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International Budget Partnership

A Guide to Analyzing the Public Budget for Climate Action: A Citizen's Proposal

with the support of

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Key steps for public budget analysis related to climate change

1 Define sectors and sub-sectors:

In order to analyse the budget, it is necessary to choose which sector you want to analyse.

2 Define the categories of analysis:

Do they contribute to mitigation?

adaptation?

Or cross-cutting activities?

3. Define the criteria for analysis:

actions

Criterion 1. Climate change oriented

Criterion 2. With positive impact on mitigation

Criterion 3. With positive impact on adaptation

Criterion 4. Simultaneous

Criterion 5. Exclusion criterion: negative impact

4 Select budget categories

Classify the budget and then the expenditure:

- Administrative classification
- Functional and programmatic classification
- Economic classification

5 Define sources of information

Sources: national, regional and/or local government budget documents.

Budget Cycle Stages

1. Budget proposal
2. Approved budget
3. Expenditure implemented
4. Periodic expenditure reports
5. Mid-year review
6. Year-end report
7. Audit reports

6 Identifies and processes information

Capture available budget information

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7 Climate budget estimation

Perform relevant calculations for estimating the climate budget or climate change related budget

8 Communicating the results

A strategy for disseminating the results will always be relevant.

9 Ongoing process

Conduct regular budget analysis on a quarterly or annual basis.

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Introduction

Fulfilling national and international commitments to reduce greenhouse gas emissions, as well as adapting territories, societies, and ecosystems to a changing climate, will require the mobilization and management of significant financial resources. While ensuring that developed countries provide financial resources to developing countries is critical, as is stipulated in the United Nations Framework Convention on Climate Change, there is also a need to mobilize resources at the national level in developing countries. The Paris Agreement has invited all parties to contribute to climate action, including the mobilization of finance and making these financial flows consistent with low greenhouse gas emissions and resilient development. This means that all countries united by common principles should, within their respective capacities and challenges, create public policies and budgets that help tackle climate change.

Climate change has many causes and effects and requires urgent intervention from many stakeholders. Governments cannot solve this problem alone. The private, financial, academic, and civil society sectors all have a role to play. Public participation is essential to incentivize and guide the participation of other actors (Guzman, 2020).

Governments, at both central and sub-national levels, need to factor climate change into their public policy and budgeting processes to mitigate losses to their economies and societies. As part of this process, they should examine how budget allocations can help them achieve climate objectives (Guzman, 2020). This does not always imply an increase in resources to tackle the problem. It can also mean reducing investments that are exacerbating it. Assessing public budgets is vital to understanding the extent to which a country is committed to addressing climate change and mobilizing finance for this purpose, as well as to identify potential gaps in public investments.

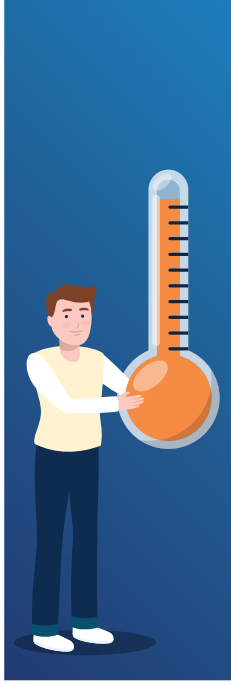
To date, there is no universally agreed upon definition of what climate finance means and, therefore, no single methodology to track and estimate it. However, there are existing methods and processes to track and assess climate finance flows, including international and national public and pri-

vate climate finance flows. These tools make it easier to identify investments that help reduce emissions and increase resilience to the negative impacts of climate change. Many of these tools have been created for international and regional organizations, but it is important to have a framework that can be used at the national level and by civil society organizations.

To that end, the Climate Finance Group for Latin America and the Caribbean (GFLAC, for its name in Spanish) and the International Budget Partnership (IBP) present this methodological guide, which is designed to support the work of civil society and other non-governmental stakeholders, as well as governmental stakeholders from central and local governments, and legislative representatives interested in exploring the public budget's role in tackling climate change.

This guide is based on GFLAC and IBP´s experiences in the field, and it provides steps and best practices for analyzing how public budgets address climate change. To do so, the guide is divided into four sections: i) a reflection on the importance of mainstreaming climate change into planning and budgeting processes, and the role of civil society in accomplishing this; ii) a review of the different methodologies for analyzing and identifying climate finance-related expenditures, including in national budgets; iii) a step-by-step methodology for climate budget analysis; and iv) a look at some lessons learned in climate budget analysis, including the challenges that civil society may face and ways to address them.

The importance of mainstreaming climate change into planning and budgeting processes and the role of civil society



Climate finance is used to spur action that can help reduce greenhouse gas emissions, decrease vulnerability to the threats associated with climate change, and promote adaptability to changes already underway. Even though the cost of tackling this problem is significant, the cost of action is lower than the cost of inaction (Stern, 2009). It has been estimated that the cost of adaptation in developing countries could be between USD 280 billion to USD 500 billion per year (UNEP, 2016), while the cost of mitigation will depend on the technology per sector. According to the report on the determination of the needs of developing country parties related to Implementing the Convention and the Paris Agreement, published in the COP26, the cumulative needs reflected in the National Determined Contributions of 153 parties, represents USD 5.8 trillion to USD 5.9 trillion up until 2030 (SCF, 2021 p.5). This without mentioning other needs reflected in other official reports.

While the cost of climate change will require investments from the private sector, which, in fact, has been helping many developing countries transition away from fossil fuels, the role of the state is indispensable. The public sector can create the necessary incentives to foster progress, and it can help establish a nation's priorities (Guzman, 2020). Given the central nature of the state, analyzing and understanding public budgets is crucial (Gutierrez, 2013).

Climate change will affect public finance systems around the globe by exacerbating existing problems, including food insecurity and water scarcity, while creating new ones, such as more frequent extreme weather events that will threaten citizens, especially vulnerable populations, and infrastructure. All of this will require additional investments at the national and subnational levels. For this reason, climate change should be considered at the beginning across all planning and budgetary processes in all countries, and particularly in developing countries that have scarce resources to tackle social, economic, and environmental issues (Guzman, 2020).

Such mainstreaming will be essential to achieve the Paris Agreement (2015), which, in Article 2.1.c., calls for "*making finance flows consistent with a pathway towards low greenhouse gas emission and climate-resilient development.*" Additionally, in Articles 9 and 13, it establishes that developed countries will continue leading the mobilization of climate finance and that this must happen in a transparent way, but it also calls on "other parties" to support these initiatives based on their capacities, referring to the role of developing countries.

The participation of both developed and developing countries will be critical to achieve the goal set by the Intergovernmental Panel on Climate Change (IPCC) in 2018 to reduce global emissions by 45% to avoid an increase of more than 1.5o C rise in the global temperature (IPCC, 2018). Efforts have been made since 2015 to address climate change in developed and developing countries through the Nationally Determined Contributions, which include specific mitigation and adaptation commitments. However, a 2019 study by the United Nations Environment Program (UNEP) found that current pledges in the nationally determined contributions (NDCs) will not meet the Paris Agreement targets and would instead "*lead to a global average temperature increase of between 2.7o C and 3.4o C by 2100.*" This increase would be catastrophic for people, societies, and economies, threatening lives and livelihoods, food and water supplies, and the ability to live in certain areas.

Given these threats, it is important to set higher standards for climate action. For instance, countries should raise their commitments in the NDCs. These increases will require both making entirely new investments and shifting investments that are carbon intensive to ones that promote sustainability. Making these changes will require political will, but it will also require the active participation of governmental and non-governmental stakeholders.

In this context, the role of civil society is highly relevant. First, civil society can help encourage a country government to adopt more ambitious public policy goals even as it monitors current policies and politics. Second, in terms of climate change, civil society can make a difference by helping to shape the allocation and execution of public budgets. Public budgets reflect a country's priorities (Gutierrez, 2013) because they demonstrate how available resources are directed. For this reason, analyzing the extent to which countries are incorporating climate change in public budgets is a major area of work for civil society.

