Initiative for Climate Action Transparency – ICAT –

Achievements and Lessons Learned

Phase 2 ICAT Brazil Project

Initiative for Climate Action Transparency – ICAT -

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DISCLAIMER

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Contents

1. Introduction

1.1. County Context

Brazil is a developing country with continental dimensions, a growing population, and an agricultural sector that plays a significant role in the global economy. Brazil has been an active player in the international climate regime, ratifying the Paris Agreement in 2016 and committing to implement an ambitious Nationally Determined Contribution (NDC) aiming to reduce greenhouse gas (GHG) emissions by 37% below 2005 baseline levels in 2025, and a 43% reduction below 2005 baseline levels in 2030. Brazil also ratified the Doha Amendment to the Kyoto protocol in 2017.

Brazil has submitted four National Communications (Nat Coms) to the United Nations Framework Convention on Climate Change (UNFCCC), with the most recent being in December 2020. In addition, Brazil has submitted four Biennial Update Reports (BURs). The Nat Coms were submitted in 2004, 2010, 2016, and 2020, with the BURs submitted in 2014, 2017, 2019, and 2020. Further, the country has gone through two rounds of international consultation and analysis (ICA) under the UNFCCC in response to the information provided in the BURs. These ICAs occurred in 2016 and 2019.

The focal point in Brazil for the UNFCCC is the Ministry of Foreign Affairs, which is responsible for coordinating the preparation of BURs with the support of a task force involving many other ministries. The coordination of the Nat Coms is under the responsibility of the Ministry of Science, Technology, and Innovation (MCTI, the acronym in Portuguese). This ministry also coordinates the preparation of the national GHG inventory, convening different working groups and establishing partnerships for official statistics and data with government agencies. A key partner in the production of inventories is the Brazilian Research Network on Global Climate Change (Rede Clima, the acronym in Portuguese), which involves experts from different thematic areas, such as universities and research institutions. Centro Clima/COPPE/UFRJ, a research center on climate change and environment of the Institute of Graduate Studies in Engineering of the Federal University of Rio de Janeiro, is a member of Rede Clima and was responsible for the elaboration of the first, third and fourth national GHG inventory of the energy sector of Brazil.

The National Policy on Climate Change (Law 12,187, enacted in 2009) and Law 12,114/2009, which established the National Fund for Climate Change, are the legal instruments for the governance of climate change in the country. Under this legal framework, the country made a voluntary national commitment to reduce GHG emissions up to 38.9% compared to projected business as usual emissions in 2020. Moreover, Brazil established a governance structure for implementing the National Policy on Climate Change. That policy specifies mandates and assignments to governmental bodies and assisting roles to civil society organizations and academia, namely the Brazilian Forum on Climate Change (FBMC, the acronym in Portuguese) and the Brazilian Research Network on Global Climate Change (Rede Clima). The Forum is constituted by government and civil society, is chaired by the President of Brazil and includes government officials, the private sector, NGOs and academia.

Brazil established concrete action plans for mitigation and adaptation to climate change through Executive Decree 7,390/2010, later revoked by Executive Decree 9,578/2018. This Decree established sectoral targets for the 2020 voluntary commitments, made the national GHG inventory a policy instrument (Bustamante et al., 2018), and established the legal base for the measurement, reporting, and verification (MRV) issues under the National Policy on Climate Change. In addition, the decree mandates the Ministry of Science, Technology, Innovation, and Communication (MCTIC) to elaborate, review, and publish the estimates of GHG emissions and removals and enhance the methodology to calculate the projections of GHG emissions. The country also established a national registry system for GHG emissions (SIRENE, the acronym in Portuguese) through Executive Decree 9172/2017 to confer security and transparency in preparing the national GHG inventory.

In September 2016, Brazil submitted an intended Nationally Determined Contribution (NDC) toward the achievement of the UNFCCC. This document sets out the intention to commit to economy-wide absolute GHG emission reductions of 37 % from 2005 levels by 2025. Furthermore, in December 2020, Brazil confirmed its intention to a 43% reduction from 2005 levels by 2030 indicated provisionally in the 2016 commitment.

