The Coalition of Finance Ministers for Climate Action

Ministries of Finance and Nationally Determined Contributions

Raising Ambition and Accelerating Climate Action

—

A product of the Helsinki Principle 6 Workstream

November 2022

The Coalition of Finance Ministers for Climate Action

Authors and Acknowledgements

This Report was produced by the Coalition Secretariat from the Helsinki Principle 6 (HP6) workstream, led by Inge Pakulski and Namrata Rastogi under the coordination of Lee Cando and Roohi Abdullah based on guidance from its Country Leads: Rwanda (2022), Jamaica and Uganda (2021) and the NDC Partnership Support Unit.

The Coalition Secretaries, Mart Kivine, Fiona Stewart and Christian Eigen-Zucchi, together with Ahmed Al Qabany and Michael Comstock (World Bank SCCAO) led the development of this report, with support from Benjamin Holzman and Athena Tallroth.

Valuable contributions to this report were made by Daniela Buchuk, Rodolfo Bustamante, Antonio Canale-Mayet, Maria Paz Gutierrez, and Jaime Tramon (Chile, MoF); Robert Benda and Camille Leboeuf (France, MoF); Dirk Kramer (Germany, BMF); Thomas Connolly, Heather Cuddy, Sean Judge, and David Owens (Ireland, Department of Finance); Anaitee Mills and Karelle Samuda (Jamaica, MoF); Malik Aman, Albert Mwenda (Kenya, MoF); Peter Odhengo (Kenya, Greening Kenya Initiative Trust); Aranxa Tatiana Sánchez Mejía, Brenda Pequeño, and Regina Rosales (Mexico, MoF); Neil Cabiles, Jenevive Lontok, Anne Marie Mercaldi, Sharmaine Dianne Ramírez, Willa Nicole Tac-an, and Marius Torres (the Philippines, MoF); Fred Sabiti and Thierry Watrin (Rwanda, MoF); Sam Mugume and June Nyakahuma (Uganda, MoF); Romeo Bertolini, Robert Bradley, Joaquim Leite, Amanda McKee, and Namitha Vivek (NDC Partnership Support Unit); Suellen Basilio, Valerie Guillamo, Ananthakrishnan Prasad, and Dulani Seneviratne (IMF); Abdulaziz Almuzaini, Tatiana Falcao, Samuel Moon, and Timothy Williamson (World Bank).

Wanda Ollis edited the report.

Disclaimer and Copyright

This work is a product of the Coalition of Finance Ministers for Climate Action ("the Coalition") and was prepared at the request of the Coalition under the Helsinki Principle 6 Workstream. The views, findings, interpretations, and conclusions expressed are, however, those of the authors and do not necessarily reflect those of the Coalition, its members, or the affiliations of the authors.

This work may be reproduced, in whole or in part, for non-commercial purposes provided full attribution to this work is given.

©2022 The Coalition of Finance Ministers for Climate Action. All rights reserved.

Website: www.financeministersforclimate.org

—

Suggested citation:

Coalition of Finance Ministers for Climate Action. 2022. *Ministries of Finance and Nationally Determined Contributions: Raising Ambition and Accelerating Climate Action.* Coalition of Finance Ministers for Climate Action, Washington, D.C. © Coalition of Finance Ministers for Climate Action.

The Coalition of Finance Ministers for Climate Action

Table Of Contents

List of Boxes, Figures, and Tables

BOXES

FIGURES

TABLES

List of Acronyms

CAP	climate action plan
COP	Conference of the Parties
CSO	civil society organization
DECC	Department of the Environment, Climate and Communications (Ireland)
DOF	Department of Finance
DPER	Department of Public Expenditure and Reform (Ireland)
EC	European Commission
ECBI	European Capacity Building Initiative
EGD	European Green Deal
ESG	environmental, social, and governance
ETS	Emissions Trading System
EU	European Union
GCF	Green Climate Fund
GDP	gross domestic product
GEF	Global Environment Facility
GHG	greenhouse gas
GST	global stock take
HIC	high-income country
HP6	Helsinki Principle 6
IPCC	Intergovernmental Panel on Climate Change
KPI	key performance indicator
LIC	low-income country
LMIC	lower-middle income country
LTS	long-term strategy
MINECOFIN	Ministry of Finance and Economic Planning (Rwanda)
MoF	Ministry of Finance
MRV	measurement, reporting, and verification
MTEF	medium-term expenditure framework
NDC	Nationally Determined Contribution
PEER	public environmental expenditure review
PETS	public expenditure tracking survey
PFM	public financial management
PIMS	public investment management system
RRF	Recovery and Resilience Facility (EU)
SDG	Sustainable Development Goal
TNTP	National Treasury and Planning Ministry (Kenya)
UMIC	upper-middle income country
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
WRI	World Resources Institute

The Coalition of Finance Ministers for Climate Action

Executive Summary

Finance Ministries have an essential role to play in implementing the policy changes that are needed to transition to a more sustainable, low-carbon, and climate-resilient world. The more they come to understand the economic impacts of climate change, the more they can leverage opportunities, such as national level investments, to realize substantial benefits from climate-responsible policies. In particular, their participation in the development and implementation of countries' Nationally Determined Contributions (NDCs) can be key. Hence, the commitment of the Coalition of Finance Ministers (the Coalition), as part of Helsinki Principle 6 (HP6) to "Engage actively in the domestic preparation and implementation of" NDCs submitted under the Paris Agreement.

This document is the second Report of the Coalition, following the first in 2020, *Ministries of Finance and Nationally Determined Contributions: Stepping Up for Climate Action*, which drew on the results of a survey of Coalition member countries, presented case studies of country experiences, and highlighted lessons learned.

Since the 2020 report, the Coalition has grown from 52 members to 80; this document serves to update information based on a new survey. It further examines the enhanced engagement of Ministries of Finance (MoFs) in NDC formulations and examines how they can best contribute to successful outcomes aligned with the Paris Agreement through leadership and coordination with other sectors, including the private sector and civil society organizations (CSOs). Indeed, their input, through their oversight of public finances and stewardship of financial stability, is key to operationalizing national development strategies, policies, and plans to meet climate goals that are becoming more urgent by the day. Ministries of Finance need to work closely and in tandem with other technical/economic ministries and government agencies, such as the Ministry of Environment, to ensure that national climate goals are ambitious, but realistic and economically feasible.

Finance Ministries are responsible for economic assessments of proposed policies to ensure that climate risks and opportunities are being factored into decision-making. Sound costing of NDCs helps identify least- and low-cost pathways for a low-carbon transition and climate resilient strategies. Financing needs for NDCs are also determined through this process, and attracting private sector financing for NDC projects and programs through investor-friendly policies and regulations is key. In addition, as the ministry responsible for fiscal planning, MOFs can secure the priority of climate actions during a country's budget prioritization and allocation process.

The engagement of MoFs in the development and implementation of NDCs in several countries has strengthened. For example, almost 90 percent of Coalition members surveyed reported MOF's direct involvement in the process. Countries such as France, Ireland, the Philippines, and Rwanda reported significant increases in their involvement in the NDC process. However, three challenges hinder members' efforts: shortage of personnel, limited specialized knowledge, and inadequate financial resources.

Through their engagement, MoFs identified capacity-building needs in sustainable financing and budgeting, macroeconomic modeling, developing viable projects, defining sectoral key performance indicators (KPIs), and mobilizing climate finance, as major financing gaps needing to be filled. The Coalition

can provide a platform to address some of these challenges through the experience of its wide and varied membership.