There are several ways in which civil society can shed light on how public budgets are contributing to the climate crisis, such as:

1. Monitor and assess the allocation of public budgets in terms of climate change, including identifying expenditures that might be contributing to the problem and determining investment gaps.
2. Produce and disseminate reports to raise awareness of what funds are allocated in public budgets and examine levels of government transparency.
3. Identify how public budget allocations are meeting public policy goals and mandates, such as complying with the NDC.

4. Build and promote capacities for different entities and stakeholders so that they can help incorporate policies that tackle climate change into the planning and budgeting process.
5. Support the design of measurement, reporting, and verification systems for climate finance information, including both public finance and international finance.

There could be other areas of work related to climate international finance and public finance, such as the analysis of revenues. This guide, however, is focused on analyzing government budget allocation and offering tools for examining the extent to which public funds are being used to reduce greenhouse gas emissions and foster adaptation to climate-related changes that are expected and already happening.

II Methodological approaches for analyzing climate finance: civil society experiences

While there is no universally agreed upon definition of climate finance or sustainable finance, a few methodologies have been created to tag, label, or characterize public and private investments associated with climate change. Some of the most relevant are included in Annex I.

At the international level, there have been efforts to measure international finance flows from developed countries to developing counties. One example is the Rio Markers established by the Organization for Economic Cooperation and Development (OECD). These markers are intended to identify climate-related spending on mitigation and adaptation, and they include statistical reports on specific environmental categories. A similar undertaking has been adopted by the Multilateral Development Banks, which, since 2011, have been reporting how their investments are affecting climate change.

One of the first attempts to measure domestic flows associated with climate change was the Climate Public Expenditure and Institutional Review (CPEIR), which was created by the United Nations Development Program to identify and track climate-related public expenditures. Earlier this year, the World Bank took a similar step and published a review of climate change budget labelling, which included an examination of the methodologies and practices used by 19 national and sub-national governments.

The drawback to CPEIR analyses, as well as some others, is that they are conducted by governments themselves and do not always allow for neutral or independent assessments of public budget allocations. For this reason, civil society organizations and think tanks have been working to create independent processes for measuring climate-related government spending. This kind of review is underway in South Asia. For instance, Action Aid Bangladesh (AAB), which has made protecting women and girls against the threats of climate change a priority, is holding its national government accountable for how it is using public resources to help vulnerable populations become more resilient. AAB is part of a broad effort by civil society to get the country's government to use public money to reduce greenhouse gas emissions and support adaptation programs.

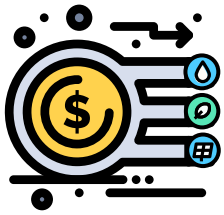
Similarly, ForestAction Nepal, a research and advocacy organization focused on the environment, published a Citizens Climate Budget in 2019. The report evaluated whether the Nepali government was spending public money in ways that are consistent with policies that reduce greenhouse gas emissions. The report also shed light on the government's investments in programs that protect and build the resilience of those most vulnerable to the impacts of climate change.

In Indonesia, INISIATIF, a civil society organization, has been working with Kesatuan Nelayan Tradisional Indonesia, an association of traditional small-scale fisherfolk, to incorporate climate-related policies into national development planning.

In Latin America and the Caribbean, budget analysis of this kind has also started taking place. GFLAC, a civil society organization, has been working for nine years to analyze climate-related public budget information in 21 countries, experience that has been invaluable in building this guide.

There are several challenges when it comes to accessing and analyzing public budgets, most of which are related to the availability and disaggregation of data and other transparency issues. Nevertheless, when it comes to tackling climate change, it is critical for civil society to take the necessary steps to examine public budgets and, thereby, understand the priorities of governments. With this in mind, this guide offers a methodology to examine public budgets and their climate-related impacts.

III Key steps in analyzing public budgets related to climate change



As explained in the review of existing methodologies for climate change budget analysis, there is currently no universal methodology that allows for standardized application in different national and sub-national contexts. For this reason, this guide proposes that civil society uses a hybrid approach, which builds on existing international and national methodologies.

1 Define sectors and sub-sectors

As indicated by the IPCC, climate change is a multi-causal and multi-sectoral problem that can be exacerbated by several activities in certain sectors while creating impacts in other sectors.

In practical terms, this means that when analyzing climate-related public spending, it is necessary to look at a range of sectors, and what activities within those sectors help reduce emissions and those that generate them. While the analysis of the environmental sector is critical – it is traditionally where designing and coordinating actions in the climate change agenda are to be found – it is therefore also necessary to analyze other sectors, such as energy, transportation, and agriculture. A list of relevant sectors that might be appropriate for analysis is included in Annex II.

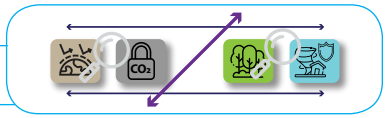
The selection of these sectors may vary depending on the objectives of the analysis, existing capacities, and resources, as well as levels of transparency and access to public information in a country. In some cases, for example, it may be relevant to conduct a broad analysis of public sector funding to understand how a country is addressing climate change on a national level. In other cases, it may be relevant to carry out more narrow analyses, such as a comparison across sectors.

According to the OECD's Rio Markers' methodologies, the sectors that should have the highest priorities when analyzing climate-related public expenditures include:

- Water and sanitation, transportation, energy, agriculture, land use, land-use change, and forestry, waste, and industry, when they refer to mitigation actions; and,
- Health, water and sanitation, agriculture, forestry, fisheries, environment, and disaster prevention and preparedness, when they refer to adaptation actions.

There might be additional relevant activities that may be carried out by different sectors: environmental policy and management, biosphere protection, biodiversity, environmental education, and environmental research. In this guide, we suggest aggregating these activities under a "cross cutting sector" category.

2 Define categories of analysis



Once the sector or sectors to be analyzed are determined, it is important to define the approach and categories that will be analyzed and identify whether these activities help reduce emissions (mitigation) or help reduce vulnerability to climate change (adaptation). There is also a third category, proposed by GFLAC in 2014, which includes actions that help both mitigate climate change and increase adaptation, often referred to as cross-cutting actions. It is also possible to analyze activities that increase emissions and are having a negative impact.

How to know when an activity is contributing to mitigation or adaptation?

Mitigation:

i. Definition: Actions that help stabilize greenhouse gas emissions, prevent damage from human activities, as set out in the United Nations Framework Convention on Climate Change, and promote efforts to limit emissions or to sequester gases.
ii. Characteristics: To be considered as mitigation, actions must contribute to:
    - Limiting anthropocentric greenhouse gas emissions, including gases covered by the Montreal Protocol.
    - Limiting the emission of Short-Lived Climate Pollutants.
    - Promoting climate policies and/or the development of climate change mitigation objectives, as set out in the NDCs and long-term low emissions and resilience strategies.
    - Protecting and enhancing carbon sinks.
    - Integrating climate change concerns into the development objectives of recipient countries through institution building, capacity building, strengthening of regulatory and policy frameworks, or research for emission reductions.
    - Strengthening countries' efforts to meet the objectives of the Paris Agreement.

Adaptation:

i. Definition: Actions that decrease vulnerability to climate change impacts and risks. Also included are those activities that promote, maintain and/or increase adaptive and resilient capacity.
ii. Characteristics: To be considered as adaptation, actions must contribute to:
    - Reducing vulnerability in the context of climate change.
    - Explicitly identifying the causality of climate change vulnerability.

- Increasing resilience to the negative impacts of climate change.
- Strengthening the capacities of communities, assets, or ecosystems to cope with climate change.
- Increasing the resilience of communities, assets, and ecosystems to the negative impacts of climate change.
- Identifying risks, vulnerabilities, and impacts related to climate variability and change.
- Adjusting human or natural systems, in response to projected or actual climatic stimuli or their effects, in ways that moderate harm or harness their beneficial aspects.

Cross-cutting: Mitigation and adaptation

i. Definition: Actions that reduce emissions and/or contribute to the conservation of carbon sinks and, at the same time, contribute to the reduction of vulnerability and increase resilience.
ii. Characteristics: Actions have a clear link to emission reductions and, at the same time, allow reducing vulnerability to the negative impacts of climate change and vice versa. In other words, they combine the characteristics that apply to mitigation and adaptation, as outlined above.

