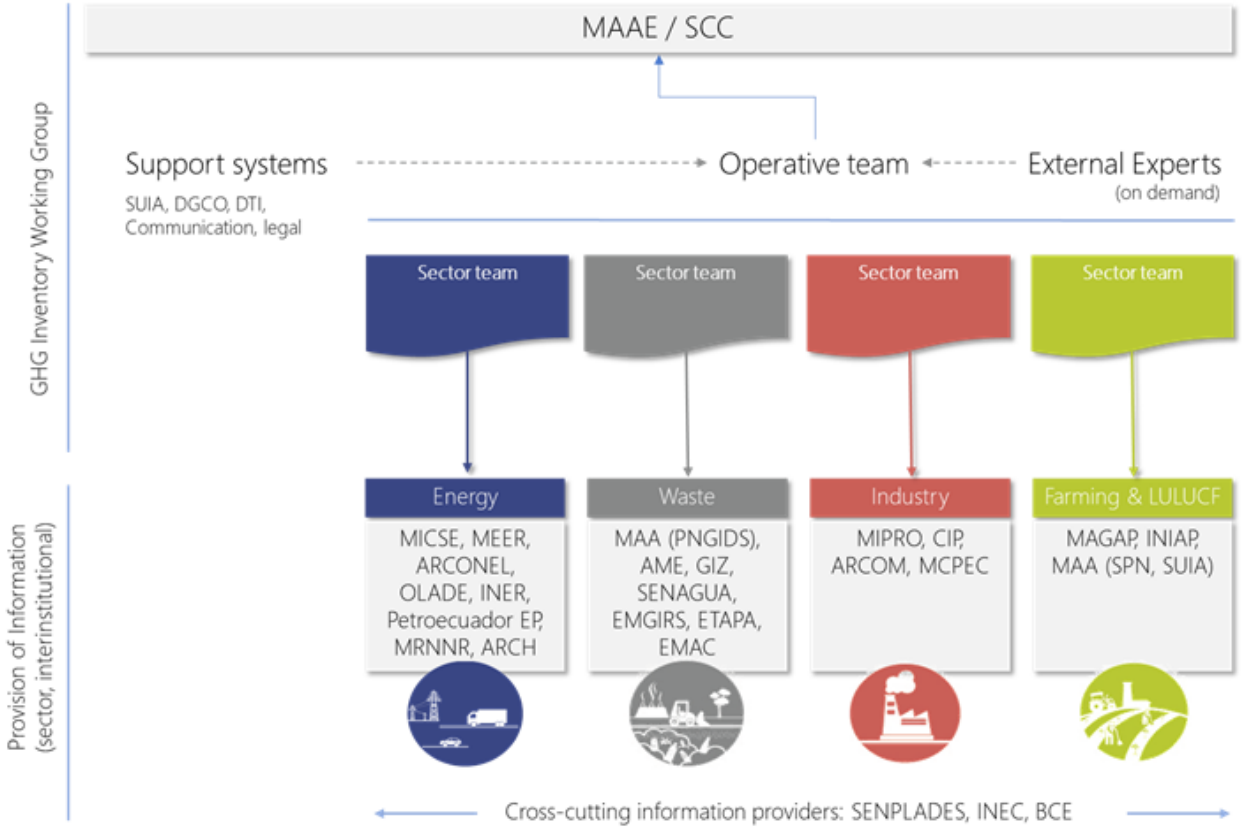
1996 IPCC code	1996 IPCC category	Sector	GHG	Accumulated emissions (%)

5B2	Emissions from land converted into farming land	LULUCF	CO_2	32
5A1	Changes in forest stocks (tropical forests)	LULUCF	CO_2	48
1A3	Emissions from Road transport	Energy	CO_2	61
1A1	Stationary emissions from energy industries	Energy	CO_2	71
4D	Direct N_2O emissions from agricultural land	Agriculture	N_2O	76
4A	Methane production as a by-product of enteric fermentation of domestic cattle	Agriculture	CH_4	82
1A2	CO_2 from stationary sources: manufacturing and construction	Energy	CO_2	86
2A1	CO_2 from cement production	Industry processes	CO_2	90
6A	CH_4 from solid waste disposal	Waste	CH_4	92
1A4	CO_2 emissions from stationary sources: residential	Energy	CO_2	94
4C	CH_4 from rice cultivation	Agriculture	CH_4	95
5C2	CO_2 from soil converted to grasslands	LULUCF	CO_2	96

As per the figure below, the institutional framework of the National GHG Inventory System of Ecuador consists of sectorial round tables, providing information upon the signature of official agreements. A GHG Inventory Working Group is organized into sectorial sub-groups led by identified focal points, often with the support of external consultants funded by international cooperation projects for specific periods of time and to meet specific tasks within each institution.

Even though the agreements presented on Figure 3 have proven to work appropriately at the national level, there is still a need to draft specific inter-institutional cooperation agreements at the local level from which more specific data could be collected as a means to improve the National GHG Inventory System. Data gaps are often an issue that requires using default values or local expert assumptions.

Figure 6. Institutional Arrangements for the Preparation of National GHG Inventories in Ecuador. Acronyms of the institutions supplying data[14][14]



Acronyms of the institutions supplying data: *Ministry of Coordination of Strategic Sectors (MICSE), Agency for the Regulation and Control of Hydrocarbons (ARCH), Ministry of Hydrocarbons (MH), Agency for the Regulation and Control of Electricity (ARCONEL), Latin American Energy Organization (OLADE), Ministry of Energy and Non-renewable resources (MRNNR), National Institute of Statistics and Census (INEC), Central Bank of Ecuador (BCE), National Institute of Energy Efficiency and Renewable Energies (INER), Andean Cement Association (UNACEM), National Cement Union (UCEM), Ministry of Industries and Productivity (MIPRO), Chamber of Industries and Production (CIP), Agency for the Regulation and Control of Mining (ARCOM), Ministry of Coordination of Production, Employment and Competitiveness (MCPEC), Technical Secretariat: Ecuador Plans (formerly, SENPLADES, National Secretariat of State Planning); Ministry of Agriculture, Farming, Aquaculture and Fishery (MAGAP), Ministry of Environment and Water (MAAE), National Programme for the Integral Management of Solid Waste (PNGIDS), Ecuadorean Association of Municipalities (AME), Water Secretariat (SENAGUA)**[15]**[15], Public Metropolitan Utility for Water and Sanitation of the Quito Metropolitan District (EPMAPS),Under-secretariat of Natural Patrimony (SPN), Unique Environmental Information System (SUIA)*

In terms of the accuracy of the data of the National GHG Inventory, the vast majority of methods for estimating emissions follow a Tier 1 approach, with only a few of them using country specific emission factors (Tier 2) and none of them reaching a Tier 3 level. The NC3 provides a detailed analysis of the areas with room for such improvements, where a national emission factor would have a greater impact in terms of accuracy and certainty.

International cooperation has played a major role in the improvement of the SINGEI. At the moment, for example, the Initiative for Climate Action Transparency (ICAT) of Ecuador is expected to strengthen the capacity of the institutions that collect and provide information of activity data to the system[16][16]. However, the dependence on external consultants comes at a cost in terms of the development of skills for government technicians.

As reported by MAAE, Ecuador has made efforts to strengthen the capacities of its national technicians in the use of 2006 Guidelines of the Intergovernmental Panel on Climate Change (IPCC) for upcoming estimations of the GHG inventory, to be presented in the 2nd BUR and the 4th National Communication. Ecuador has taken place in several domestic South-South cooperation activities with the Latin American Network of GHG Inventories (Red INGEI), as countries in the region face common barriers in data collection and management. These workshops have significantly improved the capacity of national data suppliers.

The country considers that a larger amount of capacity building activities via domestic and South-South cooperation workshops will further enhance the quality of the GHG inventory overall. Capacity building processes (such as the one described with Red INGEI) are not yet institutionalized, and the NC3 reports limited involvement of the academia, public and private research institutes and industries as one of the main challenges for the development of the SINGEI.

B. Mitigation actions (NAMAs, REDD+ and other mitigation actions)

In its NC3, Ecuador presents mitigation actions in five key sectors, i.e. energy (47% of 2012 GHG emissions), LULUCF (25%), agriculture (18%), industry (6%) and waste (4%). Some of these mitigation actions are arranged as NAMAs, the most advanced of which belong to the energy sector. These are the NAMA for the development of hydro power plants, the Programme of Energy Efficiency/Fuel Replacement in Cooking (PEC) and an energy efficiency and generation project in the oil sector (OGE&EE, for its Spanish acronym). At present, the MAAE in coordination with the Electricity Regulation and Control Agency of Ecuador (ARCONEL) is developing a web platform to automate and interconnect the existing MRV Systems of these NAMAs with the MRV for the electricity sector as a whole. Even though this will result in the interconnection of these NAMAs, as of yet there are no arrangements for their interconnection -or that of similar mitigation activities- with other MRV Systems within the mitigation module of the RNCC.

Future mitigation activities include a transport NAMA for freight and passengers transport as well as REDD+ projects[17][17].

C. NDC tracking

One of the ultimate goals of the National GHG Inventory System and the MRV of mitigation actions is to allow for the tracking of Ecuador?s NDCs. As mentioned earlier, the first NDC was submitted in March 2019, covering the period 2020-2025. Presidential Decree N?840 was passed on August 6th of the same year, giving mandatory status to the NDC and establishing the requirement of ?*a mechanism to measure, report and verify the progress made in terms of its implementation*?[18][18]. However, neither the design, the specific arrangements nor the set of indicators for the operationalization of this sub-system are yet available.

f) Adaptation module

Adaptation to climate change is one of the main lines for the realization of the vision expressed for 2025 in the National Climate Change Strategy (ENCC). The ENCC sets out the reduction of social, economic, and environmental vulnerability to the impacts of climate change as a fundamental objective to guide adaptation efforts. Sectors prioritized by the ENCC are: 1) Food Sovereignty, Agriculture, Livestock, Aquaculture and Fisheries; 2) Productive and strategic sectors (e.g. energy); 3) Health; 4) Water heritage; 5) Natural heritage; 6) Human settlements; and a) Priority care groups[19][19], and b) Risk management being understood as cross-cutting sectors.

The adaptation module of the National Climate Change Registry was conceptualized to include various ?blocks?, with the concept of reducing *climate risks* through adaptation action at its center. Following IPCC (2012)[20][20], 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. 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.

The adaptation module will update data on vulnerability and risk, as well as their connection with the adaptation measures that are implemented. This will allow tracking and updating the adaptation side of the NDC and provide inputs for the creation of Biennial Transparency Reports from the adaptation?s

perspective. As with the rest of the modules in the RNCC, a specific interphase for the interaction with GADs is foreseen.

The MRV sub-systems within the Adaptation Component of the Registry are at different stages of development. A vulnerability indicator has been approved, including its calculation procedures. Calculations are carried out not only at the sectorial level (the six prioritized sectors for adaptation by the ENCC) but also disaggregated to the local level (Provinces, Municipalities and Parishes). The indicator measures the enabling conditions for adaptation such as: vulnerability and risk assessments, designing of adaptation measures, and integration of adaptation in policies and institutions. Regarding the impact of adaptation actions, specific indicators have already been proposed[21][21] and will be further adjusted to the scope required from a sector and local-specific context. Moreover, the National Adaptation Plan (NAP), to be developed by 2022 with the aid of the GCF Readiness and Preparatory Support Programme, is expected to advance further on the development of indicators and an MRV system to measure its own effectiveness in terms of i) the level of integration of adaptation into the development planning at sectoral, territorial and local levels; ii) the increased resilience and / or the reduced vulnerability at the sectoral, territorial and local levels; and iii) gender focus mainstreaming. While the NAP project is expected to include a strategy for collection of data that will feed into the indicators to measure climate risk reduction through adaptation action, the required institutional arrangements for the collection and continued update of these indicators -national and at the GAD level-have not yet been addressed. Likewise, a platform for the visualization of georeferenced information resulting from the adaptation module is also lacking.

Another challenge for the adaptation module has to do with knowledge management. During the preparation of the NC3, for instance, the MAAE traced 127 studies related to adaptation in the Ecuadorian water sector alone, with similar figures for other prioritized sectors[22][22]. A common challenge has to do with the harmonizing of the results and the variables of analysis, with methodological dispersion often referred as a barrier for interpretation. Although these publications are traced and compiled with the assistance of consultants for the preparation of documents such as National Communications, no formal repository nor means to track and identify relevant academic work exist.

g) The Means of Implementation module

A National Climate Finance Strategy was published in 2021, including among the enabling conditions required for its implementation, the operationalization of an MRV system for climate finance[23][23].

The means of implementation component of the National Climate Change Registry is expected to be centered around support received (and how it was used) as well as further support needed (in terms of capacity building, enabling conditions, technology transfer, etc.), both of which are reported in various transparency documents, most notably, NCs, NDCs and BURs/BTRs.