Ministries of Finance have played a critical role in the recent preparation of NDCs. A review of four second-generation NDCs (Chile, the EU, Kenya, and Norway) yields lessons for improving future NDCs and accelerating the low-carbon transition. MoFs are playing the instrumental role of collaborating with other ministries for financing climate action, including NDC implementation. In some cases, countries have created specialized units and/or institutions dedicated to spearheading climate finance issues or established platforms for collaboration among key finance stakeholders. By developing climate finance strategies, some MoFs are sending a clear signal on prioritizing funding for climate action and helping define how NDC implementation will be funded. This is the case in Mexico, for example, where they are spearheading ways to secure sustainable finance, including raising funding for environment and social governance projects through sovereign sustainability-linked bonds. Elsewhere, MoFs are aligning policies with their NDCs. Case studies from Chile, the EU, Kenya, and Norway underscore lessons learned that may be useful to other countries during the next NDC submission round.

The survey, on which this report is based, demonstrated that MoFs have specialized financial management expertise that they are leveraging to steer and guide the development and implementation of NDCs in a fiscally responsible manner. This is a positive development and sharing lessons of their experiences can be of great benefit to other MoFs seeking to embark on similar processes within their countries. By integrating climate actions and, ideally, NDCs into public financial management (PFM) systems, MoFs ensure that the fiscal and economic consequences of climate change are considered in their economic and development strategies, making the achievement of realistic but ambitious NDCs feasible. Budget tagging, for example, is an important tool that will help track allocation and budget performance in regard to climate change actions. Furthermore, governments are now taking a keen and growing interest in green budgeting that will subsequently lead to a green gross domestic product (GDP), largely because of the implication of MoFs in the deliberative process.

MoFs are uniquely positioned to enhance their countries' enabling environment to attract financing from public and private actors, and to tap into international sources of financing. MoFs play an enhanced role in attracting other sources of climate finance through, for example, the establishment of Sustainable Finance Roundtables (or more institutionalized Sustainable Finance Advisory Councils) , adopting global or national taxonomies for increasing transparency on sustainable investment, developing a carbon market, introducing green taxes, and incorporating environment, social, and governance (ESG) criteria for sovereign wealth fund management. MoFs can also assess the bankability of NDC investment plans.

Ministries of Finance are key to assessing the effectiveness of climate spending and, accordingly, supporting climate policy decision-making, by establishing climate indicators and establishing Measurement, Reporting and Verification (MRV) systems for transparency and better understanding of metrics and trends. They are, thus, able to assess the efficiency and effectiveness of climate spending with a view to fine-tuning climate spending for the desired outcomes. Colombia has included MRV systems in NDC development for several years. As an early adopter of MRV systems, the country has integrated them into finance, emissions, and adaptation strategies.

1. Introduction

"The Coalition of Finance Ministers for Climate Action (the "Coalition") **brings together fiscal and economic policymakers from more than 75 countries in leading the global climate response and in securing a just transition towards low-carbon and resilient development"** (The Coalition of Finance Ministers for Climate Action, 2021).The Coalition helps countries mobilize and align the finance needed to implement their national climate action plans; establish good practices such as sustainable climate budgeting and strategies for climate-sensitive investment and procurement; and support its members in integrating climate risks and vulnerabilities into their economic planning.

The premise of the Coalition is that there is a unique role for Finance Ministries in targeting, procuring, and mobilizing funds necessary for specific national climate actions, while promoting global climate goals and initiatives. Launched in 2019 with 26 members, as of October 2022, there are 80-member-country Finance Ministers committed to supporting global collective action on climate change under the Paris Agreement. The 2019 Helsinki Principles guide the Coalition's strategic objectives and key areas for policy engagement in support of the implementation of the Paris Agreement. The six principles also acknowledge that such policies and actions will support global collective action on climate change under the Paris Agreement (The Coalition of Finance Ministers for Climate Action, 2020).

The Helsinki Principles

1. Align our policies and practices with the Paris Agreement commitments;
2. Share our experience and expertise with each other in order to provide mutual encouragement and promote collective understanding of policies and practices for climate action;
3. Work towards measures that result in effective carbon pricing;
4. Take climate change into account in macroeconomic policy, fiscal planning, budgeting, public investment management, and procurement practices;
5. Mobilize private sources of climate finance by facilitating investments and the development of a financial sector which supports climate mitigation and adaptation; and
6. Engage actively in the domestic preparation and implementation of Nationally Determined Contributions (NDCs) submitted under the Paris Agreement.

This document reports the status of work towards Helsinki Principle 6 (HP6), which focuses on supporting the active engagement of Ministries of Finance (MoFs) in the development, update, and implementation of Nationally Determined Contributions (NDCs) submitted under the Paris Agreement. The activities under HP6 build on the work programs of other Helsinki Principles and aim to help members raise awareness and improve capacities related to evaluating the macro-fiscal impacts of NDCs. The activities also include creating and sharing long-term strategies for NDC planning, revision,[1] and implementation.

[1] Here, the word 'revision' represents two parallel processes: enhancement and update. An enhanced NDC is more ambitious, while an updated NDC is underpinned by better data.

Context

A network of institutional elements underpins the Coalition. At its center lies the 2015 Paris Agreement, a legally binding international treaty seeking to limit global warming to well below 2°C (preferably to 1.5°C), compared to pre-industrial levels (UNFCCC 2016). Each signatory country submits its own five-year plan, its NDC, to outline how it will reduce greenhouse gas emissions and build resilience to adapt to rising temperatures. The Paris Agreement works on a fixed five-year cycle of increasingly ambitious climate action set out in successive NDCs (first in 2020; 2025 now in view; then 2030, then 2035 and in subsequent five-year increments). In addition to NDCs, countries are encouraged to submit a long-term strategy (LTS) for low greenhouse gas emission development.

It is accepted that NDCs and LTSs alike will consider common but differentiated responsibilities and respective capabilities, depending on national circumstances. For developing countries, emission reductions should be undertaken based on equity, and in the context of sustainable development and efforts to eradicate poverty.

Starting in 2023, then every five years, governments will take stock of the implementation of the Agreement to assess collective progress towards achieving its purpose and long-term goals. The outcome of this, the global stock take (GST), will inform the preparation of subsequent NDCs to allow for increasing determination and climate action to achieve Paris Agreement goals (UNFCCC 2016).

It is against this background that in 2020, the Coalition's HP6 workstream prepared a report—*Ministries of Finance and Nationally Determined Contributions: Stepping Up for Climate Action*—focused on the role of MoFs in NDC revision and implementation. The report drew on the results of a survey of Coalition member countries and presented case studies on countries' experiences and lessons learned.

Over the following two years, the Coalition membership base grew significantly, and MoFs have been increasingly engaged in climate action in their countries. This report updates the 2020 edition, using 2021 survey results (Appendix A) and interviews with Coalition members. It presents the current role of MoFs in NDC development and implementation in three areas:

1) The role of MoFs in developing, updating, enhancing, and implementing NDCs.
2) The ways in which MoFs leverage their specific expertise in developing and implementing NDCs, noting possible lessons to promote further progress.
3) Progress in the MoF's role in the NDC process since the 2020 report, as well as any challenges that may have inhibited progress or remain for further engagement.

This report should serve as a resource and source of inspiration. Hence, it is primarily intended for MoFs—in Coalition member countries, and elsewhere—to facilitate the sharing of experiences and expertise that will promote collective understanding of relevant policies and practices and provide mutual encouragement.