Greenhouse gas intense activities

i. Definition: Actions that increase the emission of greenhouse gas into the atmosphere, altering its natural composition.
ii. Characteristics: Action that increase one of the greenhouse gas emissions in a way that alters the natural composition of the atmosphere and that is associated to the emitter sectors.

3 Define analysis criteria

Because climate change is a problem that increases or intensifies other problems, it is sometimes difficult to determine whether a problem is caused by climate change or whether it is something that would have happened in the absence of it. Similarly, there are activities that can help reduce emissions and increase resilience even though they were not created for these purposes. In this context, there is a debate at the international level about the relationship that one activity has or does not have to climate change. Since there is not a methodology to resolve this specific debate, this guide proposes four criteria that can be applied to define which actions can be included in the analysis, based on existing international methodologies. Depending on the context of the countries to be analyzed, these criteria can be modified as needed.

When can an activity be considered climate relevant?

Criterion 1 **Explicit climate change-oriented actions.** This refers to actions that have been created to address climate change and are therefore explicitly labelled for climate change, mitigation, adaptation, or both.

Guiding questions Are resources explicitly earmarked for institutions/policies/programs/projects/activities to implement climate change mitigation or adaptation, and can it be proven that these actions are for the express purpose of combating climate change? Example: National climate change programs, institutions dedicated to addressing climate change, or any actions whose express purpose is to combat climate change.

Scoring The budget for explicit climate change-oriented actions will be fully counted (100%).

Criterion 2 **Actions that have a positive impact on climate change mitigation, even though they were not created for that purpose and are not marked as climate relevant.** Actions that were not explicitly created to address climate change but help reduce greenhouse gas emissions and increase natural carbon sinks, according to the emitting sectors of each country (mitigation).

Guiding questions Are there resources allocated that are associated with emission reductions and protection of carbon sinks (mitigation)? Is it possible to link financial allocation and emission reductions?

Scoring The budget for actions that spur climate change mitigation will be partially counted (50%).

Criterion 3 **Actions that help advance climate change adaptation, even though they were not created for that purpose.** Actions that were not explicitly created to address climate change but help reduce the vulnerability of people, territories, and ecosystems to the effects of climate change and promote adaptation and resilience (adaptation).

Guiding questions Are these resources associated with reducing vulnerability, adapting, and increasing resilience to climate change impacts? Is there a clear link between the allocated resource and climate change adaptation?

Scoring The budget for actions that foster climate change adaptation will be partially counted (50%).

Criterion 4 **Actions that promote both mitigation and adaptation even though they were not created for that purpose.** Actions that were not explicitly created to address climate change but have the potential to reduce emissions and, at the same time, reduce vulnerability to, and increase adaptation and resilience to, the negative effects of climate change.

Guiding questions Are there resources associated with both emission reductions and vulnerability reductions and/or adaptation to climate change impacts? Is there a clear link between the allocated resource and climate change mitigation/adaptation?

Scoring The budget for actions that promote both climate change mitigation and adaptation will be partially counted (50%).

Criterion 5 **Exclusion criterion. Actions with negative environmental, economic, and social impacts.** It is proposed to exclude from climate budget accounting actions that were supposed to address climate change or have a climate change-related positive impact but have negative effects on the environment, economy, and society. Identifying these actions can be made using various criteria, including criteria for weighing benefits against negative effects, depending on the national, local, and community contexts of each country.

Guiding questions Are there any activities that were supposed to help reduce emissions and/or vulnerability but, overall, negatively impact the environment and society?

Proposed activities that, due to their widespread negative impacts, should be excluded from any climate budget analysis, irrespective of the context: (i) nuclear plants; (ii) large hydroelectric plants; (iii) medium and small hydroelectric plants when their social and environmental impacts are high (e.g. when several plants are built on the same river); (iv) natural gas exploitation by conventional or unconventional techniques (hydraulic fracturing); (v) cogeneration plants; (vi) carbon capture and storage; (vii) any activity or project whose environmental and/or social impact assessment indicates negative impacts; and (viii) those activities and projects that have been denounced at the national, regional and/or international level for violating human rights.

Note about scoring There are different methodologies for scoring actions since there is not always a clear relationship between the action and the goal. For instance, some sources refer to the necessity to estimate 100%, 80%, 60%, 40%, or 20% depending on the relationship of the project with climate change. However, to do that it is necessary to have detailed information about what part of the project is or is not related to climate change, which is not always available. In this sense, the scoring proposed in this document is meant to be a general estimation about the extent to which climate change has been addressed in the public budget, which may not reflect the exact sum of resources, but should show the intentions and effects of governments in doing so.

4 Select budget categories

The next step is to know what part of the budget will be analyzed. The budget can be presented in different ways in different countries, but there are at least three categories of analysis that are universally used to classify the budget and then the spending:

- **Administrative classification:** answers the question: who spends? This lets us know which ministries/departments/agencies oversee allocating and spending in the budget.
- **Functional and programmatic classification**: answers the question: what is the purpose

of the expenditure (e.g., health, disaster preparedness)? This lets us know the objective or purpose of the budget and expenditure.

- **Economic classification:** answers the question: what type of expenditure? It lets us know whether the expenditure is current (i.e., one that is necessary for the daily functioning of the state), or capital or investment related (i.e., an expenditure that generates an increase in the state's assets, such as infrastructure spending or financial investments).

The choice of analysis categories will largely depend on the objectives to be achieved when analyzing the budget. However, this methodological guide proposes that the analysis should use the administrative and the programmatic approach, and that can be carried out as follows:

1. Identify and review the budget for the fiscal year corresponding to the analysis period, ideally the executed or audited budget that shows the true allocation of resources. Otherwise, the proposed budget can be analyzed.
2. Based on the selected sectors, identify the related institutions to be included in the analysis. For instance, in the energy sector, the Ministry of Energy.
3. Once the institutions have been selected, identify spending on climate change (mitigation/adaptation/both) related to both functions and/or programs.
4. For the selected functions and/or programs, identify the total expenditure directed for these purposes, including current and capital expenditures.

In this sense, although the aim is to have information at the functional and, ideally, programmatic level, it is also relevant to analyze the administrative level of the institutions that are specifically and explicitly in charge of actions to address climate change, and to have both analyses available.

5 Define sources of information

The sources of information needed to conduct the budget analysis are mainly government budget documents and can reference the different levels of government: national, regional, and/or local. The selection of a specific document or group of documents in each case will largely depend on three factors:

1. The purpose for which the information is to be used and the point in the budget cycle that is to be influenced.
2. The availability of existing information in the country. Unfortunately, there is no systematic and timely publication of all budget documents in all countries; and
3. The degree of comparability of the information required, such as between countries or between sub-national governments.

It is important to mention that a budget's design, negotiation, and approval follows a public policy process, and that will determine what documents are available for carrying out a budget analysis

related to climate change. In this section, the main stages of the budget cycle and its relevance in the advocacy strategy will be discussed:

1. **Budget proposal:** The first stage is the elaboration of the budget proposal, which is created by the finance ministry or related agency after each of the different ministries present their priorities. This proposal represents the spending plans of the executive branch (sometimes called the central government) for a given fiscal year, and it is presented to the legislature for discussion and approval.

   In terms of advocacy, this stage indicates what a sector's main priorities are, and whether different ministries are introducing programs or activities related to climate change. In this moment, the identification of gaps in the budget proposal could be useful to start a dialogue with those proposing the budget and with those that will oversee approval of it. This is an important moment during which the public and other stakeholders can be made aware of the proposals and changes, or alternatives can be offered and incorporated.
2. **Approved budget:** After the legislature negotiates, revises, and approves the budget, the budget document with spending forecasts for the fiscal year is produced. This document provides information on public priorities for that year and what climate-related actions are supposed to be financed. Stakeholders can now start tracking the implementation of the approved budget and monitor spending to make sure investments are appropriate and effective.
3. **Executed spending:** After the fiscal year is over, a report about the executed budget is produced. This document shows how resources that were allocated to programs and institutions were spent. At this point, actual spending related to climate change can be analyzed and assessed. Observers can evaluate whether money was used in the ways that were intended, whether the money was spent effectively and whether the stated goals were accomplished. It is important to mention that just because something in the budget was approved, does not mean that it was spent. Sometimes institutions do not use all their resources or resources may be used in ways that were not intended. Conversely, sometimes spending will exceed what was approved, although that is less common, especially because many countries have fiscal restraints in place.
4. **Periodic expenditure reports:** Treasury authorities often provide quarterly reports about the budget to the legislature, giving updates on revenue and expenditures. These reports create ongoing opportunities for monitoring climate-related spending including whether funds are being used as planned. Whether these regular reports will be useful for climate change analysis depends to a large extent on their level of detail—that is, whether the information provided is sufficiently disaggregated and climate spending can be scrutinized.
5. **Mid-year review:** In these documents, the government presents detailed information on spending midway through the fiscal year and explains economic and social developments that may be affecting initial budget planning. Depending on the level of detail in these reports, it is possible to get a better understanding of how much progress is being made on climate change spending and, perhaps more importantly, to make recommendations for improvement.