A legal framework is required to support the implementation of the NDC and the correspondent system for the transparent reporting of information necessary to track progress in implementing and achieving the NDC. Since March 2017 and until mid-2019, the instance for discussing a road map for the implementation of the Brazilian NDC was the Brazilian Forum on Climate Change (FBMC). Centro Brasil no Clima had a crucial role in activating the FBMC and in influencing the climate change agenda in this period.

The FBMC promoted a discussion process for a roadmap for implementing the Brazilian NDC to be delivered to the President. From the first round of discussion, the Forum selected 40 actions and included them in a proposal for implementing the NDC. The roadmap was delivered in person to the President Michel Temer, the Minister of Foreign Affairs, the Minister of Environment, the President of the Congress and presented at a meeting of the Executive Group of Climate Change (comprising representatives of eight ministries and the FBMC). In addition, the road map was translated into English and widely distributed at the Conferences of Parties to the UNFCCC in 2018 and 2019 and to international partners.

1.2. Objectives and outcomes of Phase 2

During 2020-2021, Centro Brasil no Clima (CBC), with technical support from Centro Clima/COPPE/UFRJ, completed phase 2 of the ICAT project to develop a strategy to enable Brazilian states to help achieve Brazil's NDC goals. The second phase of the ICAT project comprised twelve interconnected outputs:

- Output 1: A detailed work plan for the second phase of the ICAT work in Brazil.
- Output 2: A report highlighting key achievements and lessons learned from a technical point of view from the work under the first phase of the ICAT work in Brazil.
- Output 3: A report of the project kick-off workshop.

- Output 4: A report assessing historical sectoral emissions and possible trends of the three selected states participating in the second phase of the ICAT work in Brazil.
- Output 5: A report with an assessment of the current emissions trends up to 2030 (the reference case scenario) of the three participating states, as well as an evaluation of the contribution of these states Brazil's NDC targets.
- Output 6: A report assessing the potential mitigation actions (mitigation scenario) of the three participating states, as well as an evaluation of the contribution of these states Brazil's NDC targets.
- Output 7: A report on workshops with participating states to deepen their engagement, and engage other potential participating states not yet committed to climate actions.
- Output 8: A report outlining MRV indicators to track GHG emission pathways relevant to each participating states, that are consistent with the national MRV indicators developed in the first phase of the project.
- Output 9: This report which outlines key achievements and lessons learned from a technical perspective in this second phase of ICAT work in Brazil.
- Output 10: A report on the workshop at which states present results from the project.
- Output 11: A report describing the policy to be assessed for transformation change.
- Output 12: A report estimating ex-ante the impacts of the policy assessed for transformational change.

2. Approaches and key results

This second phase of the ICAT Brazil project focused on the sub-national level. It applies technical work undertaken at the national level under phase 1 of the project to the level of states within Brazil. CBC and Centro Clima/COPPE selected three states to participate in this second phase of the project: Amazonas, Minas Gerais, and Rio de Janeiro. These states represent the different biomes in Brazil - Amazon, Cerrado, and Atlantic Forest. The primary sources of GHG emissions also differ across the three states. Work under this second phase adopted the ICAT guidance for assessing impacts of non-state and sub-national actions.

The project produced a series of connected outputs in each of the three participating states. Combined, they provide a comprehensive overview of past emissions and trends in those emissions, projected increases in emissions under a reference scenario and a mitigation scenario, and how to track emissions and the drivers of emissions in the future. This work provides vital information to understand emissions trends and plan potential mitigation actions at the state level. In addition, such information is a valuable resource for broader national efforts to meet national GHG emission reduction commitments in Brazil's NDC.

The four primary project outcomes are as follows:

- The project produced an overarching assessment of GHG emissions by sectors for the three participating states, including a detailed analysis of the evolution of those emissions on a sector-by-sector basis from within that data.