2. MoFs: Key to Unlocking Climate Action Through NDCs

A 2022 report by the Intergovernmental Panel on Climate Change (IPCC 2022) stresses that climate change impacts are being felt around the world, and that these impacts will increase in number, type, and severity unless the international community steps up action to reduce emissions and scale up adaptation. As governments increasingly recognize the economic consequences of climate change—in terms of climate opportunities and climate risks—MoFs, which are responsible for overseeing public spending and ensuring a stable financial system, have a critical role to play in meeting climate change commitments, especially NDCs. Although the Ministry of Environment is usually the lead ministry holding the policy mandate on climate issues, deeper collaboration with the MoF is needed—above and beyond ensuring that climate impacts and associated risks broadly underpin its economic decision-making—to create fiscal space and opportunities to develop or enhance NDCs. If NDC development and implementation is not explicitly within a MoF's mandate, MoFs must nonetheless be central to discussions on the fiscal and budgetary aspects and implications of the NDC.

At the Glasgow 2021 COP 26, Parties agreed to "revisit and strengthen" their climate pledges at COP 27 better to align with the Paris Agreement's 1.5°C temperature goal. Countries were therefore called upon voluntarily to submit their long-term, low-greenhouse gas (GHG) emission development strategies (long-term strategies or LTSs). Given the need for a long-term development vision, and the latest findings from the IPCC report, NDCs will remain at the heart of the Paris Agreement and, therefore, will require MoFs to continue to play a central role.

Additionally, the GST process is underway,[2] with the first exercise to be concluded in 2023 and every five years henceforth. MoFs play an additional role in this context, as the GST is intended to assess progress across climate mitigation, adaptation, and, of course, finance.

Ministries of Finance are critical to ensuring the feasibility of NDCs because they hold the financial and economic knowledge and expertise to mobilize and/or secure financing for NDC implementation, execute PFM reforms, and develop economic and fiscal policies that are aligned with the country's climate commitments. Coalition MoFs have committed themselves to extending their national role of responsibility for the overall stewardship of their national economies to one of stewardship for the global climate-finance community. As the Coalition Ministers engage in preparing and implementing in-country NDCs, they are also committed to "sharing their experience and expertise with each other to provide mutual encouragement and promote collective understanding of policies and practices for climate action." (Finance Ministers for Climate, n.d.).

Ministers of Finance can use their position as high-level government officials to influence key finance stakeholders to support climate actions in support of feasible and affordable NDCs. Since MoFs are not only engaged in policy making but also in the operationalization of policies (e.g., guidelines, processes, regulations, and PFM systems), they are well positioned to keep climate actions on the government agenda, as well as to promote or to enhance engagement not only with the NDC but also LTS processes. Moreover, as Coalition members, they can work together to negotiate with global finance institutions to

[2] This refers to taking stock of (evaluating) collective progress in the implementation of the Paris Agreement, particularly toward attainment of its long-term goals.

sustain the climate change and NDC agendas, while working purposefully to increase international awareness and enhance the focus on climate finance needs.

By steering public and private funds into climate-related activities, MoFs can keep national development and economic policies on a low-carbon and resilient pathway. By integrating climate into macro-fiscal policy making and planning, they can support the transition to a low-carbon economy with a strategic vision that anchors the budget in a medium-term perspective that offers MoFs several entry points and instruments.

As the MoF's overarching task is reducing financial risks and optimizing opportunities for growth and development, it is ultimately responsible for ensuring that climate policies and measures are economically feasible.

2.1 Role of MoFs in NDC Development, Update, and Enhancement

Generally, the starting point for the preparation of a new or revised NDC should be an evaluation of the progress to date measured against the country's long-term objectives (Fransen et al. 2019). This evaluation should focus on the NDC implementation progress, including the extent to which objectives and targets are being met; obstacles encountered during implementation; and aspects of the NDC that could be improved.[3]

The Coalition's first report on the progress of member countries towards NDC development noted that most first-generation NDCs presented an overview of countries' climate issues and long-term agendas. However, the overviews generally lacked any kind of feedback loop showing the expected impact of climate change on policies and the wider economy (Coalition of Finance Ministers for Climate Action, 2020). The report also highlighted the difficulties encountered in the costing of NDCs by many members, which led to implementation failures.[4] Recommendations to improve future costing measures include:

- The need to ensure that NDCs are supported by macroeconomic analysis;
- The necessity for accurate assessments of the financial resources required; and
- The need for costings to be aligned with available budgets and/or partner resources.

Notably, the report suggested the need for mitigating *perceived* financial risks. Ensuring transparency and accountability across all data related to costing NDCs could not only address issues of perception, but also improve knowledge within the MoFs and other ministries to enhance NDC design or scope.

[3] The UNFCCC's *Nationally Determined Contributions under the Paris Agreement: Synthesis Report*, published in September 2021, analyzes 164 new or updated NDCs submitted to the UNFCCC as of July 30, 2021.

[4] Of the 36 Coalition members surveyed in 2020, only half responded that MOFs had provided macroeconomic and costing inputs for the elaboration of NDCs. Figures from the Coalition HP6 2021 survey are presented and discussed in section 4.

Given the significant financial components of well-designed NDCs, MoFs are central to the preparation and revision of NDCs. They are responsible for:

- Providing guidance on effective costing practices in sectors or providing costing and macroeconomic assessments of climate policies and measures that are being considered or already in place;
- Developing sound macroeconomic forecasts and least-cost emissions pathways as the basis of countries' development and climate plans, as well as their long-term strategies (LTSs); [5]
- Ensuring that short- and medium-term policies and measures are aligned; and
- Aligning the NDC planning and revision with the national budget cycle (especially policy review, strategic planning, and budget formulation stages).

Moreover, MoFs can provide guidance to other ministries or sectors involved in NDC development through providing fiscal and economic data covering the actual budgetary opportunities and/or constraints, as well as other essential NDC costing requirements.

While NDCs need to be updated every five years, there is no requirement for the LTSs to be updated. This is in part because LTSs reflect the long-term (30-year) objectives of the Paris Agreement, but also because, unlike NDCs, LTSs are voluntary. Nevertheless, countries may need to update their LTSs periodically to reflect modelling results, including additional parameters, revised assumptions, technological advances, or new data, with more accurate projections. MoFs play a key role in ensuring that revised results from climate-related scenario analyses are considered in budget allocation and public spending of national plans and strategies.

France's experience with macro-modeling approaches to developing NDCs provides an example of how MoFs are instrumental in the NDC preparation process (Box 2.1).

Box 1 – FRANCE: A 2050 Low-Carbon Strategy Grounded in Robust Modeling Approaches

France adopted its original National Low-Carbon Strategy (SNBC) in 2015. An updated version, with strengthened ambition was adopted in 2020 (SNBC-2) to incorporate the 2050 carbon neutrality target, which was defined in 2017. Like the first SNBC, the French MoF was closely engaged in this process —from the early design stages of the Strategy through to its adoption by Parliament.

A new, fully revised low-carbon strategy (SNBC-3) is under preparation. The MoF (Ministry of Economics, Finance and Industrial and Digital Sovereignty/*Ministère de l'Économie, des Finances et de la Souveraineté industrielle et numérique*) is involved through macroeconomic modeling and sector-related assumptions. The revision process began in September 2021 and is expected to be completed in 2023.