Ecuador has experience in the application of the Climate Public Expenditure And Institutional Review (CPEIR), a methodological framework developed by UNDP that quantifies the climate relevant expenditure out of the total national budget. This methodology has proven successful, as it was applied in the country?s NC3[24][24]; however, so far there is no systematic or periodic application to ensure consistency and comparability of the resulting time series, and any support that does not go through the treasury needs to be manually assessed and compiled. The same is the case in terms of capacity and technology needs, which are currently assessed on an ad-hoc basis for the preparation of reports.

With additional funding coming from the NDC Support Programme, the country has recently started the work to meet the objective of supporting the domestic private sector with their contribution to the NDC, for both the conditional and the unconditional scenarios. This will be done via the development of a sectorial climate change finance strategy to meet the implementation of the NDC, in all the country?s mitigation sectors. The project will also focus on proposing domestic institutional arrangements and tools for the sharing of information among the Ministry of Economy and Finance, the Ministry of Planning, and the Ministry of Environment and Water to ensure that the actions that are aiming to meet the NDC are actually reflected in sectorial priorities, plans, and public budgets.

h) Local information systems

Reporting systems at the GAD (i.e. subnational) level exist. While these are not designed for the purpose of climate transparency, they do generate information that is relevant for the tracking of climate actions. Currently, the GADs have several information platforms, such as:

? National System for Municipal Information (SNIM): run by the Association of Ecuadorean Municipalities, it includes information of water and sanitation, waste management, transport and institutional capacity, among others.

? Information System for the Decentralized Autonomous Governments (SIGAD): captures the information required to calculate the Goal Achievement Index ? a performance indicator tied up to the country?s and the GAD?s own local development plan.

? GAD-level information from the National Institute of Statistics and Censous

? Consortium of Provincial Autonomous Governments of Ecuador (CONGOPE), which owns a platform for the creation of capacities at the provincial GAD level.

While these platforms can be used to validate the information that serves as inputs for tracking climate action, they currently work in an isolated manner and do not always report to the central government. Lack of coordination prevents the MAAE from identifying and collecting available data and integrating it into climate transparency reporting.

i) Long-term development planning in Ecuador

Long-term development planning has various points of contact with transparency systems. For example, by reflecting and integrating the NDCs, a National Development Plan can unlock funds and resources to this end both on the national budget but also when it comes to external funding. Setting national climate targets as a top priority in the long-term development planning can also release funds that are needed for the transparency system itself.

According to article 280 of the Constitution of Ecuador, the National Development Plan is the instrument that provides ground to public policies, programs, and projects, as well as the programming and execution of the national budget and investments. A National Planning Council -which includes representatives from different levels of government, foresees citizen participation and is chaired by the President of the Republic- is the body in charge of approving the National Development Plan. At the sub-national level, GADs also follow their own planning, aligned with the national guidelines. Compliance with the goals set in the national and local plans have budgetary consequences to the GADs, as national resources are distributed according to a formula that takes these elements into account[25][25].

At the time of preparing this PIF, the 2017-2021 National Development Plan (PND) was in force. The PND is aligned to international commitments as laid out in the Agenda 2030 and its 17 Sustainable Development Goals, among which climate action is considered. Moreover, with the support of the *Agence Fran?aise de D?veloppement* (AFD) the country is currently preparing its National Decarbonization Strategy 2050, also known as the ?National Plan for Climate Change Mitigation? (PLANMICC). As mentioned, this plan will have a long-term vision, with a horizon to 2050 ? the year in which the country aims to reach its decarbonization stage. The plan is being developed through a participatory process, providing guidelines for updating the NDCs, which consider gender and the basis of long-term strategies.

j) Other baseline actions

The list below includes projects which have an MRV component which could be relevant for the CBIT project. Current projects:

Table 6. Projects associated with transparency systems relevant to CBIT

Project	**Description**	**Actors, Timeframe**
Fourth National Communication 2016-2022 and Second BUR of Ecuador 2016 ? 2021	The objective of this project is to assist Ecuador in preparing and submitting its Fourth National Communication and Second Biennial Update Report to the UNFCCC. To the extent possible and based on the stages of development in which these two projects and the CBIT proposal will coincide, the CBIT project will aim to inform and suggest technical changes so that the progress made with the CBIT project are reflected on these two reports.	Ministry of Environment and Water, UNDP as Implementing Agency, 2018-present The Second BUR of Ecuador will be presented in the first quarter of 2021, while the Fourth National Communication will be presented in the first quarter of 2022.

NDC Support Programme	The First Period of the NDC Support Programme undertook the initial conceptualization of the domestic MRV System (National Climate Change Registry). The progress achieved by this project in each of the three components of the conceptualization the MRV is described below: Proposal of MRV for Mitigation: the project made a conceptual and methodological description of a domestic MRV system, with a focus on the Energy Sector (NAMAs)? Electrical Subsector. From this effort, MAAE worked with ARCONEL on a pilot web platform that develops and interconnects these systems. Proposal of MRV for adaptation: the project included a conceptualization of the MRV for adaptation, which has been already finalized. Nevertheless, the creation of its methodological framework has not been finalized. Proposal of MRV for Means of Implementation: the project included a conceptualization of the MRV for climate finance (support needed and received), which has been already finalized (concept level). Nevertheless, this conceptualization did not include specific methodologies for its implementation and operation. The Second Period of the NDC Support Programme in the creation of a Sectorial Finance Strategy of the NDC in all the country?s mitigation sectors. In addition, it will develop institutional arrangements and tools for the sharing of information relevant for the management of domestic climate finance, involving public and private sectors stakeholders.	Ministry of Environment and Water, CICC, Private sector, GADs, Academia, Civil Society, Power Generation / Electricity Sector, ARCONEL ? the Electricity Regulation and Control Agency of Ecuador. Multiple donors. UNDP as Implementing Agency, First Period: 2017 ? 2019 Second Period: 2020-2021

Initiative for Climate Action Transparency (ICAT)	The Initiative for Climate Action Transparency (ICAT) of Ecuador is expected to strengthen the capacity of the institutions that collect and provide information of activity data to the National GHG Inventory System (SINGEI). This will lead to having more robust information reported in a more transparent manner. To achieve this, a prioritization of sectors and categories has been undertaken, so that the activities focus on developing capacities where they are most needed. Details on ICAT specific activities can be found in the baseline section (see e.g. the discussion on the GHG inventories regarding the mitigation module).	Ministry of Environment and Water, UNEP-DTU Partnership, Sectorial Stakeholders from the Energy, Industry, Agriculture, LULUCF, and Waste Sectors, ICAT, 2019-2021
National Climate Change Mitigation Plan	Preparation of Ecuador?s 2050 decarbonization plan (PLANMICC). This plan will have a long-term vision, with a horizon to 2050 ? the year in which the country aims to reach its decarbonization stage. The plan is being developed through a participatory process, providing guidelines for updating the NDCs, which consider gender and the basis of long-term strategies.	Ministry of Environment and Water, AFD 2020 - 2022
National Adaptation Plan	Ecuador is currently working on its National Adaptation Plan (NAP) with support of the GCF Readiness Proposal and UNDP. The national plan prioritizes two mainstreamed sectors of Risk and Priority care groups, and six thematic sectors. The experiences of this plan and its results will inform this CBIT project, specifically as it relates to the adaptation component of the proposed National Climate Change Registry	Ministry of Environment and Water UNDP CICC 2019-2022

As per the table above, Ecuador is addressing climate change through diverse efforts. Many of these will involve one or more MRVs, but an overall systemic approach, with the coordination needed to ensure that Ecuador meets the requirements of the ETF, is still lacking.

The following section presents an alternative scenario where Ecuador can build on its existing efforts to establish an integral MRV system.

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

Overview

This CBIT project aims to strengthen the transparency systems of Ecuador in order to meet the requirements of the transparency framework (ETF) under the Paris Agreement on Climate Change. In doing so, the country is expected to streamline the collection, management, processing, and production of high-quality climate information for the purpose of international reporting. In addition, climate information will be used as an important decision-making tool at the national and sub-national level.

The project is organized into three components. **Component 1** focuses on designing and connecting the system with both the sources of data and the planning instances where this data is most likely to have a valuable impact. It will establish the institutional framework needed for data collection, management and reporting to ensure that the systems to enhance climate transparency in the country are functional, coordinated, and efficient. This component builds upon the high-level legislation provided in the COA, providing concrete instructions and processes for the operationalization of the RNCC. **Component 2** provides enhancements that improve the quality of the information in line with the requirements of the ETF. With a strong focus on technical aspects, component 2 will enhance the system by providing guidelines, templates and tools to improve the quality and reliability of the climate information that results from the RNCC and its three modules, i.e. mitigation, adaptation and means of implementation. **Component 3** closes the circle by focusing on the stakeholders that will interact with the RNCC, both as data providers but also as users of the processed information and reports. In particular, component 3 will provide the gender-sensitive communication campaign that will focus on public awareness and create the capacity building programme required to facilitate a smooth adoption by relevant public and private stakeholders. By partnering with a local academic or research institution, it is expected that this capacity building will go beyond GEF funding, providing a pool of qualified trainers while also ensuring that a steady flow of new human resources can be formed in the country after this CBIT project?s end.

The CBIT project has been designed to achieve expected benefits based on at least two of the appropriate influence models referred to in the GEF Strategy 2020: (i) strengthening of institutional capacity and decision-making processes; (ii) establish multi-stakeholder partnerships.***[26]***[26]

The following table summarizes the current context and the transformation that the project aims to achieve, to support Ecuador to implement an ambitious transparency framework that meets the requirements of the Paris Agreement. The table also links the desired transformation to the corresponding outputs that are expected to contribute towards this change; the outputs are presented in detail in the coming sub-sections.

Table 7. Desired transformation as a result of the CBIT project

The current context	**Desired transformation of behaviour to be achieved through the project**
Insufficient institutional arrangements to allow for collection of required data	A clear information inventory exists, and Data Sharing Agreements (DSA) are signed with at least the providers that represent 95% of Ecuador?s GHG emissions. The DSAs assure confidential treatment to the information provided. Information flows and QA/QC procedures are clearly established for each of the three modules (mitigation, adaptation and means of implementation). These elements will be introduced by output 1.1. The RNCC?s public engagement mechanism transparently shows Ecuador?s climate actions in mitigation and adaptation, including any gender specific impacts.

Limited technical capacities to design, implement and manage a complex, country wide climate transparency system	Through capacity building activities, government officials will have the necessary pieces of knowledge to manage new tools, to apply methods and guidelines for effectively producing, collecting, and managing data related to the GHG emissions, NDC tracking and other systems of the MRV for Mitigation component of the National Climate Change Registry. The compilation of information is done through a transparent process and the actors receive training and adequate templates to facilitate sharing of information, and the MAAE counts with standardized procedures and formats for key sections of BTRs and National Communications that will enable them to streamline these processes for future reports. Tier 2 emission factors are available, reducing uncertainty levels in the GHG inventories. The mitigation actions and the GHG inventories sub-modules within the mitigation component tell a consistent story, as captured by the NDC tracking sub-module. This will be achieved mainly after the activities in output 2.1. Indicators for the adaptation module are established and the information flows are well documented (output 2.2 and 1.1). The means of implementation module allows transparently tracing climate actions from public, private and international cooperation funds (output 2.3).
Limited integration of climate change considerations into political decision making	National Development Plans set an explicit link with PLANMICC and the NDCs, and budgets are decided accordingly (output 1.2). Capacity building activities are designed and implemented by a strategic partner institution (academy / research) to ensure continuity of activities and sustainability in the medium and the long-term, and a strategic partnership with a local academic / research institution allows a better tracking of research published and underway (output 3.2). Information providers are aware of the importance of climate transparency, supply information in a timely manner, and make use of reports coming from the system to enhance decision making processes in their respective sectors (outputs 3.1 and 3.2).

Theory of change

Through its 7 outputs, the project is expected to develop and operationalize a full-fledged transparency system -the RNCC- that will contribute towards a reduction of GHG emissions and increased climate resilience for Ecuador.

Component 1 focuses on the institutional arrangements behind the RNCC and its integration with policy making process; component 2 is expected to refine the modules in the system, ensuring that it can produce timely and precise information. Component 3 ensures that stakeholders have the required awareness and capacities to serve as data providers but also as beneficiaries of the processed information produced by the RNCC. By strengthening and bringing light into the linkage between country needs, support received and mitigation and adaptation actions, Ecuador will be in a better position to manage its NDC targets. This improved understanding will allow Ecuador -the government but also its private actors- to detect sectors where adaptation actions are most urgently needed, as well as those where emission reductions and resilience targets can be achieved at the lowest cost. Such cycle will ultimately allow Ecuador to reduce GHG emissions and increase its resilience to climate risks.