6. **Year-end report:** This document presents final information on spending for the year. In many cases, this report makes the government's priorities clear, as expenditures can vary substantially from what was originally allocated. All told, these reports reveal how governments carried out climate-related spending and are a good source of information for making recommendations for future budgets.
7. **Audit reports:** These reports are key to gaining a deeper understanding of the performance of public spending and are often the only independent evaluations of government spending. Although these documents do not often include details on climate change spending, they can be used to identify key climate change-related institutions and/or programs, which could be sources of additional information.

6 Identifying and processing information

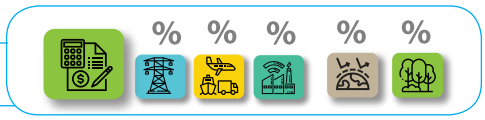
Once the sources of information have been identified, the sectors selected, and the categories of analysis defined, the available budget information can be searched and captured. For this purpose, using a format that allows data processing, such as Excel or similar, is recommended. As far as structuring the information, although this may vary depending on the objective of the analysis, in general terms, the following information, at the least, should be included:

- Name of the program or activity, refers to the program or activity to be analyzed
- Fiscal year, refers to the year of analysis (2018, 2019, 2020, etc.)
- Period of analysis, refers to the specific period to be analyzed (one year, one quarter, etc.)
- Source of information, refers to the specific document reviewed and its source
- Type of budget, refers to the stage of the budget (allocated or spent)
- Sector and sub-sector, refers to the sector of analysis (energy, environment, transport, etc.)
- Institution, refers to the entity in charge of the execution of the budget (Ministry of Energy, Ministry of Environment, etc.)
- Function, refers to the area of analysis (energy sector, environmental sector, etc.)
- Program refers to the specific program where the resources were allocated (for instance, Special Program of Climate Change)
- Activity, refers to the specific activity where the resources were allocated (for instance, Design of the Special Program of Climate Change)
- Type of expenditure, refers to the type of expenditure (current and capital)
- Category of action, refers to the goal that the activity pursues (mitigation, adaptation, or both)
- Criteria, refers to the criteria of analysis (explicitly climate-related actions, associated actions, and actions with negative social and environmental impacts)
- Amount of budget, refers to the number of resources allocated
- Currency refers to the currency used in the analysis. This is relevant, especially if cross-coun-

try comparisons are made and if disseminating the data at the regional or international level is expected. Using the local currency for the analysis and USD for comparative purposes is recommended

- Exchange rate refers to the exchange rate used, as well as the source. It is recommended to use the average of the exchange rate applied to the period of analysis

7 Estimating the climate budget



Once the budget information has been identified, captured, and systematized, the next step is to perform the relevant calculations to estimate the climate budget or the climate change-related budget. There are different calculations that can be made, depending on what the goal of the analysis is and what actions will be recommended. However, there are several calculations that are generally relevant when it comes to identifying the climate budget. Analyses can include some or all of these calculations, or even combinations of them:

- **Climate change budget as a share of the total national budget:** this shows the percentage of the total national budget that a country is directing to actions to address climate change.
- **Climate change budget for each category of analysis:** this shows the percentage of the climate budget that is directed to adaptation, mitigation, and both.
- **Budget for climate change within each sector, subsector and/or institution:** this shows the percentage of the national budget that each sector, subsector, or institution is allocating to deal with climate change.
- **Climate change investment as a share of infrastructure investment or current expenditure:** this shows what percentage of the climate change budget is being directed to infrastructure investments or to current expenditure.
- **Budget for climate change versus budget for activities that cause this problem**: this compares the budget dedicated to tackling climate change with the budget for activities that are increasing greenhouse gas emissions or hindering adaptation to the effects of global warming. Although this guide does not include a specific methodology for carrying out this kind of comparative analysis, such an examination can be informative and is encouraged.

8 Communicating the results

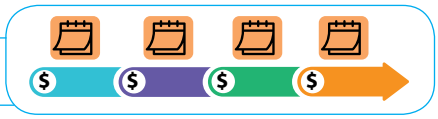
Once the analysis has been carried out, it is time to communicate and disseminate the results. Choosing a comprehensive strategy for releasing this information will depend on the reason or reasons for conducting the analysis. Some of these reasons may include raising public awareness, influencing a public policy process or budget negotiations, encouraging discussions with decision-makers, or supporting advocacy at the regional or international level. That said, as part of an

overall strategy for releasing the information, there are several options for communicating and disseminating the results, such as:

- **General report:** A comprehensive document that presents detailed information about the results of the budget analysis. This report should be created with all the stakeholders who will be reading it in mind. At the same time, the report will be stronger if it includes information that will let readers understand the context such as: i) information on national, regional, and local greenhouse gas emissions and climate change-related vulnerabilities; ii) the methodology of the analysis and sources of information, both of which will provide transparency in how the data was collected, the limitations of the analysis, and allow for its replicability; iii) the results of the analysis, including the different categories of analysis used; iv) main conclusions based on the analysis and in terms of the country or countries involved; v) and main recommendations based on the results.
- **Executive summary:** A short document (ideally no longer than five pages) that compiles and summarizes the main elements of the general report, with an emphasis on findings, conclusions, and recommendations. It is a top-line document for people, especially decision-makers, who are interested in the topic but are not likely to dive into the longer report.
- **Tailored brief:** A very short document (maximum two pages) that presents the main results of the analysis, focusing particularly on the recommendations. It is designed to give the information to stakeholders, especially key decision-makers who can act on the recommendations. These briefs could take the form of one-pagers and could be prepared for different stakeholders.
- **Country fact sheet:** If the analysis was carried out in several countries, it may be useful to prepare separate fact sheets for each country and include context, results, conclusions, and recommendations in each country's fact sheet. Each of these documents should be short and allow the reader to get a quick and concise understanding of a country's situation. If the analysis was conducted at the sub-national level, specific factsheets could be created for each state, province, or relevant territorial demarcation.
- **Infographics:** These visuals present the results in a creative, schematic, and easy-to-understand way. An infographic typically includes text and graphic elements, such as pictures, data tables, and charts (often referred to as data visualizations), or even cartoons. Any of the above documents could contain infographics, but stand-alone infographics could also be developed to present different aspects of the results of the analysis. Infographics are a good tool for communicating these issues and relevant findings on social media and to wider audiences.
- **Presentations:** An effective way to disseminate the results, but also to generate discussion, is to develop presentations of the results. These presentations could be made by different actors and could be delivered either in public or in a more selective setting with a targeted audience. During the budget negotiation process, it is often useful to make presentations to members of the legislature or staff.

- **Press conferences:** To generate publicity, it may be useful to hold press conferences or other events for members of the news media. These events can help deliver information or results to the public and draw attention to important issues.
- **Media publications:** Publishing articles and blogs in the media is useful for reaching both general and specific audiences. These pieces can be helpful when trying to reach decision-makers, especially by publishing in outlets that they tend to consult the most.
- **Other materials:** Videos, pictures, and other materials could be produced to communicate the results to different audiences.

9 Ongoing process



As this guide has demonstrated, conducting public budget analysis is a vital part of tackling climate change. Nevertheless, a one-and-done effort has its limits. By contrast, conducting this analysis on a regular basis will amplify its value. With regular reviews, comparisons between different years or time periods can be made. This practice will reveal whether governments are making progress on their national and international climate commitments. It will also indicate whether civil society actions from previous analyses have been effective at improving climate-related government allocations and spending. For these reasons, this guide recommends updating the analysis information on an annual basis, although for certain actions, it may be relevant to incorporate analysis of spending on a more frequent basis, e.g., quarterly.