A public consultation on very general aspects of life in a low-carbon society in the medium- (2030) to long-term (2050) is ongoing (October 2022). SNBC-3 will be finalized through a two-step process:

[5] The World Resources Institute (WRI) explains that a new or updated NDC should always be prepared keeping in mind the country's LTS—to reduce the costs and challenges of transitioning to a zero-emissions, climate-resilient society ("Climate Action for Today and Tomorrow: The Relationship between NDCs and LTSs, 2019).

1. Results from consultations with stakeholders (e.g., representatives from academia, corporate, industrial, and other business leaders, civil society, and NGOs) at the level of sectoral working groups and line ministries (most notably, the MoF and the Ministry of Agriculture) to discuss model assumptions and input parameters that will inform SNBC-3. The MoF is also involved in preliminary discussions on sector-related assumptions that will play a key role in the sector models and scenarios (energy prices, macroeconomic trends, and so on).
2. Once the models are created, they will be tested in two back-to-back runs; these will provide emission-trajectory scenarios for each of the key sectors and the corresponding carbon budget, based on the input parameters agreed on in the working groups with all stakeholders. The model results will be presented to the stakeholders at Information and Orientation Committees so that a broadly supported strategy can be ultimately adopted.

For more information:
https://climate-laws.org/geographies/france/policies/national-low-carbon-strategy-snbc
https://www.ecologie.gouv.fr/strategie-nationale-bas-carbone-snbc

High-level buy-in—especially at the level of heads of state—can prove crucial to MoFs' ability to engage in climate action. The experience of the **Philippines' MoF (**Department of Finance) is a useful example of engagement on climate and NDC preparation (Box 2.2).

Box 2 – PHILIPPINES: Department of Finance Playing a Central Role in NDCs and Climate Action

The designation of the Department of Finance as the core of sustainable and climate financing, and, consequently, enabler of the NDCs, the Philippine government sends a clear signal of the importance of the issue of climate change. This further highlights the role of MoFs' engagement in NDC implementation and climate action–front and center.

In 2021, recognizing the important role of the Department of Finance (DoF) in mobilizing finance and aiming to ensure budgetary resilience against climate impacts and disaster risks, the President of the Republic of the Philippines designated the Secretary of Finance as the official representative of the Chairperson to the Climate Change Commission (CCC)—the independent and lead policy-making body on matters concerning climate change whose mandate is to coordinate, monitor, and evaluate government programs and mainstream the climate change agenda in national, local, and sectoral development plans. The DoF is the National Designated Authority (NDA) to the Green Climate Fund (GCF), serving as the interface between the country and the Fund. The NDAs provide strategic oversight of the GCF's activities in-country and communicate the country's priorities for financing low-emission and climate-resilient development.

The Philippines delegation at COP 26 was headed by the Finance Secretary. Underlying this decision was the conviction that it was time for the Philippines to shift its focus from *theorizing* about climate change to *executing* concrete and practical climate adaptation and mitigation projects through efficient and accessible climate finance; these subtle designations signaled a paradigm shift in the relative importance of climate change issues within the Philippines government and further emphasized the central role of the DoF in climate action.

The first Philippine Sustainable Finance Roadmap, which tackles the country's policy and regulatory gaps to promote a sustainable finance ecosystem and formulate green policies to raise the necessary financing for a low-carbon transition, was released in 2021. It advocates taking a blended approach on climate finance to raise the necessary capital and develop the investments needed to address the climate-change impacts and enable a low-carbon transition. It specifies three types of financing: (1) *grants* for capacity building; (2) *investments* for bankable green projects with high-yield returns; and (3) *subsidies* to address the financial costs and risks borne by the local communities during the gradual shifts toward a climate-resilient economy.

For more information:
https://www.dof.gov.ph/dof-leads-scaled-up-climate-action-initiatives-in-2021-amid-worsening-global-warming/https://www.climate.gov.ph/https://www.greenclimate.fund/about/partners/nda

2.2. Role of MoFs in Implementation and Mainstreaming of NDCs

Climate action requires changes in national expenditures and investment patterns. An important difference between implementation and mainstreaming is that the latter involves integrating NDCs in economic and fiscal policies, other (supra)national[6] development plans and objectives, and in PFM systems.[7]

As the ministry responsible for the economic affairs, expenditures, and revenue of a nation, MoFs are crucial to this process. To meet the objectives of NDCs and other climate-related policies, they may be involved in:

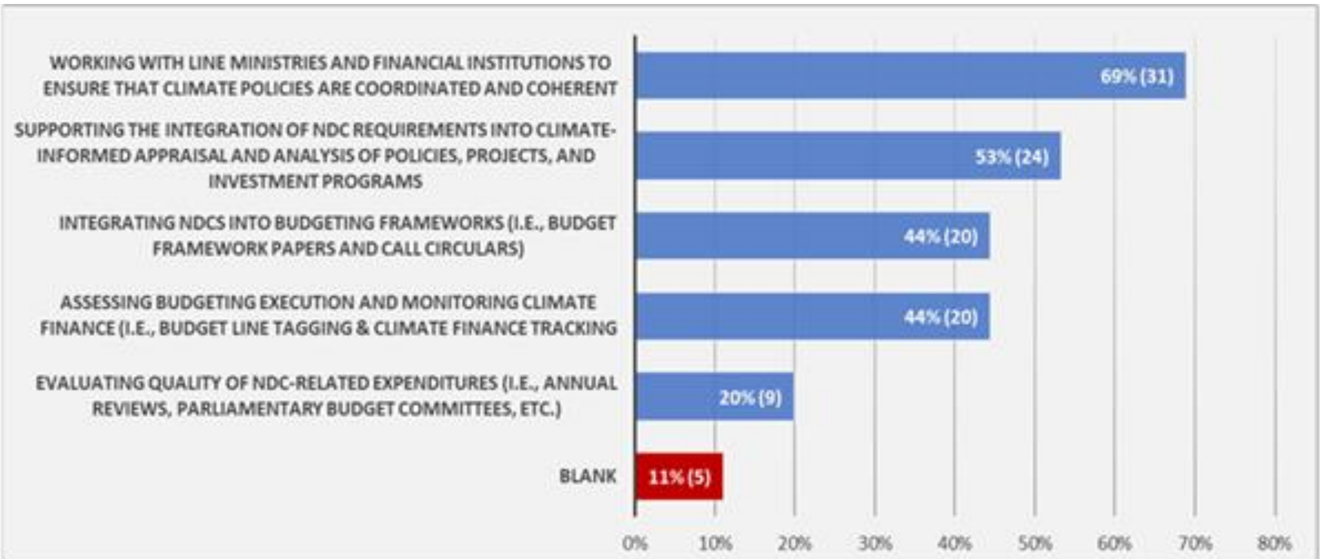
- Collaborating with the Ministry of Environment and/or other relevant ministries mandated to lead climate policy or to monitor climate action implementation.
- Reviewing the design of regulations or taxation policies in the light of implementation evidence to support better-targeted climate objectives.
- Administering climate-smart regulation and fiscal policies through the budget, including screening investments (e.g., to avoid technological lock-ins and stranded assets).
- Confirming that risk assessments are adequate.
- Challenging incompatible or unsuitable budget proposals to free resources for climate objectives.
- Establishing financing mechanisms for climate-action policies.

Supplementary roles for MoFs may include participating in monitoring and evaluation of climate finance, based on comprehensive MRV systems; aligning NDC implementation with the national budget cycle; and assisting in establishing the carbon-pricing policy mix required to contribute to Paris Agreement commitments.