The theory of change depicted above is dependent on a series of assumptions and drivers. As UNEP?s 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 fulfill the country?s climate commitments and continued international funding for climate action. Similarly, **drivers** are defined as external conditions over which the project does have a certain level of control. In this project, this will include the willingness of the private sector to share data, as this is expected to be facilitated by the project?s establishment of confidential data sharing agreements (component 1); as well as the retention of technical capacities (e.g. by setting adequate incentives in the design of the system) and the conviction of line ministries and the private sector of the importance of transparency (e.g. through the communication campaign and capacity building in component 3).

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; however, these will be further refined under the actual design phase of this project.

Component 1: Strengthening institutional aspects of the National Climate Change Registry (RNCC)

Outcome 1: The Government of Ecuador develops policies and tracks climate ambition based on a robust RNCC

As discussed in the baseline section, Ecuador has an encompassing environmental law -the COA- that sets broad mandates for the creation of a National Climate Change Regime. In article 254, the COA establishes the creation of the registry, which is to be managed by the National Environmental Authority, i.e. the Ministry of Environment and Water. The latter is to define ?the criteria, scope and procedures for the registry, as well as the activities that are to be registered?[27][27]. The Regulatory Decree to the COA further clarifies that the objective of the MRV system in the RNCC is to ?*measure, monitor, report and verify the impact of mitigation and adaptation measures, evaluating their contribution to national and international climate change targets, which should reflect:*

a) The results of greenhouse gas emissions, consistently and transparently, to avoid double accounting;

b) Results related to vulnerability reduction and climate risk management in the face of the effects of climate change;

c) Financial resource flows received, implemented and required for climate change management, and

d) Others determined by the National Environmental Authority?[28][28].

This component aims to provide a detailed design and to set the institutional arrangements needed for its operationalization.

Besides from its natural function as main repository of data for the preparation of BTRs, NCs and the tracking and updating of NDCs, the RNCC is also expected to play a fundamental role in Ecuador?s planning and decision-making processes. Component 1 will build on the latest advances provided by other projects concerned with improvements to data collection, such as ICAT (also executed by the MAAE).

This first component will likewise focus on the integration of the RNCC with the national planning process. This will be accomplished by strengthening the link between the transparency system and the country?s existent development-planning instances, i.e. by operationalizing the link between the NDC

updating process, the 2050 National Decarbonization Plan (the ?PLANMICC?) and the National Development Plan (PND).

Output 1.1. MAAE is able to establish a fully operational National Climate Change Registry

The purpose of the National Climate Change Registry is to become the main and centralized MRV system for Climate Change Mitigation, Adaptation, and Means of Implementation.

Based on the different level of development of the components of the National Climate Change Registry, the CBIT project will make final adjustments to the conceptualization and design of the proposed Registry and all its components and interconnect currently isolated MRV platforms. During PPG stage, a detailed system-by-system diagnosis will be prepared to determine the missing elements in each of the modules of the RNCC[29][29], using the structure proposed below:

Table 8. Proposed analysis to be undertaken at the PPG phase to determine current status of the modules in the RNCC

Elements in the institutional arrangements to be assessed at PPG for each module		**Module**		
		Mitigation[30][30]	**Adaptation**	**Means of implementation**
Organizational mandates	Stakeholder groups (identification of coordination & leadership, expert teams, data providers)			
	Definition of roles and responsibilities (laws, memorandum of understandings, data supply agreements)			
Expertise	Compilation coordination			

	Sectoral expertise			
	Reporting			
Data flows	Data sets			
	Data providers			
Systems & tools	Data collection and update			
	Data analysis, databases and modelling			
	Quality management tools			
	Reports			
	Procedures, guidance and training			
Stakeholder engagement	Communication to decision makers			
	Websites and data visualization			
	Education engagement			
	Events and activities			
Gender	Gender disaggregated data			

Using the baseline analysis to be developed under the PPG phase, and after an assessment of the requirements and functionalities for the RNCC to fulfil the MPGs of the Enhanced Transparency Framework, this output will provide a roadmap for the operationalization and improvement of each module, including but not limited to the timeframe comprised by the CBIT project.

Following a modular format, the RNCC will be nested in the Unique Environmental Information System and will interconnect to other existing information systems within the latter to ease the sharing of climate change data. Thus, the design will include the development of interoperability formats and procedures required between all the current information systems as well as their minimum functionalities required to advance in the tracking and updating of national goals in climate change. Furthermore, the design will develop a protocol for the efficient addition and interconnection of

upcoming modules/platforms of the MRV components so that the National Climate Change Registry operates smoothly.

To produce a gender-responsive transparency system, it is important to include gender considerations from the very design. This will require a reflection on which data should be collected to endow the system with enough resolution to capture gender biases in fundamental elements such as the NDCs, Adaptation Plans and the NAMAs.

Essential for the scaling and costing of the system will be the preparation of a detailed data collection plan, i.e. an exhaustive inventory of the information that the system would ideally require, together with the status of each. This deliverable will also serve as the basis for the prioritization exercises under the other outputs of this component.

Another fundamental aspect related to the sustainability of the entire system has to do with the involvement of stakeholders. While component 3 (discussed below) prepares an engagement strategy that is focused on communicational aspects, output 1.1 will assess collaboration opportunities from a technical point of view, focusing on which actor is better equipped for which piece of data and/or which process in the RNCC. One deliverable will thus explore the opportunities for technical collaboration with academia, research institutions (such as the National Institute of Farming Investigations, INIAP, or the National Institute for Energy Efficiency and Renewable Energies, INER), and public and private universities throughout the country.

The last element in the design will include the estimation of operational costs based on the proposed structure, together with the identification of financial means to support the transparency system. This will include plausible internal and external funding opportunities both for retaining and developing the team of national experts and for gathering and compiling the required data. Fundraising activities can include lobbying for internal resources (e.g. national projects, national and sub-national budget funds, ministry resources) and scanning the horizon for external ? local and international ? funding sources (private sponsors, funding to support reporting under the convention, international projects).

Tentative deliverables for the design:

1.1.1. Case studies of other Latin American countries concerning their transparency architecture and approach to climate transparency;

1.1.2.	Detailed design of the RNCC, including responsible authorities, mission, functions and its interconnection with other systems, with at least two alternatives (platforms, applications, or others) proposed for sharing institutional data and identification of data managed at the national and at the GAD (sub-national) level.
1.1.3.	Report mapping which modules(s) will provide which piece of information to each report to the Convention (NC, BUR, BTR, NDC, PLANMICC)
1.1.4.	Detailed Data Collection Plan by module, including all the information required to run the system, templates required for collection, and mapping the entity / sector / government level providing the data, and their current status (e.g. periodically received, occasionally received, rarely received, needed but not received, etc.)
1.1.5.	Considerations for designing a gender-responsive RNCC: information required to be able to capture gender inequality in Ecuador?s climate actions as well as design elements concerning the system?s outputs.
1.1.6.	Report: identification of collaboration opportunities, technical synergies and potential partners for the RNCC.
1.1.7.	Specification of necessary resources (human and physical assets, including hardware and software, databases, source codes, licenses, design documents as applicable).
1.1.8.	Roadmap for the operationalization and further improvement of the RNCC (according with the baseline defined in the PPG phase and the scope agreed with the MAAE)
1.1.9.	Report: Cost estimates and means to finance the operation of the RNCC
1.1.10.	National Workshop for the presentation of the RNCC to stakeholders

To establish and operationalize the RNCC, Ecuador will need to implement the remaining institutional arrangements required to ensure the timely supply of the information required for the consolidation of the National Climate Change Registry, with the inclusion of more disaggregated data at the sectorial level. As described in the baseline, some arrangements are already in place (most notably, those for the GHG inventories), but the remaining sub-systems (elements in the mitigation module such as NDC tracking, as well as the entire adaptation and means of implementation modules) still lack arrangements in terms of organizational mandates, data flows and stakeholder engagement. Since many sources of information may overlap -providing data to more than one of the modules- this output takes a cross-cutting approach to avoid duplication of efforts, thus maximizing efficiency.

This output thus includes arrangements between the MAAE (focal point for the reporting to UNFCCC and the ministry in charge of the RNCC) and the line ministries that are responsible for supplying the necessary data, but also support between sectorial ministries and their own Data Sharing Agreements and Memorandum of Understanding with their own data suppliers. These institutional arrangements shall include minimum commitments by each party as well as channels of communications to enable the resolution of technical elements. The institutional arrangements should also allow for their own evaluation as part of their continuous improvement plan.

The purpose of these institutional arrangements is mainly to facilitate cooperation for the development of the National Climate Change Registry to comply with the commitments established under the COA and the United Nations Framework Convention on Climate Change. This is expected to complete the operationalization of the mitigation, adaptation, and means of implementation modules of the RNCC.

The country has had good results in the provision of data with key stakeholders in the private sector, such as the cement industry within the Industrial Processes and Product Use (IPPU) sector. In fact, within the IPPU sector, the production of cement and lime have upgraded to Tier 2, thanks to the disaggregation of data (especially those related to the production and composition of clinker). This upgrade is a result of appropriate institutional arrangements that have allowed for the subscription of confidentiality agreements with this specific sector. The idea is to identify the prioritized sectors and stakeholders involved with whom the government shall establish institutional arrangements and confidentiality agreements in order to ensure that timely, high-quality data is fed into the RNCC.

Expected deliverables to achieve this can include the following:

1.1.11.	Prioritized inventory of information required by sector and institutions at the national level
1.1.12.	Draft Ministerial Resolution setting sectoral arrangements for the collection of information in the energy, industry, waste and AFOLU sector
1.1.13.	Template(s) and draft(s) for Data Sharing Agreements and/or Memorandum of Understanding with sectoral institutions at the national level[31][31]

As discussed in the baseline section, GADs are a fundamental actor in the overall governance structure of Ecuador. While most information will be captured at the sectoral level, further refinement will require an interconnection at the sub-national level. As mentioned in the baseline, although some information systems already exist at the GAD level, they currently operate in isolation from each other and not always feed into the central government. In this sense, the CBIT project would support in the establishment of institutional arrangements and linkages between the systems, allowing to efficiently capture information that is already available.

The following deliverables build upon the Data Collection Plan produced in deliverable 1.1.4, refining and improving its results at the GAD level and assessing the information that GADs are currently developing on their platforms that could serve to inform the National Climate Change Registry. It will also prioritize which organizational mandates should be established at the subnational level, including a mapping of actors that are necessary for each of them, in close coordination and consultation with sub national jurisdictions (GADs) representatives such as the Association of Ecuadorian Municipalities (AME), and the Consortium of Autonomous Provincial Governments of Ecuador (CONGOPE) and the National Counsel of Rural Parishes of Ecuador (CONAGOPARE). These institutional agreements should include at least: the type of information to be presented, the information management mechanisms to follow, and the periodicity of reporting. The agreements should include clauses for their own evaluation as part of their continuous improvement plans (QA/QC processes).

Additional deliverables to achieve these goals will include:

1.1.14.	Prioritized inventory of information available at the GAD level (parishes, provincial, municipal)
1.1.15.	Template Memorandum of Understanding and Data Sharing Agreement with municipal, parishes, provincial GADs
1.1.16.	Roadmap for the implementation and adoption of sub-national level institutional arrangements

Output 1.2. The National Planning Council is able to incorporate climate data into national planning processes and instruments

Ecuador is currently preparing the National Climate Change Mitigation Plan (PLANMICC), which is the country?s long-term low greenhouse gas emission development strategy, as required by article 4 paragraph 19 of the Paris Agreement. With a 2050 horizon, the PLANMICC will provide a framework for updating the NDCs. The likelihood of climate change actions being implemented successfully is dependent on such actions being recognized within this national planning and the corresponding finance regime. As NDCs develop, the integration of climate change actions into national development planning will be necessary if the resources for implementation are to be secured, both domestically and from international sources. In parallel, national development planning needs to consider the impacts of climate change to create more sustainable, resilient, and inclusive growth in the longer term.

Furthermore, a National Development Plan (PND) is the instrument that provides ground to public policies, programs, and projects, as well as the programming and execution of the national budget and investments. A National Planning Council -which includes representatives from different levels of government, foresees citizen participation and is chaired by the President of the Republic- is the body in charge of approving the National Development Plan. At the sub-national level, GADs also follow their own planning, aligned with the national guidelines. Compliance with the goals set in the national and local plans have budgetary consequences to the GADs. At the time of preparing this PIF, the 2017-2021 National Development Plan (PND) was in force. The PND is aligned to international commitments as laid out in the Agenda 2030 and its 17 Sustainable Development Goals, among which climate action is considered.

This output will analyze possible connections between national processes and the transparency system that is to be established by this CBIT project, in particular those that have a connection to the setting of climate ambition (mainly the mitigation but also the adaptation module in the RNCC). The activity will analyze where, when, and how the information generated in the NDC?s progress monitoring system is relevant to the country's development planning process and propose measures to ensure its inclusion. These connections intend to maintain consistency between the three instances (i.e. PLANMICC, the NDCs and the PND), establishing coordination and integrating NDC spending into national budget planning. At the national planning level, the project will coordinate with the National Planning Council in order to maintain consistency with the PND 2022 - 2028.