Updating information in a timely manner is not always easy to accomplish. Obstacles include lack of transparency and limited access to information. There are also differences in the way countries and regions publish budget data. It is, therefore, advisable to know when governments plan to put out budget information. Knowing these schedules will make it easier to update budget data in a timely and consistent manner and to adequately plan the communication, dissemination, and possible advocacy actions to be carried out.

Also, by knowing budget information schedules, public information requests can be made most effectively, where such tools exist. These requests can be used to obtain information before it is officially published by governments. Again, adequate planning is needed to make information available in a timely manner, as these types of access to information mechanisms often have long waiting times.

Lessons learned in climate change budget analysis IV

The climate budget analysis work conducted by GFLAC for more than 10 years in various countries in Latin America and the Caribbean, as well as IBP's more than two decades of experience supporting civil society budget analysis and advocacy, has taught us many lessons. These lessons can be instructive for civil society when carrying out budget analysis in climate change. To that end, here are some of the challenges that often arise when conducting climate-related budget analysis and ways to address them:

- Climate budget analysis methodologies need to be flexible so that they can adapt to various on-the-ground circumstances when they are executed. While the guidance presented here has been applied and tested in several countries, it is still adaptable. In addition, those using this guide are encouraged to be creative in applying it to their own contexts.
- Access to public information is critical when conducting budget analysis. However, climate-related public information is not always easy to access. The information may not be published, or it may be published irregularly or only refer to high levels of aggregation. To address these challenges, there are several strategies that can be pursued:
    - Before starting the analysis, find out what documents are being published and the dates when they are to be published. From there, pinpoint what climate-related information will be available for the analysis and how that information can be used.
    - When information is not available or its level of aggregation does not allow for analysis, use whatever channels are available to make public information requests for the information that is needed. As noted earlier, responses to these requests often take a long time, so it is best to incorporate those likely delays into the analysis work plan. Also, to help save time, seek out advice on the best way to request information and the best institutions to make requests from.
    - If the information is too aggregated, it may be appropriate to include information at the institutional and/or functional level. If it is impossible to determine climate-related budget allocations or spending, that obstacle could be discussed in the analysis and recommendations for improving transparency could be made, such as greater levels of disaggregation, using climate change labels, or both.

- If the analysis is going to be conducted in different countries or in different territorial divisions within one country, focusing on information that is easy for making comparisons is recommended, as long as that information is consistent with the objectives of the analysis. For example, only allocated budgets were analyzed for the Sustainable Finance Index (SFI), which was started by GLFAC in 2021, because the executed budgets in many of the countries did not include enough detailed information. The SFI looked at budget earmarks for climate change, renewable energy, energy efficiency, and disaster response in the corresponding sectors. By using approved spending, the climate-related analysis could offer accurate comparisons between countries. It also revealed which countries were using labels for climate change spending in their budgets.
- Many countries publish budget information in formats that create challenges. For example, some countries use read-only formats (e.g., PDF), which means the information has to be manually inputted into Excel or other software for analysis. This step adds time and increases costs. This obstacle should be addressed and, when appropriate, governments should be called on to use open formats.
- Releasing the climate budget analysis as quickly as possible will, in many cases, allow it to have the greatest impact possible, although the timing of its publication will, of course, largely depend on why the analysis was conducted and the availability of information. Speed, however, is not the only consideration. The analysis of information can be influential if it is published during budget negotiations – that is, when the executive presents the budget proposal to the legislature for discussion and approval. Other moments may also be pivotal, depending on what the analysis seeks to achieve and who could be in a position to use it.
- Budget information is highly technical, and those who are not specialists will often find it hard to understand. At the same time, communicating budget information to most people can be challenging. Conveying climate-related budget matters can be more difficult, even when it comes to people who are familiar with budget information. That is because not all of them are aware of climate change issues and how they intersect with the budget. For this reason, developing a comprehensive strategy for disseminating and communicating the results is key to ensuring that the information reaches the right people and is used most effectively. As part of that strategy, as explained in the section on communicating results, using different media and formats can be critical when targeting particular audiences.

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Annex I. International methodologies related to international and national climate finance

Methodology	Key features
Methodologies to analyze international climate finance flows	
EU Climate Change Taxonomy	This taxonomy builds on the European Green Deal regulatory framework that establishes an EU-wide classification system or 'framework' aimed at providing businesses and investors with a common language to identify the extent to which economic activities can be considered environmentally sustainable. The Taxonomy Regulation sets the framework for EU taxonomy by outlining four conditions that an economic activity must meet to qualify as environmentally sustainable: (i) contribute substantially to one or more of the six environmental objectives of the Taxonomy Regulation; (ii) not cause significant harm to any of the other environmental objectives; (iii) be carried out with respect for minimum (social) safeguards; and (iv) comply with technical screening criteria set by the European Commission. In this context, the EU Taxonomy Act specifies the technical screening criteria under which certain economic activities qualify as making a substantial contribution to climate change mitigation and adaptation, and for determining whether those economic activities cause significant harm to any of the other relevant environmental objectives. The screening criteria are presented by sector, by activity within each sector, and by condition ("substantial contribution of the activity to climate change mitigation" and "no significant harm").
Inter-American Development Bank (IDB) climate change budget markers	The IDB's proposed method of tagging is based on the importance of having a common methodology for classifying climate expenditure that allows it to be linked to existing international statistical systems for classifying budget information. The purpose of this is to have integrated systems that not only make it possible to identify climate-relevant public spending (tagging), but also to link the budget with specific policies (mitigation, adaptation, and risk and disaster management) and to evaluate their results (i.e., the impact they have on climate change). The authors of this proposal argue that the development of a tagging methodology aligned with the needs of policy makers and with a statistical standard requires accounting for: i) the need to create a broader classification system for climate spending than the existing functional classifications that classify spending based on its intention or purpose. These classifications are limited for classifying climate change spending, as they do not allow for the identification of spending that, although its main motivation is not to address this issue, does have an impact on it; and ii) the need to generate a specific classification system for climate change, which should be consistent with existing systems at the international level.

Common Principles for Climate Mitigation Finance Tracking and the Adaptation Finance Tracking Principles	In 2015, the Multilateral Development Banks (MDBs) and the International Development Finance Club (IDFC) published the Common Principles for Climate Mitigation Finance Tracking and the Adaptation Finance Tracking Principles, which set out the parameters for identifying and estimating the volume of mitigation and adaptation finance in MDB and IDFC Operations: The adaptation methodology consists of three steps: 1) establishing the climate change vulnerability context of the project; 2) making an explicit statement of project intentions to reduce vulnerability to climate change; and 3) articulating a clear and direct link between specific project activities and the project objective of reducing vulnerability to climate change. The identification and estimation of adaptation funding is limited to those project activities (projects, project components, or elements or portions of projects) clearly linked to addressing vulnerability to climate change. The mitigation methodology consists of i) definitions: an activity is related to climate change mitigation if it promotes "efforts to reduce or limit greenhouse gas emissions or enhance greenhouse gas sequestration"; and report, in accordance with the principles, that it does not involve climate change impacts; ii) guidelines; and iii) a list of activities classified by category and subcategory.
OECD Rio Markers for Climate DAC	This marker methodology was created by the Development Assistance Committee (DAC) to annually monitor development assistance from bilateral and multilateral sources aligned with the objectives set out in the Rio Conventions related to climate change. Among the existing markers are those created for climate change mitigation and adaptation activities, which indicate the donors' policy objectives for each funded activity. For this approach, there are two ways to classify funding: i) main objective (mitigation or adaptation) (with a score of 100%), when advocacy is stated in the activity's documentation as one of the main reasons for carrying out the activity. That is, the activity has been funded specifically to achieve this objective; and ii) activities marked as «significant» (with a score of 40%), when they have other main objectives, but have been formulated or adjusted to help address climate change issues.
Methodologies to analyze domestic climate finance flows	
The United Nations Development Program (UNDP) Methodological Guide for Public Expenditure and Institutional Analysis on Climate Change (CPEIR)	This Guide provides elements for incorporating climate change into budgeting and planning processes, but recognizes that the scope, content and process of this analysis will vary according to each country's particular needs and circumstances. For this proposal, the analysis of public climate expenditure consists of quantifying public climate change expenditure as a proportion of total public expenditure and measures fiscal policies, such as tax incentives and subsidies, as part of climate finance instruments. To guide the identification of climate change-related spending and make it as comparable as possible across countries, the Guide proposes to use two methods: a) the UNDP/World Bank's standardized CPEIR Typology, which establishes a set of standardized categories to identify and classify climate spending; and b) the National Policy Objective Typology, which assesses national climate change policy priorities against the government budget.