Most survey respondents (69 percent) indicated that their MoF was working with line ministries and financial institutions to maintain coordinated and coherent country climate policies, while 53 percent indicate that MoFs support integration of NDC requirements into climate-informed appraisal and analysis

(Figure 2.1). Thus, a reasonable proportion of MoFs are already actively addressing and mainstreaming NDCs.

Figure 1: Survey results from the question: How does the MoF contribute to NDC implementation and mainstreaming?



Note: Percentages do not add up to 100 due to rounding. The total count for each option is shown in brackets after the relevant percentage figure.

Ireland presents an example of how a MoF (Department of Finance) is using levers such as carbon pricing to implement and achieve its NDC (Box 2.3). **Rwanda's** Ministry of Finance and Economic Coordination (MINECOFIN) shows its strong engagement in the update of the NDC and its implementation (Box 2.4).

Box 3 – IRELAND: Implementing NDC Through Carbon Pricing as Levers of Decarbonization

Ireland fully supports the EU's climate ambitions and is committed to playing its part in meeting the revised NDC target—reducing GHG emissions by at least 55 percent compared to 1990 levels by 2030. To this end, Ireland's Programme for Government: Our Shared Future has committed the country to reducing economy-wide GHG emissions by 51 percent by 2030 compared to 2018 levels. This target has been placed on a statutory basis through the Climate Action and Low Carbon Development (Amendment) Act 2021.

The Department of Finance (DoF) plays a key role in the implementation of the EU's NDCs through carbon pricing and environmental taxation. A carbon tax was introduced in 2010 on CO_2 emissions in the heat and transport sectors (non-Emissions Trading Schemes sectors), covering fuels such as kerosene, marked gas oil, liquid petroleum gas, fuel oil, natural gas, and solid fuels.

The development of the Climate Action Plan 2021 (CAP), which prescribes the emission-reduction measures to be taken by all economic sectors, was led by the Department of Environment, Climate and Communications (DECC). The DoF submitted its planned actions in a range of relevant areas—including taxation, economic research, and the financing environment. The two ministries consulted regularly and the CAP 2021 was published in November 2021, following extensive public consultations.

Economy-wide carbon pricing
Carbon pricing is a cornerstone of Ireland's national decarbonization strategy and method for meeting the country's emission reductions derived from the EU's 2030 and 2050 NDC targets. To that end, the Finance Act 2020 has established a 10-year, programmed, statutory trajectory to increase the carbon tax to €100 per ton by 2030, which provides a clear signal, as well as price certainty, to consumers, businesses, and investors. In line with this trajectory, Budget 2021 included carbon tax increases of €7.50 bringing the carbon €26 per ton to €33.50 per ton. Further increases of €7.50 were announced in Budget 2022 and Budget 2023 bringing the rate to €48.50 per ton. (https://assets.gov.ie/235732/93f95f31-bc1e-4823-993f-af16492fe628.pdf)

The planned carbon tax increases are expected to raise an additional €9.5 billion in revenue over the period to 2030. This revenue will be allocated to programs such as energy efficient retrofits (€5 billion); addressing fuel poverty and providing for a just transition (€3 billion); and the promotion of sustainable agriculture practices (€1.5 billion); it is not earmarked for the sectors from which it was raised. Total carbon tax revenue in Budget 2023 amounted to €623 million, with almost half allocated for investment in improving the energy efficiency of homes.

Carbon tax revenues are a major funding source for climate action and contribute to a just transition. The independent Economic & Social Research Institute (ESRI) recently concluded that the latest budgets have been progressive, as intended, despite the carbon tax increases (Doorley et al. 2021; O'Malley, Roantree, and Curtis 2020).

2.3 Challenges Faced by MoFs on NDC Engagement

As countries work towards meeting their Paris Agreement obligations, they face a host of challenges related to creating the mitigation and adaptation vehicles needed for robust NDCs. The complexity of climate finance is well recognized; the challenges directly related to financial strategies to fund NDCs are as complex as the science underlying climate change knowledge and measurement. Thus, it is evident that the MoF is the government ministry most capable of taking on these challenges. What is less evident is the extent of its participatory role in NDC preparation, mainstreaming, and implementation. Yet, collaboration between all the principal ministries—environment, energy, transport, economy, and trade—would be both insufficient and inefficient without contributions from the MoF. Ministries of Finance are instrumental in producing climate-finance vehicles, creating responsive national budgets, and driving holistic approaches. They need deep knowledge of the entire spectrum of government and societal aspirations. The many potential capacities and strengths that MoFs can offer in the NDC arena, expanding their engagement beyond budget and finance into development and implementation, can be complicated. Political will, while necessary, can be insufficient without the capacity and resources needed for full participation. The HP6 2021 survey results identify key challenges being faced by MoFs and highlight potential opportunities for further engagement.

Box 4 – RWANDA: Strong Engagement by the MoF on Both NDC Preparation and Implementation

Rwanda has put green growth and climate resilience at the heart of economic development, raising its climate ambitions and establishing powerful mechanisms to mobilize finance. In 2020, it was the first African country to submit its updated and enhanced NDC to the UNFCCC process, with support from the NDC Partnership.

Rwanda's Ministry of Finance and Economic Planning (MINECOFIN) contributed to the coordination of its NDC revision including engaging the private sector and civil society organizations.

To deliver its ambitious NDC commitments and vision of a resilient, sustainable economy, the government is developing new financial instruments to fast-track and implement blended finance and to prepare investment-ready flagship projects. These complement broader efforts by MINECOFIN, the Ministry of Environment, and the Rwanda Green Fund (FONERWA) to engage donors and the private sector in raising billions of dollars.

The successful implementation of Rwanda's NDC requires an effective MRV system to monitor the effectiveness of its mitigation and adaptation measures and facilitate its access to climate finance. MINECOFIN leads coordination through sector working groups that track implementation of sector priorities; chairs the economic cluster to inform policy and strategic decisions; and ensures that MRV of NDC implementation supports sustainable development. MINECOFIN also leads tracking finance of NDC implementation, coordinates with FONERWA to manage data on finance and provide a platform to access such data and information for national reporting. This information is critical for FONERWA to influence resource mobilization to fill finance gaps for successful NDC implementation.

MINECOFIN has been active in supporting the mainstreaming of NDC key performance indicators into sectoral and district plans (single action plans). A checklist of key performance indicators has been designed and is shared to all budget agencies to be the basis for preparing plans and budgets.

The Ministry has also developed an environment and climate change monitoring system. Although it requires manual input, it is a useful tool for tracking annual climate expenditures based on the annual climate-related investments by different agencies/institutions. All these are part of the planning and budget call circular.

For more information:
[a] https://pia.ndcpartnership.org/country-stories/rwanda/

The Rwanda case study highlights how these challenges have been approached, the pro-active role of the MoF (MINECOFIN), and a value-added component of that role.

MoF survey respondents identified challenges related to NDC engagement: constraints on human resources (53 percent), technical capacity (44 percent), and financial resource availability (38 percent). Another 24 percent identified "Minimal political support and/or lack of coordination mechanisms" as obstacles (Appendix A).

Additional constraints mentioned in the survey or in follow-up interviews with MoF officials include:

- Absence or lack of MRV systems in the MoF for tracking and monitoring climate finance;
- Insufficient supportive policies or enabling mechanisms to implement NDCs;
- Resource-scarcity concerns that MoF resources (human resource capacity, time, etc.) will be over extended;
- Limited availability of adequate data; and
- Inability to identify and access suitable funding mechanisms.