The mechanism for aligning the transparency system with the national planning will cover various aspects. First, the transparency system needs to be integrated into national coordination instances in charge of the development planning. In Ecuador, this instance is coordinated by the National Planning Council, which is also responsible for consolidating the development plan with sectoral and sub-national planning, and as such a key stakeholder for this output. The second element will be the integration of reports from the climate transparency system into the PND?s own evaluation mechanism, including the harmonization of indicators and results from modelling analyses that involve cross-cutting issues, like energy and elements relevant to climate change adaptation (e.g. access to essential services). Finally, the articulation of the NDC with the budget planning processes will aim to ensure that funds are readily available for climate action; this final aspect will involve the Ministry of Economy and Finance as the key government stakeholder.

Expected deliverables include:

3.1.1 Inter-ministerial workshop for the integration of climate transparency system with existing national planning processes

3.1.2	Identification and assessment of regional and international best practices for the integration of transparency systems into the long-term planning
3.1.3	Proposal of institutional arrangements and capacity building needs to align national planning processes with the PLANMICC and the NDC updating and formulation processes.

Component 2: Enhancing the National Climate Change Registry.

Outcome 2: The MAAE produces more accurate climate information and reports in alignment with the requirements of the ETF.

The ETF sets more stringent requirements in terms of the data that is reported and submitted to UNFCCC. The second component in this project consolidates the more technical aspects of the RNCC, providing tools to enhance the system designed and operationalized in component 1. It includes more precise emission factors for the GHG inventories, tools for the collection of data from the MRVs from NAMAs and indicators from tracking NDCs (output 2.1). A set of tools, protocols and guides are also prepared for the Adaptation and the Means of Implementation modules (outputs 2.2 and 2.3, respectively). Each of the enhancements are presented below.

Output 2.1. MAAE has access to tools for increasing the accuracy and precision of the mitigation module of the RNCC.

This output provides improvements for Ecuador?s mitigation MRV. The first set of deliverables focuses on the GHG inventory, which in turn will contribute to compliance with the requirements laid out in chapter II of the Katowice MPGs.

Table 7 below shows the prioritized improvements that are required in terms of activity data and emission factors according to the latest information in the NC3. This output will update this information, providing national emission factors for the key categories and setting in motion a roadmap for the generation and collection of pending activity data. The roadmap will include both the CBIT part but also any outstanding information that will be gathered beyond CBIT funding ? and how.

Table 9. Information gaps identified for the GHG inventories.

Sector	Emission factors	Activity Data
Energy	Define tier 2 emission factors for each fuel consumed (residential, commercial, rural, industry) based on the characteristics of fuels consumed in Ecuador	- Energy consumption of manufacturing industry (lacking data by industry sub-sector) - Volume of vented gas (currently, flared volumes are available)
Industry	-	- Agreement for recollection of halocarbon categories and (imported) SF_6 - Identification of all companies producing lime (including for own consumption) - Clinker production data series from cement companies - Refine data from production and usage of asphalt for roofs and roads through surveys to producers and/or the Ministry of Transport - Establish agreement with INEC for the provision of information in the Manufacturing, Mining, Commerce and Services Survey.
Agriculture	Development of tier 2 emission factors for key categories, e.g. enteric fermentation	- Improvements in coordination with government agencies that generate statistics and activity data - Yearly data on camelid and buffalo population in Ecuador - Improvements in national information associated to synthetic nitrogenous fertilizers - Disaggregation of data into cattle, buffalo, and sheep for the purpose of enteric fermentation estimates - Improvements in rice farming data

LULUCF	Monitoring forests through permanent plots: this will allow to know the emission factors on increases in biomass in the forest, natural regeneration, growth dynamics in biomass, detritus, soils and dead wood.	- Generation of country-specific data on carbon reserves of grasslands, agricultural land and forest plantations. - Generation of forest harvesting data, differentiating by type of forest and/or region of origin. - Generating fire occurrence statistics that include information on surface, coordinates, plant cover affected and origin.
Waste	- B_0 (max. CH_4 generation capacity) of sludge derived from municipal and industrial wastewater - Degradable organic carbon in waste (fraction)	- Improved coordination with AME and INEC for the collection of solid and liquid waste data - Records for CH_4 recovered and flared in controlled dumps and landfills. - Detailed information on treatment systems for municipal and industrial wastewater (flow, type of treatment, population served (in the case of municipal wastewater), quality analyses results for influent and effluents. - Quantity of sludge derived from municipal and industrial wastewater - Ratio of residential to other wastewater influents in treatment systems - Information on yearly protein intake (per capita) - Information on incinerated waste

Source: Adapted from NC3 (2017)

Expected deliverables required for improving GHG inventories:

2.1.1 Baseline and current status of the emission factors and activity data of the prioritized subsectors and analysis of the current status according with the MPGs of the ETF of the Paris Agreement

2.1.2 Enhanced Emission Factors for key categories[32][32]

2.1.3 Detailed roadmap and strategy for the generation and collection of pending activity data

As expressed on the baseline section, energy, transport, and REDD+ sectors have advanced on the conceptualization of their individual MRV systems. Nevertheless, there is still work needed for the integration of these advances and the implementation of the systems in an articulated way that allows the RNCC to report consolidated, consistent reports that are aligned with the MPGs of the ETF, identifies leakage effects and avoids double counting.

As a start, the following individual systems will be included in the mitigation module of the National Climate Change Registry[33][33]:

? MRV System for the Energy Sector ? Electrical Subsector. This includes MRV systems for the NAMAs ?Development of Power Plants?, ?Programme of Energy Efficiency in Cooking?, and ?Energy Efficiency-Optimization of Electricity Generation (OGE&EE)?.

? MRV System for the Transport Sector. Conceptualization process of how the MRV System for the NAMAs of the Transport Subsector shall work, including both NAMAs for the Freight and Passengers Transport (in design phase).

? MRV for REDD+ Initiatives. This includes MRV systems for the following initiatives: REDD+ Management of Actions and Measures System (SGMyA), Safeguards Information Systems, National Forest Monitoring System, and National GHG Inventory System.

Given its most recent experience in preparing the Second BUR and Fourth National Communication (both of which were under way at the time of preparing this document), the country has encountered a lack of standardization of processes and format for the collection of information in some key areas of the documents in most of these MRV Systems. The activity will focus on the standardization of processes and formats for prioritized MRV System within this component of the National Climate Change Registry. Therefore, it is expected for the country to count with standardized procedures and formats for key sections of BURs and National Communications that will enable them to streamline these processes for future reports. Special emphasis will be placed in identifying the interactions between individual projects within the same sector, but also between sectors and between regions. This

module will also benefit from the georeferencing platform that will be built as part of the adaptation module (output 2.2 below).

Additional deliverables for this output will thus include:

2.1.4	Sectoral guidelines for the estimation of baseline emissions, project emissions, leakage emissions and net emission reductions (volume comprised of five sets of guidelines, i.e. one for each sector - energy, industry, agriculture, LULUCF and waste).
2.1.5	Guidelines for the collection, compilation, processing and reporting of mitigation actions, emission reductions and leakage effects, including relevant templates (energy, industry, agriculture, LULUCF and waste).

The country submitted its first NDC in 2019 with a focus on mitigation (five sectors) and adaptation (six sectors and two cross-cutting sectors), and with 2020-2025 as its implementation timeframe. The NDC tracking sub-module will compile, process and produce all the information required to track progress made in implementing and achieving nationally determined contributions under Article 4 of the Paris Agreement, in line with the requirements set out in chapter III of the Katowice MPGs. The NDC tracking sub-module brings together elements from the GHG inventories and the mitigation actions sub-module, ensuring that they are both keeping a consistent account of Ecuador?s contribution to its mitigation targets, as reflected in both the NDC and the National Climate Change Strategy (ENCC).

As part of the Implementation Plan of the NDC of Ecuador, the country has developed a set of indicators to track its NDC. This CBIT project will develop guidelines and protocols for the monitoring / tracking processes of prioritized indicators, as well as for the consistency and interaction between individual / sectoral mitigation actions and the national GHG inventories.

Additional deliverables required for NDC tracking:

2.1.6	Document with respective methodological descriptions for each progress indicator for the tracking of the NDC
2.1.7	Methodology to ensure consistency between mitigation actions and GHG inventories

2.1.8	Platform for the monitoring and tracking of the NDC and the National Climate Change Strategy
2.1.9	Roadmap prioritizing processes, tools, protocols and guides to be adjusted/improved/updated to comply with the ETF requirements for tracking NDC and support received, both during the CBIT project and after its finalization

Output 2.2. MAAE has access to processes, information flows, indicators and methodologies for operationalizing the adaptation module of the RNCC.

The adaptation module of the National Climate Change Registry was conceptualized around the concept of reducing *climate risks* through adaptation action. In the context of the assessment of climate impacts, *risk* result from the interaction of *vulnerability* (of the affected system), the likelihood of the occurrence of a climate related *hazard*, and *exposure* to the latter. These are all key elements in the Adaptation module of the RNCC.

As mentioned in the baseline section, a set of indicators for the tracking of adaptation actions will be developed as part of the NAP project and domestic planification. The NC3 presents a series of guidelines for their design, so that they ensure capability to capture changes in vulnerability (including those coming from adaptation capacity), as well as the impacts resulting from variations in exposure. Once the concrete indicators are established, however, they will need to be integrated into the larger MRV system, including detailed information flows and a methodology for the collection and processing of relevant information; this will be the first part of this output. Arrangements for the collection of this information will include a ministerial resolution that sets the required mandates and establishes the sectoral groups, as needed.

The other main element in this output is the preparation of a platform for the visualization of georeferenced information, which will be needed for the preparation of maps at all level (national, provincial, municipal, etc.) to represent adaptation actions as well as risks and all of its components. This platform will serve to showcase and inform the upcoming BTRs in the adaptation section, which include reporting on the progress of the NAP and/or the adaptation component of the NDC among other information suggested by the modalities, procedures and guidelines of the BTR.

Expected deliverables include:

2.4.1	Proposal for the integration of indicators in the National Adaptation Plan and domestic processes into the RNCC, including information flows and a methodology for the collection, processing and presenting of each indicator
2.4.2	Draft Ministerial Resolution setting sectoral roundtables for discussing adaptation and vulnerability, including representatives from the GADs
2.4.3	Manual including existing, revised and new tools, protocols and guides for the compilation of required indicators in the adaptation module, including a roadmap with required refinements
2.4.4	Platform for the tracking of adaptation measures and visualization of georeferenced information on risk, vulnerability, exposure and hazard.

Output 2.3. MAAE has access to a roadmap and guidelines for the operationalization of the means of implementation module in the RNCC.

As expressed on Figure 2, the MRV for Means of Implementation counts with systems on climate finance, technology transfer, and capacity building. As a cross-cutting module, it is important that it remains connected and in sync with the other two, i.e. the mitigation and the adaptation modules.

As discussed in the baseline section, the climate finance sub-component is the most advanced in this module, as the MAAE already has experience with UNDP?s CPEIR methodology, used to quantify the expenditure in the national budget that is directed to climate-related actions. While this component will provide the information required to report on support needed and received (as required in BTRs and NCs), the aim of this module is more ambitious, as it intends to become the country?s main registry for all types of financial flows (national, international, public, private) that have an impact on climate[34][34].

Despite progress made, reports prepared in the past have been the result of ad-hoc consultancies with the support of international cooperation, focusing only on the funds that entered the country?s treasury[35][35]. A system to periodically collect and update the information is not yet available, and the same goes for private expenditure. This output would therefore systematize the periodic compilation of the information required to update public expenditure reports and implement a methodology for

tracking private climate expenditure, including the formats and procedures to collect, process, account and report on climate finance[36][36].

Capacity assessment and technology needs will mostly result from the operation of the mitigation and adaptation modules. As the central hub for these requirements, the means of implementation module will also be responsible for the organization and coordination of capacity building activities once the RNCC is operational.

Lastly, another element in this module would be the tracking of finance *available*, searching for private and public sources and assisting government and private actors in accessing them.

Expected deliverables:

2.3.1	Roadmap prioritizing processes, tools, protocols and guides to be adjusted/improved/updated for the completion of the Means of Implementation Module. The roadmap should cover both the CBIT project timespan as well as a suggestion for the RNCC as a standalone system.
2.3.2	Proposal on climate finance tracking. This proposal should include a methodology for the tracking of public, private, national and international flows, as well as procedures for the collection of information and indicators that allow tracking support received and needed.
2.3.3	Methodology for the tracking of capacity building and technology transfer needed and received, including the linkage with the mitigation and adaptation modules.

Component 3: Capacity building and public engagement.

Outcome 3: Stakeholders provide inputs to and draw information from the RNCC for their decision-making processes.