Climate Budget Labelling (CBT)	It is a tool that aims to enable government to make informed investment decisions, facilitate better integration of climate change into national and sub-national budgets, and enable tracking and monitoring of resource allocations that are relevant to climate change in the country. The main components of CBT are: 1. Definition of climate activities: The definition of which activities are climate-relevant (mitigation and adaptation) is the first step in climate budget labelling and determines whether the expenditure item will be labelled or not. 2. Classification of climate-related expenditures: Following the identification of mitigation and adaptation-related expenditures to be labelled, the expenditure must be classified, which determines the climate labels that the expenditure item will have. Based on CPEIR's experience, the proposed typology has three pillars of classification (Policy and Governance; Scientific, Technological, and Social Capacity; and Climate Change Compliance) and three levels of classifications (Pillar / Category / Task). 3. Weighing climate relevance: CBT proposes to follow the UNDP CPEIR Methodological Guide, which provides detailed guidance on weighing the climate change relevance of each expenditure item. 4. Design of the labelling procedure: The design of the labelling procedure depends on the type of expenditures the government would like to label and the country's budget process.
Methodologies to analyze both international and domestic climate finance flows	
Sustainable Finance Index (IFS) of the Climate Finance Group for Latin America and the Caribbean (GFLAC)	The IFS is a tool that allows monitoring of national and international revenues and expenditures in developing countries to address the problem of climate change and the sustainable development objectives associated with it, as well as to identify those resources that could be hindering such progress, such as those directed towards activities associated with the extraction and production of fossil fuels, the main emitters of greenhouse gas in the world. The aim of this Index is to be able to carry out annual analyses of the state of sustainable finance in the countries assessed, allowing for comparisons between countries over time. For this reason, the authors used a methodology that allows for such comparisons given the enormous challenges of access to budget information on climate change and the lack of a common standardized labelling methodology. Thus, the public budget analysis was based on the following elements: i) budget specifically labelled for climate change in the environmental sector; ii) budget specifically labelled for renewable energy and energy efficiency in the energy sector; and iii) budget labelled for risk management and natural disaster response within the institution in charge of coordinating this policy in each country. Based on these data, the Sustainable Budget variable was calculated by estimating the percentage that the sum of these elements represented of the country›s total budget. Additionally, the BPI is composed of the following variables: Carbon Intensive Budget (comprised of the budget allocated to hydrocarbon exploitation in the energy sector as a percentage of the country›s total budget); Sustainable Revenues (revenues from international cooperation and financing for climate change as a percentage of the total for development); and Carbon Intensive Revenues (revenues from exploration and extraction of hydrocarbons and minerals, and from fuel taxes).

Annex II. Sectors and subsectors related to climate change (based on GFLAC´s methodology)

SECTOR	SUBSECTOR	No	ACTIVITY	MITIGATION	ADAPTATION	BOTH IMPACTS
Energy	Electricity generation, improvement, and access	1	Increase the share of renewable sources in the energy matrix (wind (offshore and onshore), solar photovoltaic, geothermal, tidal, hydroelectric, biomass and biogas).	1		
		2	Generate energy with non-conventional sources in non-interconnected areas (hybrid systems).	1		
		3	Build, maintain and optimise transmission and distribution systems for the use of renewable sources.	1		
		4	Integrate smart grids into the national grid system.	1		
		5	Using biomass for thermal applications	1		
		6	Cogeneration with biomass	1		
		7	Implement biomass removal plans for hydropower plants with flood valleys	1		
		8	Producing biofuels (low carbon footprint)	1		
		9	Accessing energy through rural electrification		1	
	Energy efficiency	10	Optimise and increase the efficiency of air-conditioning and heating systems.	1		
		11	Using solar energy for water heating	1		
		12	Improving energy efficiency in public lighting and remote management	1		
		13	Change incandescent bulbs to energy-saving bulbs (LEDS)	1		
		14	Using efficient cookers to reduce traditional biomass consumption	1		
		15	Promoting thermal insulation in buildings	1		
		16	Using renewable sources for water pumping systems	1		
		17	Increasing the energy efficiency of wastewater treatment plants and the sewerage system	1		
		18	Promoting energy efficiency in power generation	1		
	Policy, law, and research for energy transition	19	Develop institutional arrangements to promote and implement renewable energy projects.	1		
		20	Issue technical regulations on energy efficiency	1		
		21	Managing demand by regulating energy tariffs	1		
		22	Promote economic and fiscal incentives for the use of renewable energy and energy efficiency.	1		
		23	Efficient pricing of fuels and electricity (rationalisation of subsidies, end-user tariffs, regulations on generation, transmission or distribution).	1		
		24	Modelling energy consumption in various sectors for decision-making purposes	1		
	Hydrocarbon production	25	Promote and implement energy efficiency projects in the hydrocarbon sector.	1		
		26	Recovering condensates in crude oil storage systems	1		
		27	Enhanced oil recovery	1		
		28	Harnessing methane from leaks, venting and flaring in the oil and gas chain	1		
		29	Capture and store CO2 in refineries.	1		
		30	Optimising pipeline efficiency	1		
		31	Promote the measurement, reporting and centralisation of information on greenhouse gas emissions generated by the hydrocarbon industry.	1		
	Mining production	32	Research and capacity building to improve the resilience of mining activity.		1	
		33	Efficient practices in mining activities			1
		34	Harnessing methane in leaks, venting and flaring from the underground and open-pit mining chain	1		

Environment and Natural Resources	Water resources	35	Promote water harvesting and storage in strategic areas at risk of water scarcity due to climate change.		1	
		36	Conserving water in priority and water-stressed areas due to climate change		1	
		37	Floodplain restoration for flood control		1	
		38	Strengthen the national hydrometeorological and climate change modelling network (within the framework of the national network).		1	
		39	Apply hydrological modelling in watersheds to determine vulnerability to climate change impacts.		1	
		40	Protect and/or rehabilitate wetlands (water bodies, marshes, etc.) as providers of ecosystem services in the face of climate change impacts.		1	
		41	Investigate the potential of non-forest sinks for CO2 storage.	1		
		42	Incorporate climate variability and change considerations into water resource management planning instruments.		1	
		43	Develop and improve systems for monitoring drinking water in areas affected by high temperatures, flooding and sea level rise as a result of climate change.		1	
		44	Use and exploit alternative water sources (such as groundwater harvesting and groundwater protection, rainwater harvesting for irrigation).		1	
		45	Incorporate climate variability and change considerations into comprehensive departmental water plans.		1	
		46	Promote and implement water efficiency programmes in the context of climate change.		1	
	Water management, development, and sanitation	47	Promote water and basic sanitation services that reduce vulnerability to flooding.		1	
		48	Promote wastewater management systems or systems designed to protect the quality and quantity of water resources in the face of climate change.		1	
		49	Capturing and flaring methane in domestic and industrial wastewater treatment plants	1		
		50	Produce biogas through anaerobic digestion.	1		
		51	Use waste to reduce methane and N2O emissions in water treatment (sludge from plants, etc.).	1		
	Biodiversity and forest governance	52	Reducing deforestation and forest ecosystem degradation			1
		53	Restoring forest ecosystems			1
		54	Sustainable management of forest resources			1
		55	Control and monitor forest resources	1		
		56	Improving forest fire management			1
		57	Manage for pest control		1	
		58	Establishing wood energy plantations	1		
		59	Establishing REDD actions			1
		60	Improving greenhouse gas depositions			1
		61	Protecting greenhouse gas reservoirs			1
		62	Implementing rehabilitation processes			1
		63	Regulating the forestry sector			1
		64	Implement forest management actions			1
		65	Sustainable consumption of forest resources			1
		66	Implementing incentives to curb deforestation	1		