Limited technical capacities within MoFs represent a critical hurdle. Specifically, MoFs highlighted that they lacked the tools to comprehensively analyze the links between climate change and the economy. For example, they need to understand the influence of climate change on the sustainability of public finance, and how sustainable finance can affect the economy and the environment. Capacities need to be reinforced in key areas such as sustainable financing and budgeting; costing and macroeconomic modeling techniques; developing proposals for green projects and programs; prioritizing public investments; defining sectoral key performance indicators (KPIs); mobilizing climate finance; and tapping into international climate-finance sources.

Addressing challenges and constraints takes time, resources, and creativity. Training programs, peer exchanges, and the resources offered by partnerships such as the Coalition and its institutional partners, can be used to enhance the technical capacities of MoFs. Countries could consider establishing dedicated units, identifying climate champions and seeking closer technical support from the leading climate-change ministry in the country (usually, the Ministry of Environment). MoFs can also channel resources to NDC implementation by working alongside sectoral ministries to develop an overarching financial strategy. Such a strategy would include: prioritization of green projects that reflect the NDC targets and objectives (and ideally also those of the LTS and NAPs, if available); establishment of an MRV system for tracking climate finance; creation of new revenue sources or green financing instruments; issuance of green bonds; and clear procedures for the creation of green public-private partnerships.[8] Human resource capacity enhancement may involve creative solutions such as initiating job-sharing positions or inter-ministry staff loans for qualified (and interested) personnel to float between ministries for specified periods, with the likely added benefit: an increase in human capital.

2.4 MoFs' Role in NDC Updating and Enhancement: Case Studies

The four enhanced (second-generation) NDC implementation cases (the EU, Kenya, Chile, and Norway), below, highlight entry points for MoFs to engage in the process.

Box 5 - EU: The EU's First NDC and its Implementation

In December 2020, the EU submitted its first NDC, with its target of reducing domestic emissions by at least 55 percent by 2030 from 1990 levels,* and information to facilitate clarity, transparency, and understanding (ICTU) of the NDC. The EU and its member states, acting jointly, are committed to the target.

The European Commission (EC) put forward legislative proposals to ensure the EU could meet the more ambitious net emission reduction targets at the core of its updated NDC. These proposals center on policy reforms in various economic sectors and are focused on carbon pricing, sectoral emission-reduction targets, and rules promoting the development and uptake of cleaner technologies in the transportation sector.

[8] For more details on how MoFs can boost financing for the low-carbon transition, see "South American Finance Ministers Discuss Incentives and Mechanisms to Finance the Decarbonization of their Economies," posted on June 30, 2021.

PRICING	TARGETS	RULES
Stronger Emissions Trading System including aviation	Updated Effort Sharing Regulation	Stricter CO2 performance for cars and vans
Extending Emissions Trading to maritime, road transports and buildings	Updated Land Use, Land Use Change and Forestry Regulation	New infrastructure for alternative fuels
Updated Energy Taxation Directive	Updated Renewable Energy Directive	ReFuelEU: More sustainable aviation fuels
New Carbon Border Adjustment Mechanismt	Updated Energy Efficiency Directive	FuelEU: Cleaner maritime fuels
SUPPORT MEASURES		
Using revenues and regulations to promote innovation, build solidarity, and mitigate impacts for the vulnerable, notably through the new Social Climate Fund and enhanced Modernisation and Innovation Funds.		

Source: European Commission

The MoFs of the EU member states play a key role in the implementation of EU's NDC by introducing policy reforms aimed at meeting the European energy and Green Deal goals and targets.

For more information:
https://ec.europa.eu/clima/eu-action/international-action-climate-change/climate-negotiations/paris-agreement_en#:~:text=In%20December%202020%2C%20the%20EU,(ICTU)%20of%20the%20NDC.

*This is an increase over the INDC (intended NDC), that contained a commitment to reduce GHG emissions by at least 40 percent by 2030 compared to 1990 levels, under its wider 2030 Climate and Energy Framework.

Box 6 - KENYA: Conveyor and Implementer of Climate Action

Kenya has estimated the total cost of its updated NDC (2020) implementation at US$ 62 billion by 2030. The financial resources committed domestically for mitigation and adaptation measures have been identified, as well as the international climate finance required. These financial estimates have been linked to conditional and unconditional targets. Specifically, Kenya is committed to meeting 13% of the total budget required to meet its NDC target by 2030, while the remaining 87% is conditional on international support in the form of finance, technology development and transfer, and capacity building.

The NDC was developed through an extensive process of consultation among stakeholders, led by the Kenyan Ministry of Environment. Efforts have been made to align mitigation and adaptation actions with the SDGs, thus facilitating NDC implementation.

The National Treasury and Planning Ministry (TNTP) is a facilitator, transmitting policy into operationalization of guidelines and processes through building the capacities of line ministries, CSOs, the private sector, and subnational governments to access sources of climate finance, including requirements needed to access such resources. Its remit extends to being an implementer, by mobilizing financial resources for climate action. The TNTP is also responsible for planning and budgeting, coding, tracking, and reporting the support required, mobilized, provided, and received for climate action by state and non-state actors.

Box 7 - CHILE: MoF as Primary Convener of a Green Transition

In June 2022, after a broad discussion between the government, civil society and private sectors, the Framework Law on Climate Change (LMCC), establishing the institutional framework for the development of climate policies, was published.

One of the main responsibilities that were allocated to the Ministry of Finance (*Ministerio de Hacienda*) by Article 35 of the LMCC is the formulation of the financial strategy, which should be updated every five years, along with the revision of the NDC. Its goal is creating a strategic vision for the financing of the initiatives needed to achieve the NDC objectives that include establishing guidelines and enabling conditions for the transition towards a resilient and low-carbon economy with GHG-emission neutrality by 2050.

Some of the MoF's contributions to the preparation of Chile's NDC were:

- Issuing green bonds to finance clean public transport, renewable energy, "green" buildings and the efficient management of water resources.
- Establishing the public–private Green Finance Roundtable, for long-term collaboration between the government, regulators, and financial-market institutions, under which the institutions have made explicit commitments, with significant progress being made by all parties.
- Facilitating action on adaptation and mitigation, assuming the role of Designated National Authority vis-à-vis the Green Climate Fund (GCF), guaranteeing that the activities financed and supported by the latter are consistent with national objectives and priorities.
- Developing a framework to identify climate-related public expenditure, making it possible to analyze the extent to which and how public resources are used for climate action.
- Promoting a reform of the tax system to include tax-reduced status for initiatives aimed at the protection of the environment.
- Establishing a Preparatory Committee to advise on structural elements of a future green taxonomy.
- Continuing the promotion, development and improvement of green financial instruments and solutions for climate change (i.e., green tax policy, sovereign bond issuance strategy, carbon-pricing instruments).

The updated NDC specifies that the first revision will, at a minimum, have the following objectives:

- to generate information, data, and analyses to mobilize capital under an institutional framework for policies and measures (PAM)s;
- to enable the design and implementation of green financing instruments;
- to promote public–private cooperation for a better understanding and management of risks and opportunities;
- to develop further a framework for the determination of direct and indirect public climate expenditure; and
- to improve the evaluation methodology and prioritization of projects to be submitted to the GCF, based on current and future national priorities, ensuring alignment with the LTS and the NDC objectives and commitments.

Box 8 - NORWAY: Fostering Green Transition Through Taxation of GHG Emissions and Emissions Trading

The Norwegian Government's climate policy is intended to improve welfare standards, while cutting emissions.