Component 1 focused on designing and connecting the system with both the sources of data and the planning instances where this data is most likely to have a valuable impact, and component 2 provides enhancements that improve the quality of the information in line with the requirements of the ETF.

Component 3 closes the circle by focusing on the stakeholders that will interact with the RNCC, both as data providers and as users of the processed information and reports.

Component 3 thus provides the communication campaign and creates the capacity building programme required to ensure a timely adoption and interaction with the system from relevant stakeholders. The communication campaign creates public awareness and establishes a channel for continuous stakeholder consultation, interaction and engagement. In turn, the capacity building programme will be carried out through a local university, which will both receive training and be in charge of designing and implementing courses and training modules as well as providing specialized learning material. A knowledge management system for climate change information is also foreseen to support the creation of capacities.

The specific outputs in this component are discussed in greater length below.

Output 3.1. Stakeholders demonstrate increased awareness of the work, benefits and impact of the RNCC as a result of gender-sensitive public engagement.

Strong stakeholder engagement is fundamental for the adoption of a transparency system. A successful communication campaign will enhance the likelihood that data is gathered from the most reliable and relevant sources, and that the transparency system?s outputs can inform decision-making processes across many different sectors. Thus, engagement and communication from the point of view of a transparency system has to facilitate i) the collection of data; and ii) the adoption of the MRV?s outputs by stakeholders. The greater the engagement, the better (and more useful) the transparency system will be for evidence-based decision-making and the production of reports.

This output will take an explicit gender approach by stressing the communication of gender aspects from:

- the input data (e.g. energy access, access to naturales resources)

- the outputs coming from each module of the RNCC, including ETF reports (e.g. gender elements in the NDCs, NAMAs, Adaptation Plans, support needed and received)

- the governance structures of the CBIT project and the RNCC themselves.

Thus, expected deliverables for this output include:

3.1.1.	Communications and Engagement Plan, and the editable pieces of communication materials of the plan. This should include a working plan during the CBIT project and a suggested plan for the RNCC after the end of the project, as well as a gender communication strategy
3.1.2.	Gender communication strategy
3.1.3.	Annual report on communication activities during the CBIT project.

Output 3.2. Stakeholders demonstrate strengthened understanding of the RNCC following a national capacity building programme.

Technical limitations and lack of trained human resources are described as a key barrier for Ecuador to meet its transparency commitments[37][37]. This output will establish a National Capacity Building Programme that will ensure that the RNCC is properly fed and adopted by all relevant stakeholders, i.e. both as data providers but also as beneficiaries and users of the information produced by the transparency system.

The development of this programme will be based on a collaboration with one or more local academic and/or research institution(s) that work with climate change topics. With the intention to create a sustainable capacity building system, the appointed institution will receive training from the project team and the supporting consultants (following a ?train the trainer? approach) to guide the development of educational materials and capacity building activities. The capacities will thus be retained by these institutions mainly by including climate transparency in their curricula. The institution is also expected to conduct periodic capacity building modules to the relevant ?users? or beneficiaries of the RNCC on both ends, i.e. as input data suppliers and as users of processed data users for their own decision-making processes. The selection of the institution that will carry out these services will be based, among other aspects, on the profile of the institution and its current programs that could ensure sustainability of training activities beyond the duration of GEF funding.

Expected deliverables include:

3.2.1	Roadmap for continuous capacity building actions for the National Climate Change Registry and its modules, including the identification of a strategic partnership with a local academic institution
3.2.2	MoU signed with local academic institution for the design and implementation of courses, training modules and provision of learning material
3.2.3	Calibration workshop between consultants appointed for the design/improvement of the RNCC and the appointed academic institution
3.2.4	Training modules for the relevant data suppliers for the GHG Inventory + launch workshop
3.2.5	Training modules for the relevant stakeholders for the tracking of mitigation actions and NDCs + launch workshop
3.2.6	Training modules for the relevant stakeholders for the tracking of adaptation actions and NDCs + launch workshop

As mentioned in the baseline (see Figure 1), the RNCC consists of two elements, i.e. the MRV systems and a climate change information repository. This output also addresses the creation of said repository, building a dedicated system for knowledge management in the RNCC. Proper knowledge management allows to understand what information is been generated, where the knowledge is (in which specific academic institution, organization, publication, journal, etc.) and what is the best way to transfer it to relevant people, so that the information is useful, productive and generates benefits. The knowledge repository will also include meteorologic, hydrological and climate information, as well as projections under different, relevant scenarios that can be used to foster further research. In particular, article 719 establishes the minimum contents for the repository:

a. Plans, programs, projects and strategies of different levels of government and sectors of the State that include and/or evaluate climate change mitigation and adaptation criteria;

b. Assessment of financial needs prepared by private, public and academic sectors;

c. Nationally and internationally existing climate finance sources, including details on the institutional requirements to access them;

d. International technical and financial cooperation received;

e. Potential measures and actions to adapt and mitigate climate change;

f. Published GHG inventories;

g. Compensation schemes approved and recognized by the National Environmental Authority;

h. Future climate projections;

i. Information on climate variability;

j. Information on incentives for institutions engaged in activities or actions that contribute to climate change mitigation and adaptation;

k. Baseline scenarios;

l. Private sector climate change mitigation and adaptation strategies; communes, communities, peoples and nationalities; academy and civil society;

m. National Communications on Climate Change and other international reports; and

n. Others determined by the National Environmental Authority.

On top of this minimum content, the design phase of this CBIT project will further explore possible cooperation modalities with the National Institute of Meteorology and Hydrology (INAHMI), as well as research institutions and the academia. Furthermore, it is expected to subscribe agreements with international organizations such as the Global Observing System (GOS), the Global Climate Observing System (GCOS) and the Global Atmosphere Watch (GAW)) of the of the World Meteorological Organization.

Thus, additional deliverables will include:

3.2.7	Conceptual design for the observatory of adaptation and climate information.
3.2.8	MoU signed with INAHMI and at least one university and one international meteorological institution.
3.2.9	Platform for the Repository of Climate Information (in coordination with INAHMI and/or the university).

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.

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 signatories of the UNFCCC. As such this project is financed on full agreed cost basis. In the case of this programme, eligible activities have been 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 considered co-financing and have been considered when estimating in-kind co-finance of USD1,080,057, as indicated in table C.

Ecuador's current efforts within the field of transparency are substantial and on many different fronts. The increased requirements introduced by the ETF, and the need to comply with the MPGs of the Paris Agreement Work Programme, increases the necessary effort and demands more resources. The CBIT project serves well to close that increased gap through its additional financing.

The country has developed a set of institutional arrangements at the national level to ease the process of information management of the National Climate Change Registry, especially those on the National GHG Inventory, as part of its MRV for the Mitigation module. Nevertheless, there is a lack of funding to make several institutional arrangements needed both at the national and the local level to provide climate information, among various other resources and arrangements required for the establishment of the National Climate Change Registry, as stated in Component 1.

As far as the GHG Inventory System of the country is concerned, the country has made significant progress in the process of enhancing the activity data collection. Nevertheless, there is a lack of funding and capacity to further ameliorate the processes of collection of activity data and the tiers of emission factors of other key categories within the GHG Inventory.

The remaining modules are mostly at a conceptual level of development. This conceptualization identifies a vision for the desired features of the RNCC, without determining the necessary steps to operationalize the system. The conceptualization lacks the necessary funding to be implemented and the proposal identifies priority areas defined by the country to make progress towards the full implementation of the Registry.

Through Ecuador's current climate transparency system analysis, lacking capacity is identified as an issue. The CBIT project establishes a national capacity building programme which will train the necessary stakeholders in the various systems which are to established. This capacity building system, through a strategic partnership with a local academic institution, thus addresses an underlying need and in a sustainable manner, as it is expected to persist beyond the CBIT project itself.

At the end of the CBIT project, the country will have a complete conceptualization and design of the integrated MRV System of the country (National Climate Change Registry) to serve in a timely manner the reporting requirements of the ETF under the Paris Agreement as well as for tracking the implementation of the National Climate Change Strategy. Additionally, the CBIT project will support the country in the development and operationalization of the Registry, building upon the existing advances in institutional arrangements and conceptualization of some components. The registry will promote a holistic and cross-cutting vision that facilitates the interaction with other frameworks, such as the Sustainable Development Goals, and serves planning processes at national and subnational levels.

Thus, the CBIT project will address these identified needs and plans, advancing Ecuador's development of a functional transparency system.

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

This project will indirectly lead to increased mitigation, adaptation, and means of implementation efforts through improved tracking of Ecuador?s climate efforts. This project will increase the quality and availability of climate data for Ecuador 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, Ecuador will have better information of how its climate work is contributing to sustainable development. These effects will translate to a higher ambition when presenting the next NDC in 2024, and for the consecutive ones as well.

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.

Socioeconomic benefits

The regular collection, analysis and use of reliable information on climate action and support to reduce GHG emissions and increase resilience, and data on GHG emission trends, both historical and projected, is essential for evidence-based decision-making and information-sharing, which in turn build trust and understanding and promote stakeholder engagement. This project will increase the quality and availability of climate data for Ecuador through the systems which are to be established[38][38].

This is expected to result in the following socioeconomic benefits:

- Improvements in the mitigation module of the transparency system are expected to lead to increased mitigation efforts that will ultimately lead to reduced GHG emissions, whereas the improvements to the adaptation module are expected to improve vulnerability and risk assessments in the country, leading to a safer livelihood for vulnerable communities.

- The operationalization of the means of implementation module of the RNCC will increase financial accountability, contributing to an enhanced flow of climate finance into the country?s priority areas in mitigation and adaptation. This element will reinforce the socioeconomic benefits discussed in the previous bullet point.

7) Innovation, sustainability and potential for scaling up.

Innovation

The transition from the existing MRV arrangements to the ETF will introduce enhanced scope and depth of reporting for developing countries, which underscores the importance of having strong sustainable institutional arrangements in place. This project builds on the innovative approaches and lessons learned during the early developments in transparency, such as the GHG inventories, in order to create a full-fledged, country-wide transparency system that encompasses mitigation, adaptation and means of implementation.

Among the most innovative aspect of the CBIT project, the following can be highlighted:

- As a result of this project, tier 2 (i.e. country-specific) emission factors or higher will be introduced for each of the IPCC sectors (i.e. energy, industry, agriculture, LULUCF and waste) of the National GHG Inventory. Currently, the vast majority of methods for estimating emissions currently follow a Tier 1 approach.

- The climate change information repository and knowledge management system (output 3.2), that is also expected to include cooperation with the National Institute of Meteorology and Hydrology (INAHMI), as well as research institutions and the academia. Furthermore, it is expected to subscribe agreements with international organizations such as the Global Observing System (GOS), the Global Climate Observing System (GCOS) and the Global Atmosphere Watch (GAW)) of the of the World Meteorological Organization. To date, ambitous cooperation efforts of this nature have not yet taken place in Ecuador.

- The gender-responsive approach towards the system design (output 1.1) will endow the RNCC with enough resolution to capture gender biases in fundamental elements such as the NDCs, Adaptation Plans and the NAMAs.

- Another innovative aspect is related to capacity-building activities, where innovative educational method will be applied, as opposed to the provision of standard workshops. The capacity building mechanism for the project (output 3.2) will be designed and implemented in partnership with a local academic institution, which will receive training during the CBIT project and expand their curricula to include key climate transparency topics.

The project will also incorporate relevant, innovative solutions appearing from other CBIT projects through the CBIT Global Coordination Platform.

Sustainability

As described above, 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 capacity in Ecuador to create the necessary MRV systems, including a 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.

More specifically, output 1.1 will provide a detailed analysis of system costs and potential funding alternatives. Output 1.2 establishes the linkage with long-term planning processes in Ecuador, including through the relevant budgetary processes that may be able to fund the operation of the RNCC. Output 3.2 will establish a partnership with a local university and/or academic research institution for the establishment of two elements that are designed to go beyond the duration of this CBIT project, i.e. the capacity building programme (to be included in the curricula of the university) and the repository of climate change information. Capacity awareness campaigns (output 3.1) are also expected to contribute towards the long-term buy-in of all involved stakeholders. This will further serve to convince government of the value of these systems, thus securing their long-term financing.

Scaling up

There is considerable potential to scale up the activities of this project. The established capacity building system for the different sectors can be built upon to add other components as well. The modular structure of the RNCC allows new components to be added as needed.

In addition, the project will try to learn from and share its experiences at the international level. The project will promote that Ecuador actively exchanges lessons learned with peers especially from Latin America. Countries whose CBIT projects include similar activities are, for example, Peru when it comes to adaptation metrics and indicators, and Honduras in setting up a capacity building scenario, or Uruguay and its experience in adaptation. As a member of the Red INGEI, Ecuador has demonstrated that it has the capacities to both transmit and absorb the lessons learned from peer exchange.

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[1] These barriers are presented in the context of a larger discussion in the coming baseline section.

[2] See e.g. Table 7 below, which includes a list of specific information gaps.