		67	Implement monitoring, reporting and verification mechanisms in the forestry sector.			1
		68	Plan, conserve and sustainably use critical ecosystems (mangroves, dry forest, coastal marine, paramo, etc) in the face of climate change impacts.		1	
		69	Conserving biodiversity and its ecosystem services in the face of the effects of climate change		1	
		70	Payment for environmental services			1
		71	Improving knowledge of natural heritage and environmental services in the face of climate change impacts			1
		72	Promote adaptation measures that contribute to biological connectivity (corridors, isolation, wildlife crossings, etc.).		1	
		73	Promoting urban green spaces			1
		74	Incorporate climate change into the route for declaring new protected areas in the national park system.			1
		75	Incorporate climate change criteria in NPA management instruments.			1
		76	Implement ecosystem-based adaptation actions		1	
		77	Researching and monitoring the impacts of climate change on ecosystems		1	
Agriculture and Livestock	**Rural development**	78	Provide guidelines for incorporating adaptation measures into sectoral agricultural policy instruments.		1	
		79	Promote agroforestry systems			1
		80	Developing technology packages for agroforestry			1
		81	Use smarter, precision irrigation systems and farming practices with ecosystem approaches to conserve water.			1
		82	Use, conserve and exchange genetically improved varieties of crops that are more resistant to extreme climatic conditions.		1	
		83	Promote research and development of genetically improved crops that are more resistant to extreme weather conditions.		1	
		84	Encouraging climate-resilient agricultural methods in a sustainable manner		1	
		85	Reduce fossil fuel consumption for energy generation in traction (e.g. efficient tillage), irrigation and other agricultural processes.	1		
		86	Use organic and biological fertilisers instead of chemical fertilisers.	1		
		87	Integrated management of pests and diseases in the face of extreme weather events.		1	
		88	Develop urban and peri-urban agriculture programmes in vulnerable areas.			1
		89	Promoting organic and ecological production			1
		90	Promote agricultural production based on community, associative and cooperative models.			1

		91	Develop and strengthen models of technical assistance with self-management approaches for community development.			1
		92	Strengthen local, regional and national institutional capacities for the promotion of strategies and policies for community, associative and cooperative agriculture.			1
		93	Develop and strengthen social food and food security programmes to respond to extreme weather events.		1	
		94	Identify and evaluate adaptation measures to reduce vulnerability of priority agricultural production systems through best agricultural practices.		1	
		95	Collect, process and disseminate agro-climatic information through the EWS to promote adaptation.		1	
		96	Develop and implement strategies for GHG mitigation in crop and livestock production.	1		
		97	Promote productive and technological reconversion in the agricultural sector.	1		
		98	Composting organic waste	1		
		99	Support the formulation of land-use plans with a low carbon and climate resilient rural development approach.			1
		100	Developing and strengthening agricultural insurance and economic incentives			1
	Agriculture	101	Using crop residues for energy generation	1		
		102	Employ cultivation practices such as minimum tillage and mulching.		1	
		103	Efficient use of water and soil in agricultural activities		1	
		104	Reforestation through commercial plantations	1		
		105	Implementing agro-silvopastoral systems	1		
	Cattle breeding	106	Assess GHG emissions in livestock production by determining emission factors specific to Colombia.	1		
		107	Promoting mitigation projects in cattle farming	1		
		108	Use of manure and other solid waste through biodigesters for electricity generation, household biogas and biofertilisers.	1		
		109	Supplementing the diet of livestock	1		
		110	Assess options for joint implementation of adaptation and mitigation measures on livestock farms.			1
		111	Stabilising the beef herd	1		
		112	Implement economic incentives for GHG mitigation in livestock production.	1		
		113	Promote rational grazing	1		
	Other primary productive activities	114	Reducing the vulnerability of fisheries to climate variability		1	
Transport	**Urban development and mass passenger transport**	115	Develop and promote Mass Transit Systems	1		
		116	Employing efficient and low-emission technologies in the transport system	1		
		117	Building low-carbon road infrastructure that is resilient to the impacts of climate change			1
		118	Developing and promoting passenger rail systems (suburban trains and metros)	1		
		119	Replacement and/or renewal of public and private transport fleet with electric or hybrid technology.	1		

		120	Condition infrastructure for the use of electric vehicles	1		
		121	Establish better performance standards in public and private passenger transport.	1		
			Develop training and awareness-raising campaigns for efficient and fuel-saving driving (green driving).	1		
		122	Using direct injection for internal combustion engines	1		
		123	Promotion of inland waterway freight transport	1		
		124	Promote vehicle scrappage and disintegration programmes.	1		
		125	Developing transport demand management measures to reduce GHG emissions	1		
		126	Establish high occupancy vehicle lanes	1		
		127	Establish road and freight congestion pricing	1		
		128	Regulate the use of dedicated lanes for private carpooling vehicles.	1		
		129	Restructure the value of taxes and other fiscal obligations on motorbikes.	1		
		130	Implement electronic tolls and congestion charges.	1		
		131	Optimise the use of taxis (geographical distribution of taxis, parking bays).	1		
		132	Implementing transport-oriented development (TOD) measures	1		
		133	Optimise logistics chains within cities (timetables, dispatch centres).	1		
		134	Promote the sustainable development of productive clusters to reduce the transport of raw materials and finished products.	1		
		135	Optimisation of logistics systems to reduce the transport of raw materials and finished products.	1		
		136	Establish improved standards for the implementation of testing and issuance of vehicle technical inspection certificates.	1		
		137	Articulate housing and transport projects as a planning tool.	1		
		138	Improving the technological efficiency of freight transport	1		
		139	Promote multimodal freight transport	1		
		140	Implement services to take advantage of return trips or available space on the freight transport system.	1		
		141	Developing and promoting rail freight systems	1		
		142	Developing risk and vulnerability analysis of the transport sector		1	
		143	Developing mobility plans	1		
		144	Develop and/or implement master plans for the promotion of intermodality.	1		
	Non-motorised mobility	145	Developing public bicycle systems	1		
		146	Optimise, regulate and formalise the practice of bicycle taxis.	1		
		147	Create and maintain infrastructure for the use of non-motorised mobility (cycle paths, parking, toilets, etc.).			1
		148	Promote, regulate and create policies for non-motorised mobility (cycling and walking).	1		

	Fuel Improvement	149	Improving fuel quality	1		
		150	Assessing the use of alternative fuels for the transport sector	1		
		151	Promote the use of biofuels produced under integrated social and environmental conditions for the transport sector.	1		
		152	Promote the use of natural gas as an alternative to conventional fuels in the transport sector.	1		
		153	Improving aviation and maritime bunker fuels	1		
Housing	Construction, housing and basic sanitation.	154	Incorporate sustainable building criteria, norms and standards (lighting and heating).			1
		155	Replacement and provision of heating equipment in buildings.			1
		156	Use better techniques and materials for sustainable architectural design and construction (e.g. renewable energy).	1		
	Adaptive housing	157	Building adaptive and resilient housing (stilt houses, houseboats and terraced houses)		1	
Education	Climate change education	158	Promote academic programmes in higher education (technical, technological and university) on climate change.			1
		159	Mainstreaming climate change adaptation and mitigation into the school (core) curriculum			1
	Climate change communication	160	Promote awareness-raising programmes on climate change mitigation and adaptation.			1
Health	Disease care and control	161	Implement strategies for prevention, care, monitoring, surveillance and control of vector-borne diseases and epidemics associated with climate change (e.g. dengue fever and malaria).		1	
		162	Implement strategies for prevention, attention, monitoring, surveillance and control of events associated with heat waves.		1	
	Efficient building in the health sector	163	Design and implement energy efficiency strategies	1		
Industry	Efficiency in industrial processes	164	Using new technologies to generate low-carbon productive development in the industrial sector	1		
		165	Promote and implement economically feasible industrial cogeneration.	1		
		166	Promote energy efficiency in the industrial sector (Programme for the installation of variable speed drives or VSDs, changes in production processes for manufacturing industries with direct heating systems, improvements in solid fuel combustion, use of waste heat from combustion processes, conversion of conventional boilers to fluidised bed boilers, improvements in natural gas combustion, conversion of pyro-tubular boilers to super boilers, conversion of indirect heating to direct burners). Programmes including: power quality, reactive power and harmonic distortion, replacement of standard efficiency motors with high efficiency motors, retrofitting of low efficiency equipment and lighting systems, replacement and maintenance of thermal insulation).	1		
		167	Create and implement energy efficiency best practice programmes in the industrial sector.	1		