The Climate Action Plan 2021-2030 will put Norway on track to achieve its enhanced target of cutting GHG emissions by 50–55 % by 2030, and its long-term target of reducing them by 90–95 % by 2050. The plan includes measures and instruments for reducing both emissions trading systems (ETS) and non-ETS emissions (transport, agriculture, and other emissions sources), and for increasing CO2 removals and reducing emissions from forest and other land categories. Central to its climate action are taxation of GHG emissions and emissions trading, as well as the design of vehicle taxes to provide incentives to buy zero-emission vehicles. The MoF is responsible for implementing these economic measures, as well as coordinating central government activities and drawing up a framework for efficient resource use.

In developing the Climate Action Plan, the Government has considered uncertainty relating to emission trends, the effects of climate policy, technological developments, and the costs of implementing mitigation and adaptation measures. The Ministry of Finance, together with Statistics Norway, the Norwegian Environment Agency, and the Ministry of Climate and Environment, played an important role as it prepared GHG emissions projections and collated data from other institutions and modeling techniques. These projections are reported in the Climate Action Plan 2021-2030 and in the Seventh National Communication under the UNFCCC (2018). They are based on the country's GHG inventory and the input–output tables of the National Accounts, which constitute the underpinnings of the SNOW[a] model, updated with new population projections from June 2018.

For more information:
Projections of emissions use Statistics Norway's general equilibrium model SNOW, a computable general equilibrium (CGE) model which gives a detailed description of the structures of economic policy, production, and consumption in the Norwegian economy.
https://www.regjeringen.no/contentassets/4e0b25a4c30140cfb14a40f54e7622c8/national-plan-2030_version19_desember.pdf

The Coalition of Finance Ministers for Climate Action

3. Applying MoF Expertise and Convening Power

This section explores the combination of methods and approaches used by MoFs. In effect, each of these is an example of how MoFs are strengthening their engagement with NDCs by leveraging their unique position and expertise. The section draws on country examples that highlight:

1. Costing of NDCs and using macroeconomic modeling;
2. Integrating NDCs into MoF business processes such as PFM or public investment management (PIM) systems, plans, and strategies;
3. Improving enabling environments of countries for NDC implementation; and/or
4. Implementing an MRV system for effective climate spending.

Table 3.1 illustrates the range of these methods and approaches from entry points to monitoring and evaluation.

Table 1: Key Entry Points and Instruments for MoF Engagement with NDCs

KEY ENTRY POINTS	TOOLS	HOW
	POLICY REVIEW	
• Assess climate policies of the previous planning and implementation period	• Mapping links between NDCs, Sustainable Development Goals (SDGs), and National Development Plans • Reassessment of NDC costing • Public expenditure reviews (public environmental expenditure reviews [PEERs]/climate change public expenditure and institutional reviews [CCPEIRs]) • Annual reports to Parliament • Impact evaluations • Situation analyses	• Review existing climate-change policies against stated policy objectives to draw lessons from NDC implementation • Revise current policies or develop new ones • Regular, specialized analyses can support decision-making • Review regulations, legislation (particularly PFM Acts) and not solely national climate-change policy; Review documents to address any inconsistencies between underlying laws and regulations
	STRATEGIC PLANNING	
• Strengthen the identification and communication of risk to inform policy • Develop costed climate plans that link policies to the budget • Establish resource framework, define climate objectives, policies, strategies, and expenditure priorities	• Strategic plan: identify key policy priorities from NDCs for the next fiscal year or the medium term (outcomes and objectives) • Costed plan • Identification of funding gaps • Formulation of policy and results matrix—approach and initiatives involved • Macroeconomic framework paper (medium-term fiscal framework and medium-term expenditure framework) • A PIMS can be a key tool for planning infrastructure investments, as it allows NDC priorities to be	• Employ analytical tools, such as costing and macroeconomic analysis for climate-change strategies to be built on evidence (i.e., data) • Identify and consult with all stakeholders of specific policy targets • Incorporate potential macroeconomic impacts of climate change into the macro-fiscal framework that underpins budget ceilings and budget call circulars to all sectors

KEY ENTRY POINTS	TOOLS	HOW
	incorporated into the investment decision process	
	BUDGET FORMULATION	
• Establish credible, sustainable macro-fiscal policies that reflect long-term climate policy as well as fiscal goals • Mobilize and allocate resources • Project revenue and allocate climate-related expenditure based on planning by including climate in the (annual) budget law, MTEF, and budget guidelines • Screen investments to strengthen compliance with climate regulation and guidelines and eliminate projects that are incompatible with climate action	• Budget call circular • Budget negotiations • Budget framework paper • Fiscal risk assessment • Parliamentary budget committees, civil society input • Tracking of climate-related expenditures (CCET/CBT).	• Integration of NDCs in all budget formulation documents, negotiations, and thus the Budget Act. • Create a parliamentary budget committee for climate change (the budget framework paper can include climate change for all sectors to consider; budget call circulars can include information and instructions on how to tag and track climate expenditures, followed up with customized training sessions for sectors)
	BUDGET EXECUTION	
• Implement climate policies by collecting revenues and channeling resources in accordance with the budget	• Budget reporting—tracking of climate-related expenditures (CCET/CBT)	• Regular budget reporting may provide information on climate-related expenditures and their alignment with plans and budget allocation; bottlenecks in the flow of funds through PFM systems may be identified • Given the wide range of climate-related activities and stakeholders, specialist tracking/tagging may be necessary • Budget reports can track tagged budget lines on climate change
	ACCOUNTING AND MONITORING	
• Monitor activities and account for expenditures • Measure, monitor, and report on financial and nonfinancial performance of climate actions	• Budget analysis—tracking of climate-related expenditures (CCET/CBT; • Public expenditure tracking surveys (PETSs) • Key performance indicators (KPIs)	• Expenditure tagging can facilitate the achievement of policy targets • Key performance targets prepared in the planning stages can strengthen the budget cycle • Effective monitoring and follow-up of KPIs' performance against targets is essential

KEY ENTRY POINTS	TOOLS	HOW
		• Regardless of the financial management information system, it can always support monitoring • The MoF can help gather information to assess how the climate-change interventions are performing
	AUDIT AND EVALUATION	
• Evaluate financial and legal compliance of climate policies • Establish impacts of climate expenditures to assess effectiveness of climate PAMs and incorporate the results into future plans	• National audit (Auditor General) • Public Accounts Committee	• Evaluating compliance: determining whether funds have been used as intended; measuring results and comparing them against objectives and targets • Compliance evaluation is particularly important when a country is using climate funds and incurring debt or creating new financing instruments for climate action

Note: CBT = climate budget tagging; CCET = climate change expenditure tagging; CCPEIR = climate change public expenditure and institutional review; KPI = key performance indicator; MTEF = medium-term expenditure framework; NGO = nongovernmental organization; PAMs = policies and measures; PEER = public environmental expenditure review; PETS = public expenditure tracking survey; PFM = public financial management; PIMS = public investment management system

3.1 Costing NDCs and Using Macroeconomic Modeling

NDCs can be implemented effectively only if they are derived from empirically based costing of climate-change interventions, including the cost of inaction. Such costing must be grounded in solid macroeconomic analysis. Solid analysis improves decision-making by supporting policy makers to understand fully the economic trade-offs of climate action and reduce the risks linked to climate change. Costing is useful in three ways: (1) yielding a more accurate estimate of the financial resources required to implement the different climate policies and measures needed to achieve NDC goals, and their feasibility, given macro-fiscal constraints; (2) creating a solid basis for budget allocation negotiations; and (3) helping identify which climate policies and measures can be funded domestically using public resources, and which ones may require additional (innovative) financing from private sources or international contributions.