[3] NC3 (2017), p. 551.

[4] Ibidem, p. 552.

[5] Additional/residual competencies were progressively allocated by the Council of National Competencies to the GADs between 2007 ? 2017.

[6] The Ministry of Environment was merged with the Secretary of Water in March 2020.

[7] Mitigation: energy, industry, agriculture, LULUCF and waste. For adaptation: food sovereignty, productive and strategic sectors, health, water patrimony, natural patrimony, human settlements, priority attention groups and risk groups. The later two are considered cross-cutting focus areas.

[8] The full list of contents is provided in the context of output 3.2.

[9] Regulatory Decree of the COA, article 251. Likewise, article 720 sets a similar mandate in terms of information sharing: ?*Decentralized Autonomous Governments, sectoral entities, national monitoring and research institutes, civil society, academia and private sector entities shall forward the information associated with climate change required by the National Environmental Authority in accordance with the institutional arrangements established for the purpose, which will determine the periodicity and format of delivery of the information*?. To date, most of these institutional arrangements have not yet been materialized.

[10] This is the case of the ProAmazon?a project (to be further discussed later in this document in the context of the REDD+ sub-system).

[11] NC3 (2017), p. 27

[12] Ibid., p. 26

[13] Ibid., p. 101

[14] Adapted from NC3 (2017).

[15] As of January 2021, integrated with the Ministry of Environment (currently, Ministry of Environment and Water, MAAE)

[16] ICAT support focuses on the development of procedures and methodologies for data collection, management and its integration into the national system. The sectors and categories covered by ICAT include: agriculture (categories to be defined), industrial processes (for the category of 'mineral products'), waste management (categories to be defined), and energy (for the subcategory of fuel combustion within 'manufacturing industries and construction).

[17] In terms of REDD+, the country, with the support of PROAmazon?a and other projects has developed four information systems: System for the Management of REDD+ Measures and Actions, Safeguards Information System, National System for the Monitoring of Forests, and the connection with the National GHG Inventory System.

[18] Decree N? 840, article 3 and article 4.

[19] Priority care groups are defined in the Constitution of Ecuador (art. 35), and include seniors, children, pregnant women, people with disabilities, people with severe or complex diseases, population at risk, victims of domestic or sexual violence and of natural or anthropogenic disasters, as well as people with low levels of income and limited coverage of basic services.

[20] 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.

[21] See e.g. section 4.4 of chapter 4 of the NC3. This proposal was prepared by JICA in coordination with the MAAE.

[22] NC3 (2017), p. 327.

[23] Ministry of Environment and Water, Ministry of Economy and Finance, *National Strategy for Climate Finance* (2021). Available here.

[24] See e.g. chapter 6, ?Barriers, needs, opportunities and support received for climate change management?.

[25] This is regulated by art. 272 of the Constitution and art. 192 of the COOTAD. Criteria for the distribution of national funds include population, density, unmet basic needs (and its variation), fiscal effort, administrative effort, and achievement of goals in the PND and the GAD?s development plan.

[26] https://www.thegef.org/sites/default/files/publications/20150031015PAspa_LowRes_2.pdf

[27] COA, art. 254.

[28] Regulatory Decree to the COA, art. 717

[29] This structure is based on Figure 1 in the ?Handbook on institutional arrangements to support MRV/transparency of climate action and support?, UNFCCC, September 2020.

[30] If needed, the mitigation module will be broken down into smaller sub-systems (i.e. GHG inventories, NAMA/REDD+ and other mitigation actions) to capture potential differences in their progress.

[31] A given number of signed DSAs will be set as a target in the PPG phase.

[32] Key categories are presented in Table 5 in the baseline section.

[33] A similar approach will be followed for actions in the rest of the sectors prioritized by the country for mitigation actions (i.e. industry, agriculture, LULUCF and waste).

[34] A summary of the various methodological challenges faced in tracking climate finance can be found in ?The state of tracking financial flows under the Paris Agreement?, *Center for International Climate Research* (2019).

[35] NC3 (2017), p. 571.

[36] Specific details on the coordination with the second period of the NDC Support Programme (2020 ? 2021) will be provided at the design stage of this project, when the results of said project are expected to be available.

[37] See e.g. chapter 6 of the NC3 (2017).

[38] UNFCCC (2020), ?*Handbook on institutional arrangements to support MRV/transparency of climate action and support*?, p.6.

1b. Project Map and Coordinates

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

Coordinates (Quito, Ecuador?s capital):

Latitude: -0.225219, Longitude: -78.5248 0? 13? 31? South, 78? 31? 29? West

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 Ministry of Environment and Water of Ecuador. In the beginning of the process, a mission was realised to Ecuador to determine the scope of the project. The elaboration of the document has been discussed in more than five (5) virtual meetings, and the document has been revised by the representatives of the Ministry as well.

In the project identification phase, key documents have been reviewed to develop this concept. These documents - the National Communications, Biennial Update Reports, and other key documents - 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 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 Ecuador's civil society and indigenous groups will be invited to participate. Women participation will be assured. The workshop will present the project and ask for inputs especially on the general direction of the project, and the planned activities. It will also serve to deeply understand the current baseline and challenges of Ecuador?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 10. Key stakeholders (preliminary list)

Name of key stakeholder	Responsibility/expertise	Expected role and relevance for the project

Ministry of Environment and Water of Ecuador (MAAE) & the Under-Secretariat of Climate Change (SCC)	To exercise environmental management effectively and efficiently, guaranteeing a harmonious relationship between the economic, social, and environmental axes that ensures the sustainable management of strategic natural resources. The MAAE exercises the administration on climate change through the Under-Secretariat for Climate Change (SCC), created on December 4, 2009. The SCC is the entity in charge of coordinating the country's mitigation and adaptation actions to face climate change. For this, it is made up of two units: The National Directorate for Adaptation to Climate Change (DNACC) and the National Directorate for Climate Change Mitigation (DNMCC).	The Ministry of Environment and Water of Ecuador - MAAE is the focal point for the reporting to UNFCCC and it will act as the executing agency of this project managing its substantive and administrative tasks. In addition, the MAAE currently hosts several of the aforementioned information climate platforms of the proposed National Climate Change Registry. In this sense, it will serve as the ultimate repository of information and coordinate all relevant internal and external stakeholders on their provision of information to the Registry. The MAAE has the mandate to manage the National Climate Change Registry.

Interinstitutional Climate Change Committee (CICC, from its name in Spanish)	The CICC was institutionalized by Executive Decree N? 495/2010 and then restructured by Executive Decree No. 752/2019. The Interinstitutional Climate Change Committee (CICC) Ministry of Environment and Water (acting as the Chair of the Committee), the Ministry of Production, Foreign Trade, Investment and Fisheries, the Ministry of Transportation and Public Works, the Ministry of Economy and Finance, the Ministry of Agriculture and Livestock, the Ministry of International Affairs and Human Capital Mobility, Energy and Non-Renewable Natural Resources, the Secretariat of Higher Education, Science and Technology, the Technical Secretariat of Planning, the Secretariat of Water, The National Risk and Emergency Management Service, the Association of Ecuadorian Municipalities (AME, for its acronym in Spanish), the Consortium of Autonomous Provincial Governments of Ecuador (CONGOPE, for its acronym in Spanish), and the National Council of Rural Parish Governments of Ecuador. Among its functions that are relevant for the CBIT project, the CICC requests the participation, advice and creation of working groups with institutions and organizations that it requires for the fulfilment of its functions.	Feedback on the different steps in the process as it brings together a wide range of stakeholders to the project. The MAAE will work in coordination with the stakeholders of the CICC for the implementation of the several activities of this CBIT project.

<u>Regional Local Government Organizations, such as:</u> - Decentralized Autonomous Governments (GAD, for its acronym is Spanish) - The Association of Ecuadorian Municipalities (AME, for its acronym in Spanish) - The Council of Autonomous Provincial Governments of Ecuador (CONGOPE, for its acronym in Spanish)	**GADs**: Local government management is carried out through the GADs. The processes of the MAAE that guide the generation of information, the formulation of policies, and the articulation in the territory, are all coordinated through the GADs. **AME**: This entity has been a key actor within the country?s climate change policies, such as waste management. Its approach, accompaniment, and interaction with the municipalities has meant the implementation of measures. It has also supported the generation of information and indicators on the subject. In fact, the information generated by AME has served as a basis to feed national statistics through INEC. **CONGOPE**: It is an institution that specializes in building capacities for public management of the Provincial Intermediate Governments of Ecuador.	The MAAE through this CBIT Project will have to be in close coordination and consultation with prioritized municipalities (GADs) through organizations such as AMEs & CONGOPE. The CBIT will have to consolidate the necessary institutional agreements to ensure the supply in time of the information required for the preparation of the National GHG Inventories and other climate information related to the three components of the proposed National Climate Change Registry. This must be done in coordination with the development of those activities under outputs 1, 2, and 3 as subnational involvement is prioritized by the country to develop its National Climate Change Registry.

Civil society and the Private Sector	From micro to large enterprises, the private sector plays a determining role in the creation of decent jobs, the contribution in productive chains, and the capacity for innovation and coordination.	The private sector will play a role in the identification of the prioritized sectors and stakeholders involved with which the government shall establish arrangements and confidentiality agreements in order to enhance the level of accuracy of the GHG inventories as well as other components of the proposed National Climate Change Registry as well as with other components. Civil society institutions play a key role as they group various stakeholders into one single entity, which is particularly important to ensure the level of participation pursued by this project. Many civil society institutions have already been identified (see e.g. the entities participating in the sectoral roundtables for the preparation of the GHG inventories, in Figure 6), and other institutions are expected to be identified and approached during the design phase of this project.

Red INGEI	The South-South peer exchange network, RedINGEI, which has been active since 2016, has been a success in its ability to foster peer exchange between the countries, and Ecuador has significantly benefited from it as mentioned in the baseline. This underscores the importance of peer-to-peer exchange, and how such interactions are beneficial for the technical development within a specific area. Several activities will collaborate with other transparency projects to establish peer-exchange networks for the wider MRV systems which this CBIT project will consolidate.	Development of institutional arrangements with Red INGEI and other local partners as capacity building providers to key stakeholders in line institutions on GHG Inventories and other prioritized aspects of the National Climate Change Registry to overcome issues related to staff turnover in these public institutions.
Academia and research institutions	Academic and research institutions in Ecuador play a significant role in the production of climate information that is crucial for the RNCC, particularly in terms of adaptation and vulnerability. Moreover, universities have the infrastructure required for training and building capacity that is much required to operate the RNCC.	This project has been conceived to include a strong partnership with academic and research institutions. In particular, this project will establish MoUs with research institutions for the repository of climate change information (output 3.2), for instance for the provision of meteorology and hydrology data that can foster further research from other institutions in the academic but also in the private sector. Likewise, output 3.2. will involve an academic institution for the institutionalization of the capacity building for the entire RNCC. Thus, academia is expected to play a key role in this CBIT project. The design phase of this project will identify and undertake preliminary conversations with institutions that are capable of fulfilling this role.

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).

Gender overview

Ecuador is making significant progress in the mainstreaming of a gender approach in its public policies, a requirement that is set out in the Constitution[1]. Executive Decree No. 1733 (2009) established the National Council for Women and Gender Equality with the mission of designing a public institutional structure to ensure equality between women and men. Along this line, its objectives include gender mainstreaming at the public policy level, including planning instruments at the macro level, making binding and mandatory recommendations and proposals that seek to transform cultural patterns embedded in the public sector and in society at large regarding gender roles and stereotypes. Other institutions of relevance are the Council for Citizen Participation and Social Control (CPCCS), the National Council for Equality (CNI) and, at the GAD level, the Cantonal Councils for the Protection of Rights. In parallel to this, a number of national agendas, plans and legal instruments anchored in the constitutional principle of equality and equity have been set in place[2].

While these efforts have shown very encouraging results, gender inequalities remain one of the structural challenges in Ecuador?s socioeconomic system. According to UNDP?s Gender Inequality Index (GII)[3], Ecuador ranks 86th out of 189 countries (2019). As can be seen in Table 9 below: despite working more, women are also relatively more affected by underemployment and poverty.

Table 11. Gender indicators

Indicator	Women	Men
Income poverty (2015)	19.35%	18.72%
Underemployment over employed population	60.40%	49.10%
Total number of hours worked in a week	77:39	59:57

Source: Adapted from NC3 (2017), chapter 5

In terms of decision making, political representation of women has been increasing steadily since the eighties, with a 40.1% share of legislative seats in 2013, as opposed to 6.1% in 1996[4], with percentages decreasing when shifting inwards towards the GAD level. Therefore -and despite the improvements- continuing efforts are still required to materialize equal access to rights and benefits.