		168	Promote the adoption of planned energy efficiency and environmental standards to reduce greenhouse gas emissions.	1		
		169	Encourage the use of natural gas over other more carbon-intensive fossil resources in the industrial sector.	1		
		170	Manage demand by regulating energy tariffs in the industrial sector.	1		
		171	Replacing fossil fuels with renewables in industrial processes	1		
		172	Promote the development of non-conventional energy sources as an alternative to the use of fossil fuels.	1		
		173	Promote training and implementation of energy management systems, life cycle assessment and sustainability in industry.	1		
		174	Use and management of industrial waste	1		
	Efficiency in the cement sector	175	Using substitutes for clinker in the cement industry	1		
		176	Substitute fuel for hazardous or non-hazardous solid waste during the clinkerisation process (co-processing).	1		
		177	Switching from wet to dry process in clinker production	1		
		178	Substituting biomass for fuel in the clinkerisation process	1		
		179	Install systems for the recovery of heat generated during the clinkering process.	1		
		180	Implement a monitoring and reporting system with efficiency and carbon intensity indicators for the local market, according to CSI (Cement Sustainability Initiative) guidelines.	1		
	Efficiency in the paper sector	181	Using black liquor gasification as a renewable energy source for pulp mills.	1		
	Sector in the steel sector	182	Increasing liquid steel production in the EAF	1		
		183	Direct Reduced Iron (DRI) production in processes with Midrex technology	1		
		184	Producing pig iron in blast furnaces with pulverised coal injection	1		
		185	Replacing conventional ovens with electric ovens	1		
		186	Implement the Technical Regulation on Boilers.			
		187	Characterise national steel production in terms of energy consumption and carbon footprint , to identify bottlenecks and opportunities for improvement.	1		
		188	Promote steel recycling to increase the percentage of national production produced from recycled material.	1		
	Efficiency in the chemical sector	189	Implement measures for nitrogen recovery in the production of ammonia and other derivatives from the Haber Bosch process or in the production of nitrous oxide.	1		
		190	Produce direct reduced iron (DRI) in process with Hylsa technology	1		

	Efficiency in other industrial processes	191	Substitution of ODS and reduction in the use of SF6 as insulation in electrical equipment.		1	
		192	Replacing plastic production with bioplastics		1	
	Resilient industry	193	Diagnose and adapt industrial facilities to improve resilience to risks related to climate variability and change.		1	
		194	Conduct vulnerability studies for new industries.		1	
		195	Substitute production technologies that consume less water and that reduce vulnerability to water scarcity.		1	
WASTE	**Waste recovery, reuse, and management**	196	Generating methane from agricultural waste	1		
		197	To use and manage urban solid waste in an integrated way.	1		
		198	Elaborate vulnerability and GHG emission studies on existing and planned waste landfill sites		1	
		199	Recovering methane from landfills	1		
		200	Using hybrid vehicles for waste collection	1		
		201	Collect and transport solid waste through efficient driving.	1		
		202	Optimising waste transport logistics	1		
		203	Recycle waste electrical and electronic equipment, paper, metal, plastic, among others.	1		
		204	Install an integrated waste management park	1		
		205	Raising public awareness on recycling and waste recovery			1
		206	Formalising the activity of waste pickers			
		207	Train communities on separation, waste minimisation, reuse and recycling.	1		
		208	Optimise urban waste management by including in building designs, waste rooms for adequate waste separation and storage.	1		
		209	Producing fuel material from municipal solid waste and co-processing	1		
		210	Create demand and strengthen the market for recoverable waste.	1		
Tourism	**Low GHG tourism**	211	Integrated waste management in the tourism sector	1		
		212	Promoting energy efficiency in the tourism sector	1		
		213	Promote the use of non-conventional renewable energy sources in the tourism sector.	1		
		214	Promoting sustainable transport in the tourism sector	1		
	Resilient tourism	215	Analyse the vulnerability of the tourism sector to the effects of climate change.		1	
		216	Contain negative impacts on tourist areas and restore degraded tourist areas.		1	
Risk management and disaster response	**Climate change risk management**	217	Implement risk management plans that contribute to climate change adaptation.		1	
		218	Prepare resilient infrastructure for the prevention of emergencies in the event of hydro-climatic events.		1	
		219	Improvement, identification, tracking and monitoring of hydrometeorological hazards for early warning.		1	
		220	Strengthening of the early warning information system (technology, IT tools, measuring equipment, etc.)		1	
		221	Generate knowledge on risk management and studies on vulnerability and adaptability to climate change (marine-coastal, continental, etc.).		1	

		222	Implement risk transfer and risk financing mechanisms associated with hydro-climatic events for public infrastructure (insurance, bonds, economic instruments).		1	
		223	Create projects to reduce hydro-climatic risks intensified by climate change (floods, droughts, mass movement, sea level rise, etc.).		1	
		224	Design and implement post-disaster recovery and reconstruction plans with climate change considerations.		1	
Transversal	**Sustainable production and consumption**	225	Implement sustainable production and consumption programmes and strategies.			1
	Research and capacity building for low-carbon and climate-resilient development	226	Strengthening public and private capacities and institutions on climate change			1
		227	Assessing the needs for technology transfer and development for climate change mitigation and adaptation			1
		228	Implement projects for the transfer and development of technologies for climate change mitigation and adaptation.			1
		229	Generate, administer and manage knowledge and information for decision-making on climate change.			1
		230	Research on mitigation and adaptation to climate change			1
		231	Preparing national Greenhouse Gas (GHG) inventories	1		
		232	Elaborate climate change vulnerability analysis		1	
		233	Designing, implementing and operating climate change information tools (web platforms, etc.)			1
		234	Design, implement and operate systems for monitoring, evaluation and follow-up of climate change initiatives and policies.			1
	Planning, land use and development with climate change considerations	235	Articulating climate change policies and actions			1
		236	Assessing the impacts of climate change and the effects on trade and economic growth			1
		237	Promote strategic and participatory planning that enhances the results of adaptation and mitigation measures.		1	
		238	Integrate climate change mitigation and adaptation criteria into spatial planning, land-use planning and sectoral policy.			1
		239	Formulate and implement mitigation and/or adaptation plans in the territories.			1
		240	Include climate change considerations in strategic projects or projects of national interest			1
		241	Management and implementation of sectoral action plans for mitigation and/or adaptation to climate change		1	

		242	Strengthen the Technical Assistance of the Territorial Management Plans to incorporate Climate Change criteria.			1
		243	Incorporation of mitigation and adaptation criteria in the life plans and ethno-development plans of ethnic communities.			1
		244	Design, implement and disseminate economic and financial instruments for climate change mitigation and adaptation.	1		
		245	Incorporate climate change criteria into the structuring of public-private partnerships.			1
		246	Manage and implement actions through climate change adaptation and mitigation funds.		1	
		247	Improving regulation and legislation to generate incentives for climate change mitigation and adaptation.			1
		248	Low-carbon and climate-resilient urban planning			1

"This is an indicative list of activities and the mitigation/ adaptation classification can vary according to the reality of the countries". This list was consolidated as part of a revision of international methodologies as well as national policies and sectorial categories identified in developing countries, particularly in LAC countries".

Annex III. Hypothetical example of analysis

Name	Special Program on Climate Change
Fiscal Year	2020
Period	2020-2021
Source of Info	Federal Public Budget
Type of budget	Current
Sector	Environment
Subsector	Planning
Institution	Ministry of Environment
Function	Environmental Sector
Program	X
Activity	
Type of expenditure	Allocated
Category	Both
Criteria	1
Scoring	100
Amount	11,000,000
Currency	MXP
Exchange	198,858
Total in USD	553,157

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