- The project built off work under phase 1 to assess possible trends in GHG emissions up to 2030 under the scenario before Brazil made its NDC commitments (reference scenario) for the three participating states. The results produced indicate provides an indication of the contribution each state makes to the national emissions under this scenario and provides a baseline for future assessments of the impact of mitigation actions within the three participating states.

- The project produced an assessment of how the three participating states could contribute to meeting Brazil's NDC commitments under the mitigation scenario, as scoped out in phase 1 of the project. That scenario is applied to each state to produce state-specific scenarios of GHG emission on a sector-by-sector basis. The knowledge from these scenarios helps inform understanding of how the states could contribute to meeting Brazil's NDC targets.

- The project applied the MRV indicators identified in phase 1 of the project to the results produced under the reference and mitigation scenarios. This provided additional detail on how these scenarios affected GHG emissions on a sector-by-sector in each state and illustrated how the MRV indicators can be used to track progress in GHG emissions and the drivers of those emissions in the future.

3. Impacts of the project in the country

A major impact of the project was the greater engagement of the states of Brazil within climate change policy development. One way this was achieved was through capacity building workshops. Eight states participated in the first round of workshops. More detailed engagement was facilitated with the three partner states through additional rounds of workshops that focused on the more substantive aspects of the project. The project promoted close contact with institutional focal points in each state: the State Secretariat of the Environment of Amazonas (SEMA-AM); the State Foundation for the Environment of Minas Gerais (Feam-MG); and the State Secretariat of the Environment and Sustainability of Rio de Janeiro (SEAS-RJ).

The project promoted the engagement of state institutions and stakeholders in the climate agenda at a time when Brazilian states have assumed greater prominence on this issue. It showed the importance of evaluating actions and policies at the state level, including for the MCTI, which has been trying to integrate the subnational level into the national inventory.

A key outcome was the interest showed by state secretariats in using the results produced in this project to update their climate change plans. For example, the state of Minas Gerais already had a climate change plan with emission scenarios and intends to use the project's scenarios to update it. The state of Rio de Janeiro has a plan with emissions targets, but there is a certain consensus that these targets are not achievable. In this way, the project helped inform new climate change goals in the partner states.

In addition, state stakeholders now recognize better the importance of MRV indicators to track GHG emission trajectories and access climate financing. At a moment when climate action at the state level gained prominence, trustable procedures to monitor the results are crucial for receiving international resources to support it.

4. Lessons learned

Applying the scenario methodology at the subnational level demonstrated the value of illustrating to states the areas in which future mitigation actions were possible. For example, the scenario results showed that in the Amazonas, mitigation actions considered under the mitigation scenario significantly reduce overall emissions due to the potential changes in emissions from the LULUCF sector. However, in the states of Minas Gerais and Rio de Janeiro, the scenarios projected an increase in emissions even under the mitigation scenario.

States were interested in getting involved with the project in general because of the benefits that those results could bring for developing or updating state policies and plans. In general, the primary point of interest of the states was the use of the results and not the development of MRV indicators itself, given that sometimes state stakeholders could not precisely understand the role of the indicators. States were interested in getting involved with the project in general because of the benefits that those results could bring for the development or update of state policies and plans. In general the main point of interest of the states was the use of the results and not the development of MRV indicators itself, given that sometimes state stakeholders could not exactly understand the role of the indicators.

The development of a system of MRV indicators applied to state-level scenarios provided the states with a more detailed understanding of the future sources of GHG emissions and the key drivers of those emissions. However, a key lesson learned is that state institutions often do not have the necessary resources to carry out all the assessments and calculate GHG emission estimates. For example, to calculate GHG emissions from rates of deforestation.

A key lesson learned is the need to build capacity within states as part of future efforts to engage in climate change policymaking. During the workshops, it was difficult for participants from different areas to understand what constituted a mitigation policy or action that could be quantified and considered in the analyses. Furthermore, data availability is limited at the state level, making some studies difficult, such as state-level GHG inventories. A lesson learned is that in the future, tools could be used to assess capacity within participants ahead of workshops and develop materials, agendas, etc., to reflect the specific capabilities of the stakeholders.