The government of Ecuador has continuously emphasized the importance and connection between gender and climate change, mainly by including gender considerations in their NDC. Documents available have extensively analyzed and evaluated previous efforts and possible future pathways for Ecuador in the topic of Gender and Climate Change (see e.g. the Third National Communication, the Concept Note on the Gender Action Plan and Climate Change for Nationally Determined Contributions (NDC), or the ?Design, Validation and Systematization of the Methodology for the Construction and Implementation of the NDCs of Ecuador Including the Gender Approach?).

The Third National Communication of Ecuador has deeply explored the gender situation of the country. It has disaggregated their findings per area such as ?socio-cultural,? ?economic productivity,? and ?Climate Change,? among others. The Ministry of Environment and Water has advocated for the mainstreaming of gender in their projects, as well as incentivizing gender analyses and proposing a gender action plan in line with the enhanced Lima Work Programme on gender. The country has also created Priority Care Groups, which emphasize vulnerable communities, in their climate actions to adapt and mitigate to the effects of climate change. It has also created agendas, like the Agenda de Transformacio?n Productiva Amaz?nica (ATPA), in which gender equality is at the forefront of climate action.

In particular, the FORECCSA project (Project for Strengthening the Resilience of Communities in the Face of Adverse Effects of Climate Change with an emphasis on Food Security and Gender Considerations) will serve as an excellent guideline to lead the way for this CBIT project in terms of its gender approach. Within the framework of the FORECCSA Project, technical documentation on gender has been collected. These documents have diagnosed the situation of women and men, the impacts of climate security on each of these social groups, among other aspects.

Thus, the project will have solid ground on which to orient its gender efforts.

Gender aspects in the project

The Global Environment Facility (GEF) and the UN Environment Programme (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.

To produce a gender-responsive transparency system, it is important to include gender considerations from the very design. The process will tackle gender in two fronts. On the one side, the system 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 way, the RNCC will be designed to assess how costs, benefits and risks arising from NDCs, Adaptation Plans, NAMAs and other mitigation actions are allocated, enabling the identification of potential inequalities before they take place. A specific deliverable has been included in Output 1.1 and in the project budget to ensure that this feature is built into the RNCC.

On the other side, the CBIT project -and the transparency system to be created by it- will both reflect upon themselves in terms of the gender balance of its own governance structures. This will be reflected in a Gender Strategy, to be included as one of the deliverables in Output 3.1.

Moreover, Ecuador will benefit from the 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?.

[1] Article 70 states that ?The State will dictate and execute policies to reach equality among women and men (?), incorporating a gender approach (?) and providing technical assistance for its mandatory application in the public sector?.

[2] A detailed discussion on the institutional framework for gender can be found in chapter 5 of the NC3.

[3] The GII measures gender inequalities (i.e. 0 indicates complete equality and 1 indicates complete inequality) in three important aspects of human development?reproductive health, measured by maternal mortality ratio and adolescent birth rates; empowerment, measured by proportion of parliamentary seats occupied by females and proportion of adult females and males aged 25 years and older with at least some secondary education; and economic status, expressed as labour market participation and measured by labour force participation rate of female and male populations aged 15 years and older.

[4] NC3, p. 493.

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?

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 Integral MRV system as they are key entities to implement many of actions needed to mitigate and adapt to climate change. This includes both small private actors, such as farmers, but also large private actors such as companies

within industry. These will be engaged in the project preparation phase, as described above, but are also key actors in a number of the outputs of the project.

For instance, under component 1, the private sector will be in for the development of Data Sharing Agreements that include explicit confidentiality clauses in order to enhance the accuracy of data for the preparation of the National Climate Change Registry. Likewise, private sector voices will be key to decide what is feasible in terms of what activity data one can collect in a simple manner.

Among all the components, private sector actors will likely be a key audience for some of the capacity building courses, as they will be data providers of the systems to be established and enhanced; however, there is also potential for them to be users of the RNCC?s outputs as well.

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)

The following table summarizes the preliminary risks identified at this concept stage; this will be further assessed during project design.

Table 12. Identified risks (preliminary ? to be further assessed during the PPG phase)

Risk	Risk Level rating - probability	Risk level rating - impact	Mitigation

Uncertainty around the duration and evolution of the current COVID-19 outbreak	Medium	Medium	Risks related to the pandemic have two components. The first is the one related with the restriction of movement, which would affect mainly workshops and related capacity building activities. This aspect of the risk would be mitigated mostly through remote work, on which MAAE has had successful experiences during the first months of the initial outbreak. The second component is related with procurement processes, which can be paralyzed or slowed down depending on the evolution of the pandemic. In this context, at 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. In addition, MAAE will cross-train staff so that if a member contracts COVID-19 and is on leave, during their recovery the project can continue. A change in stakeholder priorities can also take place as a result of the pandemic. While this may adversely affect the development 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 the pandemic in the short-run are reversed by increased interest 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. Communication campaigns (output 3.1) and capacity building (output 3.2) will serve as mitigation measures for this aspect of the climate risk.
Institutional: high personnel turnover	High	Medium	Part of the current staff, as described above, is highly dependent on international finance and is usually employed on a consultancy/project basis. This creates a high turnover. This will be mitigated by creating a system which is less dependent on international finance, and thus can create more stable conditions for employees, encouraging them to stay longer. These elements will be embedded in the design of the RNCC, as a result of which a shift from ad-hoc to systematic solutions is achieved (see e.g. output 1.1, in particular, deliverables 1.1.1 and 1.1.9).

Institutional: National institutions not having sufficient capacity to collaborate with the CBIT team.	Medium	Medium	The capacity building system which will be established will train national institutions, both public and private actors, in aspects necessary to facilitate collaboration. The activities will be agreed upon with the national institutions to measure the time and effort demands to be covered by each stakeholder in the process.
Political: Lack of political will to finance operational costs of the National Climate Change Registry and to maintain it operative after the intervention of this CBIT project.	Medium	Medium	As the current system hardly is financed through public funds, a change in this implies an increased allocation of resources, if no other means can be identified. There is a medium-level risk that such a request would not be approved politically. The mitigation measure to address this risk is to show how the National Climate Change Registry not only serves to report at the international level, but also serves Ecuador's domestic planning needs.
Organizational: capacity built not retained.	Low	Medium	The project will create a capacity building programme which can build the capacity of new staff, thus centralizing the knowledge management. The project will entail the use of the train-the-trainer approach within institutions and include the development of tools, protocols and other forms of capacity building material to provide continuous, training opportunities for future users. Moreover, by partnering with academic institutions and including transparency in its curricula, capacity building is expected to last beyond GEF funding.
Knowledge: Country works isolated from other countries and do not take advantage of existing tools and methodologies	Low	Low	The knowledge management system created for the 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.

Climate change: Climate change related events affects project implementation, or country priorities.	Low	Low	As most of the project activities will take place within the capital of Quito, 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. Regarding the 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.
Social: The world economic development adversely affects Ecuador's economic and social development, causing social tensions which could change political priorities.	Medium	Medium	Social tensions and protest towards government in these situations usually include demands for more transparency. Thus, it is rather likely that such protests could increase the urgency of the project.
Gender: gender inequalities prevent the gender responsive elements of the project	Medium	Medium	This risk is expected to be mitigated through the assignment of dedicated budget for gender activities and outputs. A Gender Strategy will also be provided among the mitigation measures for this risk.

COVID-19 risk

As in the rest of the Latin American region, the COVID-19 pandemic has had a dramatic impact in Ecuador. In April 2021, the number of cases displays an upward trend, adding pressure to the health care system. The country has established a ?smart lock-down? system consisting of four phases, which groups activities according to risk levels.

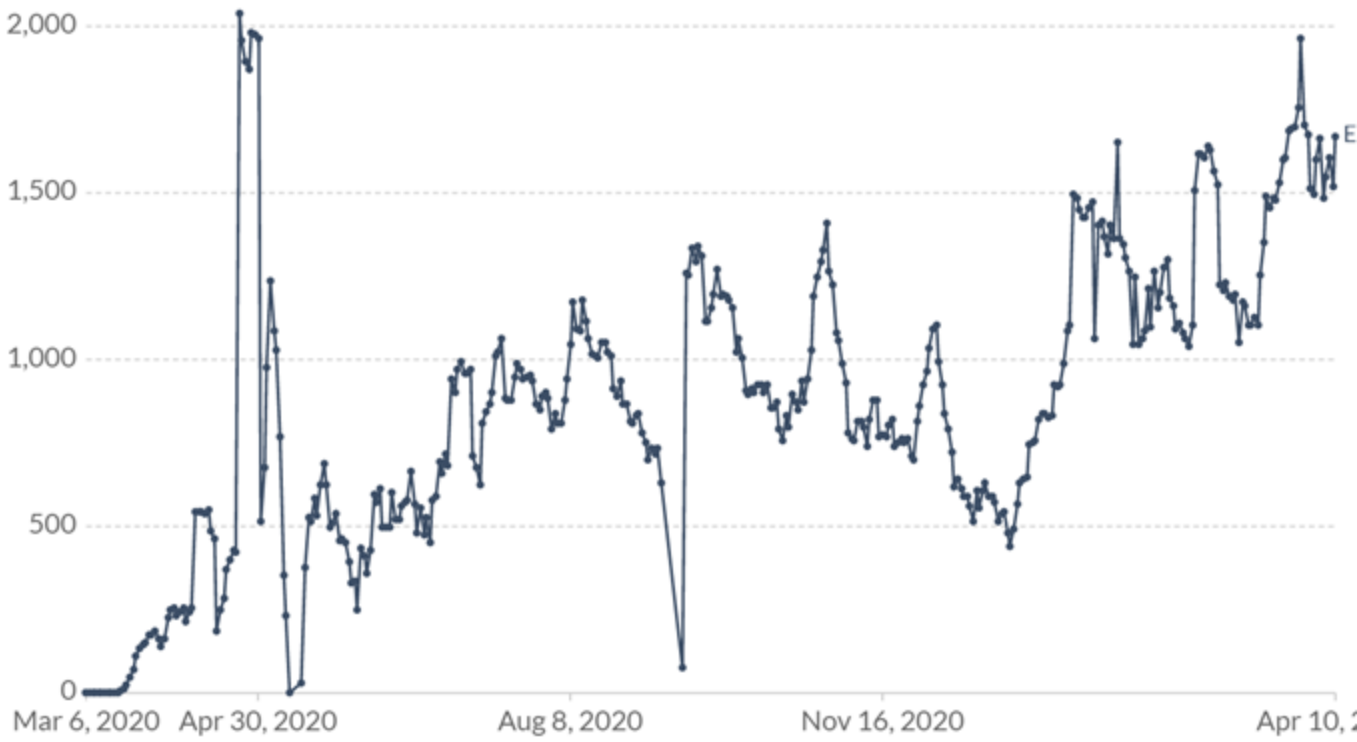

Figure 7. COVID-19 Impact in Ecuador, as captured by the daily new confirmed COVID-19 cases (7-day rolling average). *Source*: JHU CSSE COVID-19 Data (compiled by Our World in Data)

The pandemic may lead to the worst economic contraction in the history of Ecuador, with estimates ranging between 7.3% to 10.9%, and similar impacts in terms of social and fiscal indicators[1]. Ecuador's economy is highly dependent on agricultural production (with a significant percentage devoted to exports), oil and its refining, manufacturing (essentially of agricultural origin) and trade, which together account for almost 45% of gross domestic product. Thus, the contraction will result from the direct impact of confinement measures, but also from external drivers such as the fall of oil prices (with its subsequent impact on Ecuador?s balance of payment), the fall of exports, tourism revenues and foreign remittances and transfers[2].

Ways in which the COVID-19 pandemic can potentially affect the project are discussed below.

Risk

- 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.
- 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.

Mitigation measures

Measures and protocols in relation to the pandemic are regulated by national and local (GAD) entities, with recommendations issued by a National Committee on Emergency Operations and decided upon by GADs; time-limited presidential decrees enforceable in the entire territory have also been issued during different moments of the pandemic.

A dynamic approach will be pursued to accommodate to various contingent scenarios:

- 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 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. Also during the PPG phase, an additional mitigation measure will be the contracting of additional local support, to compensate for the lack of a 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.

- MAAE 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. Communication campaigns (output 3.1) and capacity building (output 3.2) will serve as mitigation measures for this aspect of the climate risk.

Opportunities

As numerous other countries, Ecuador is planning how to launch the economic recovery needed after the adverse effect the pandemic and restrictions have caused. Although the plan does not include environmental and natural resources issues, it is clear the the increasingly complex interactions between economic, political and human systems on one hand and environmental systems on the other contribute to the systemic nature of risk and its cascading effects. 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 Ecuador 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 a knowledge management system and tools and capacity to collect and analyse data for the implementation and tracking of mitigation in among others, the energy sector, and in adaptation sectors such as health and agriculture. 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.

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.

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)[3], **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[4]. **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 of its outputs have been designed and shaped precisely from the need to raise awareness on climate risks - and provide tools to mitigate them.

Given its status as a developing country, Ecuador is highly vulnerable to external factors of various kinds, ranging from natural or anthropic events to external market impacts, mainly because of its status as a primary-export economy. Climate change has exacerbated the country's vulnerability, which is critical in a number of areas, for example in the coastal area, where changes in coastal dynamics require adaptation measures in the face of rising sea levels, shoreline retracement, rising water temperature, acidification, check-out at extreme weather events, and human and economic losses. Although there are no contrasting forecasts of sea level rise in Ecuador, globally managed data foresees elevations that allow this phenomenon to be seen as a threat with significant incidence, mainly in the lowest areas, which can lead not only to increased flooding, but to an acceleration of coastal erosion and salinization of aquifers and final stretches of rivers.

In addition, the intensification of phenomena of natural variability, such as El Ni?o South Oscillation (ENSO), which is one of the main phenomena affecting the region and the country, and which has an occurrence cycle of 3, 5 and 7 years, generates alterations mainly due to increases in precipitation (El Ni?o Phase) and by precipitation deficits (La Ni?a Phase). This phenomenon triggers severe droughts and floods that have historically affected the national territory, including the coastal area, causing significant damage resulting in loss of human, socio-economic and environmental life.

Among the main changes observed in precipitation, average temperature and absolute maximum and minimum temperatures in Ecuador in the period 1960-2010 there is an increase in temperature and spatial and seasonal variations of precipitation throughout the national territory. In the Galapagos Islands, recognized as a Natural Heritage of Humanity, there is a positive change in absolute average, maximum and minimum temperatures of 1.4?C, 1?C and 1.1?C, respectively. On average, the country's volcanoes have lost about 50% of their glacial surface area over the past half century.

Future climate projections under Ecuador's Third National Climate Change Communication show that, if the current temperature trend were maintained, the change that could be expected in Ecuador would be about a 2?C increase until the end of the century; and even the Amazon and the Galapagos would have increases greater than this value.

The proposed project will take place mostly on the capital, Quito, which has the highest adaptive capacity in the country.

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 Asuncion (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 (e.g. in terms of activity data) and Output 3 (e.g. for the update of support needed and adaptation requirements).

? **Difficulties to undertake capacity building activities.** Training activities, workshops and meetings could be adversely impacted by extreme climate events. In this case, however, most activities are to take place in Asuncion, a location that can be easily reached from all over the country, has a low exposition to climate hazards and the highest adaptation capacity in the country.

? **Change in stakeholder priorities.** When a vulnerable country is impacted by extreme climate change effects, political priorities. investor?s 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, as discussed in the description of Output 4.

Thus, being a short-term (i.e. three years) 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 Ecuador.

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

The activities under this project are not likely to be compromised by climate-related events, whereas the transparency system 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 Ecuador.

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

As noted in the response 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.** Output 1.2 will link the Climate Change Module of the RNCC 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 very objectives of this CBIT project.

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[1] OECD, *Impacto financiero del COVID-19 en Ecuador: desaf?os y respuestas* (2020)

[2] OECD, *Impacto macroecon?mico del COVID-19 en Ecuador: desaf?os y respuestas* (2020)

[3] 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.

[4] Given the relatively short timeframe involved in this CBIT project (three 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 1.2, which will focus on the relationship of the transparency system and planning processes.

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.

UNEP is 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 the Climate Change Mitigation Unit with the support of UNEP?s Regional Office for Latin America and the Caribbean (ROLAC). The Ministry of Environment and Water will be the Executing Agency, and the possibility of an organization providing execution support will be identified in the CEO Endorsement request preparation phase.

Two highly relevant GEF funded projects, which are currently under preparation and will be implemented during the first years of this project, are the GEF projects to prepare the Fourth National Communication and the Second BUR. Both of these count the Ministry of Environment and Water (MAAE) as the Executing Agency, with support provided by UNDP. The presence of MAAE will allow for a high level of coordination between these two projects and this CBIT proposal. The Second BUR of Ecuador will be presented in the first quarter of 2021, while the Fourth National Communication will be presented in the first quarter of 2022. To the extent possible and based on the

stages of development in which these two projects and the CBIT proposal will coincide, the CBIT project will aim to inform and suggest technical changes so that the progress made with the CBIT project are reflected on these two reports.

As described above, this is important as there are considerable areas where synergies can be generated, including in the design and operationalization of the national inventory system, and establishment of the climate change module.

Likewise, the CBIT project and the project for the preparation of the PLAMICC are expected to take place approximately around the same time. However, as both projects will be executed by the MAAE, coordination will be assured. While more details are expected for the PPG phase, the PLAMICC will mostly focus on the processes and procedures for the revision of the NDCs, whereas the CBIT project will focus on aligning NDCs with the National Development Plan and the national budget.

The project will also allow Ecuador to actively participate in the GEF financed CBIT Global Coordination Platform jointly implemented by UNDP and UNEP.

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 Climate Change Strategy (ENCC) 2012-2025**

o The National Climate Change Strategy (ENCC) 2012-2025 is the management instrument that guides and dictates the actions and measures that Ecuador needs in order to face the impacts produced by climate change, including gender as a cross-cutting topic. This CBIT project will fall under the many initiatives and standards that are in line with the requirements stipulated by the ENCC. The strategy acts as an integrating element of the different sectors, which guides concerted, orderly, planned and concurrent action. In line with this, the CBIT project also desires the same coordinated activity. The strategy also promotes the internalization of the subject in public and private instances throughout the country, considering the existing political, regulatory and institutional frameworks. The CBIT requires a similar level of integrated actions between the different sectors and regional governments as a means to create a national inventory that is cohesive and meets the requirements of the Enhanced Transparency Framework of the Paris Agreement.

- **Climate Change Mitigation Plan of Ecuador (PLANMICC, for its acronym in Spanish),**

o This plan will have a long-term vision, with a horizon to 2050 ? the year in which the country aims to reach its decarbonization stage. The plan will allow for the transformational change towards sustainable development. The plan considers that technological, socio-economic, and environmental

changes will be required. The participatory process will involve the public and private sectors, NGOs, the academia, IGOs, and civil society. Similarly, the plan will also take into account considerations of gender and it is being implemented with differentiated approaches towards the different key sectors and vulnerable groups. The PLANMICC will count with elements of institutional and legal frameworks, methodological formulation, communication, dissemination, and knowledge management, as well as its own MRV system to track its implementation.

o This plan will have a focus on decarbonization of the economy, fair transition, participation, and gender inclusion. Additionally, it will also include guidelines for updating the NDCs, which consider gender and the basis of long-term strategies. This plan will be a good source of information for the situation of the country. It will serve as an aid to inform the baseline and the alternative scenarios for this CBIT proposal. In the same way, the gender principles of this plan will also serve as lessons learned to be implemented throughout the execution of this CBIT project.

o In this way, this CBIT project supports these objectives through the creation of an integral platform dedicated to transparency aspects. The project also supports capacity building in both the public and private sectors.

- **National Adaptation Plan**

o Ecuador is currently working on its National Adaptation Plan (NAP) with support of the GCF Readiness Proposal and UNDP. The national plan prioritizes two cross-cutting sectors of Risk and Priority care groups, and six thematic areas, which are:

? Water heritage
? Natural heritage
? Health
? Human settlements
? Productive and strategic sectors
? Food sovereignty, agriculture, livestock, aquaculture, and fisheries

o The NAP contemplates the development of climate adaptation data in four components: vulnerability analysis, climate risk analysis, adaptation measures design and mainstreamed climate change at the local and sectorial level.

o The experiences of this plan and its results will inform this CBIT project, specifically as it relates to the adaptation component of the proposed National Climate Change Registry.

- **National communications (NCs), Biennial update reports (BURs) and Biennial Transparency Reports (BTRs).**

o In 2016, the 2010 Greenhouse Gas Inventory was reported in the Biennial Update Report (First BUR) of Ecuador; while the GHG Inventories of 2012 and the updates of the time series of 1994, 2000, 2006 and 2010 were presented on its Third National Communication (NC3). With the inevitable intersections between the NCs and the BURs, this CBIT will use the gaps identified in relation to climate transparency. Thus, this project aims to address those limitations and shortcomings in the areas of reporting, inventories, and transparency, allowing the country to fulfill its reporting every two years through the BTRs.

- **First NDC of Ecuador**

o Ecuador made public its first NDC on 2019 with a focus on mitigation (5 technical sectors) and adaptation (6 technical sector and 2 cruss-crustting sectors), including the country?s First

Communication in Adaptation as the adaptation component of its NDC with vulnerability and risk analyses as well as the barriers found for the implementation of this component.

- **SINGEI (National GHG Inventory System)**

o The main objective of SINGEI is to be a repository of activity data to prepare the National Greenhouse Gas Inventories (INGEI for its Spanish acronym) of Ecuador. In this way, the country can generate GHG Reports and systematize the information that allows improving the management of GHG emissions in Ecuador and submit this information to the UNFCCC. It is important to notice that even though Ecuador follows IPCC 2006 for the creation of its GHG Inventories, the calculation process is currently being done manually. Thus, this CBIT project aims to improve the measurement and transparency systems of the country, to better and more accurately reflect the reality of Ecuador.

- **Initiative for Climate Action Transparency (ICAT)**

o The ICAT is expected to strengthen the capacity of the institutions that collect and provide information about activity data to the National GHG Inventory System (SINGEI). This will lead to information reported becoming more transparent and robust. To this end, a prioritization of sectors and categories has been undertaken, so that the activities can better focus on developing capacities where most needed. These sectors include agriculture, industrial processes (for the category of 'mineral products'), waste management, and energy (for the subcategory of fuel combustion within 'manufacturing industries and construction). In line with the ICAT, the CBIT project also seeks to strengthen the capacities in order to improve the intersectoral actions in Climate Change and it will enhance the activity data and emission factors of some prioritized sectors of the National GHG Inventory System currently not covered by the ICAT project. The CBIT project will also provide the guidelines for the QA/QC and uncertainty calculation processes of selected prioritized categories for the enhancement of the GHG Inventory.

- **Latin American Network of GHG Inventories (Red INGEI)**

o The Network has carried out several domestic South-South cooperation activities with countries in the region that face common barriers in data collection and the implementation of quality assurance and quality control system, as they migrate in their transition to the 2006 IPCC Guidelines. Moreover, and given the insightful support received from Red INGEI in terms of the enhancement of the GHG Inventory System of the country.

- **MRV components of the proposed National Climate Change Registry:**(some MRV systems are in different phases: some are conceptualized, others designed, and others in operation):

o These systems of MRV information will support this CBIT since they will be the foundations upon which the Registry as a whole will be designed, developed, and / or interconnected. They will also inform on the policies needed to fulfil the NDCs of Ecuador and how those align with the outcomes of this project.

- **United Nations Sustainable Development Framework (UNDAF) 2019 ? 2022**

o The 2019-2022 UNDAF with Ecuador establishes four priority areas, namely, people, planet, prosperity, and peace. This project will represent a direct contribution towards indicator 2.8 (?number of public policy instruments designed and/or implemented at national or local level to promote environmental sustainability in topics such as sustainable use of resources and conservation of

biodiversity, climate change, chemicals and hazardous waste management, international waters and promotion of renewable energies?) of the planet area.

- **Voluntary National Reviews**

o Voluntary National Review (VNR) is a process through which countries assess and present progress made in achieving the global goals and the pledge to leave no one behind. The purpose of VNRs is to present a snapshot of where the country stands in SDG implementation, with a view to help accelerate progress through experience sharing, peer-learning, identifying gaps and good practices, and mobilizing partnerships. Ecuador presented its second VNR in 2020. This CBIT project will support Ecuador in providing key data required for assessing progress towards SDG 13 (climate action) in terms of mitigation and adaptation to climate change.

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 Ecuador will create knowledge through the development of protocols, guidelines and indicators for NDC monitoring in mitigation, adaptation and means of implementation. An essential part in managing this knowledge is through output 3.2, which consists of a full knowledge management system for the RNCC that will ensure the institutionalization of the climate knowledge that is relevant to Ecuador and is developed within but also outside of the RNCC.

The knowledge management system will also be connected to the national capacity building programme on prioritized aspects related to the National Climate Change Registry that will be implemented as part of output 3.2. This will ensure that the knowledge flows in both directions to/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, it builds a robust system which can reach many of the necessary stakeholders in Ecuador.

Furthermore, this national project will allow the country to participate in the CBIT Global Coordination Platform providing and receiving inputs. The project proposal will therefore 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.

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.

A preliminary Safeguard Risk Identification Form is attached to this concept; the full version will be prepared during the design phase.

Supporting Documents

Upload available ESS supporting documents.

Title	Submitted
Safeguard Risk Identification Form (preliminary)	

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
Jos? Luis Naula	International Cooperation Analyst	Ministry of Environment and Water	5/10/2021

ANNEX A: Project Map and Geographic Coordinates

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

Coordinates (Quito, Ecuador?s capital):

Latitude: -0.225219, Longitude: -78.5248 0? 13? 31? South, 78? 31? 29? West