Comprehensive macro-fiscal models, sound and transparent assumptions, and reliable data are all needed to assess whether specific adaptation and mitigation policies and measures can be implemented without putting undue strain on public finances. This is perhaps even more relevant in countries that are highly vulnerable to climate-related risks as financial risks are greater in climate-risk regions.

As part of its convening power, MoFs' collaboration with Central Banks could be beneficial because both parties leverage each other's strengths and expertise. In 2021, the European Central Bank conducted an economy-wide stress test using physical climate data to produce estimates of the probability of loan default under future projections of climate hazards. This exercise was based on a pioneering methodology for quantifying the impact of physical and transition risks on European banks over the next 30 years. Efforts such as this, which link climate projections to financial impacts and potential regulatory actions are emerging rapidly.

Modelling can also be used for predictive purposes. As climate change impacts increasingly become a reality, countries will need to undertake modeling scenarios and assessments for various possible future scenarios. MoFs and central banks play a key role in this context, depending on their respective capacities in modeling scenarios (NGFS 2020a and 2020b). Yet, fewer than one third of survey respondents (29 percent) indicated that their MoF assessed the macroeconomic impacts of climate change; whereas 24 percent assessed the macroeconomic impacts of low-carbon transition scenarios. As assessments not only aid in NDC development, revision, and implementation but provide insight into the long-term sustainability of public finances, increased MoF involvement could improve possible NDC outcomes.

The survey results showed that a third of survey participants were not engaged in macro-fiscal modelling assessments. Follow-up studies are needed to gain deeper understanding of the constraints of modelling, as well as the reasons for inclusion or exclusion from use by MoFs. More resources could be channeled toward analyzing the macroeconomic impact of climate change, as well as the way various low-carbon transition scenarios would affect macroeconomic indicators. For example, depending on the sector, employment indicators could decrease or increase. MoFs that are undertaking macroeconomic modeling exercises to incorporate climate could work with the Coalition to foster knowledge exchange and learning activities on how macroeconomic modeling provides feedback into the NDC and LTS processes.

3.2 Integrating NDCs into PFM Systems, Plans, and Strategies

The MoF is the guardian and convener of the public financial management (PFM) system, that is the regulations, processes, and tools governing the annual budget cycle. This includes budget formulation, budget execution, accounting and reporting, and external scrutiny and audit (Kristensen and Bowen 2019). The PFM system is, therefore, a mechanism both to incorporate and to enforce the policies established in NDCs and other climate policies. MoF participation in the NDC and broader climate-policy development processes is desirable because it both leverages the convening power of the MoF and it can help inject an element of fiscal realism into the process, allowing NDCs to be incorporated more smoothly into PFM systems. National PFM systems that anticipate and actively incorporate NDCs are better able to integrate the economic and fiscal consequences and externalities of policies and measures into their national economic and development policies.

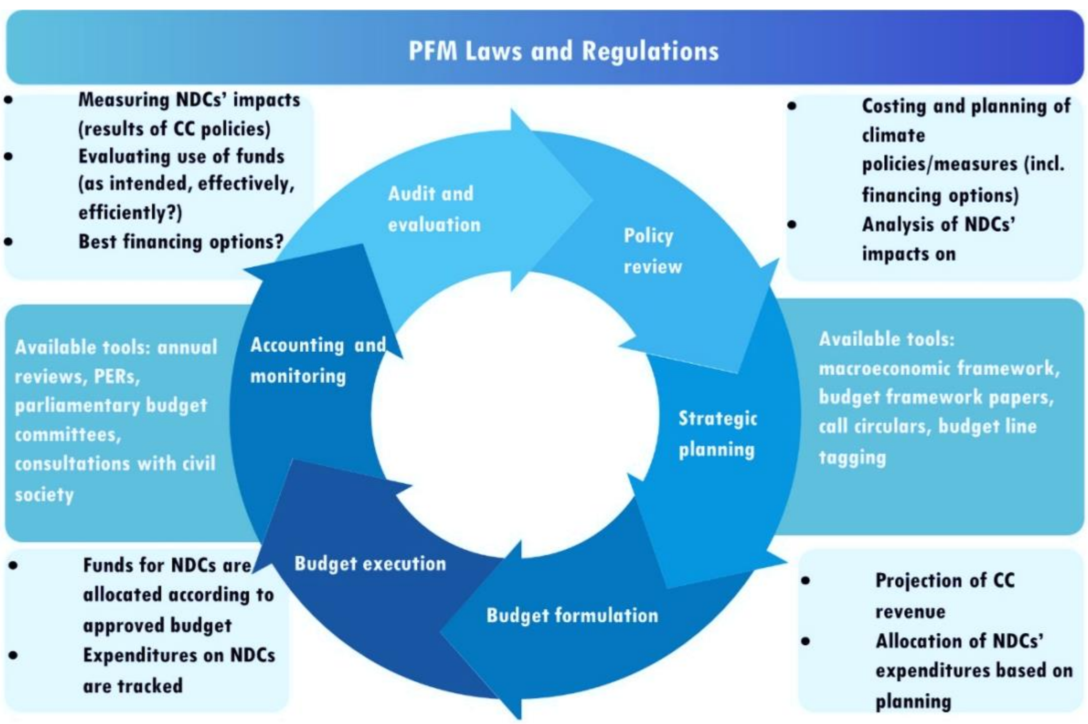
Understanding and managing climate risk is an important element of fiscal strategy and can include accounting for the uncertainty of costs related to a low-carbon transition; and evaluating the costs of inaction stacked up against costs related to adaptation. This strengthens MoF-led debate around economic payoffs and medium- and long-term fiscal sustainability objectives and helps governments prioritize budget allocations for meeting policy targets efficiently. Budget circulars could raise line ministries' responsibility for implementing their climate commitments and send a clear signal about the importance of the issue. In this scenario, several agencies are collectively advancing the mitigation and adaptation agenda—in a coordinated fashion—aligned with national priorities.

To facilitate NDC implementation, MoFs can review how PFM is enforced or how this system affects NDC mainstreaming. At each step of the PFM cycle, key practices could be implemented that help the country achieve its climate goals. Both the preparation and mainstreaming of NDCs can only be successful if they are linked to the budget cycle and the overarching PFM system. Above all, a solid link with the budget cycle makes it easier to prepare or revise NDCs that are *realistic*—that is, they support sustainable policies, can be implemented at reasonable cost, and yield the intended benefits.

PFM systems can help create an enabling environment for NDC mainstreaming and implementation by developing fiscal policies that encourage behavior change by the private and public sector to mobilize resources; and implement regulations and legislation regarding taxes, climate finance mechanisms, and procurement.

Figure 3. 1 depicts a universal budget cycle set in its broader PFM system, indicating the entry points and tools that can help mainstream climate action across the government. This approach can be adapted to any country's PFM system. Whether a country uses annual line-item budgeting, medium-term expenditure frameworks (MTEFs), or (de)centralized budgets, this budget cycle always applies. The tools highlighted can be reviewed to identify the most pertinent entry points for integrating climate change into a country's PFM system (see World Bank 2013, Levin et al. 2015, Shabih Ali Mohib 2014, and Allen et al. 2013).

Figure 2: Mainstreaming NDCs through PFM Systems



Source: Adapted from World Bank (1998).

Note: CC = climate change; NDCs = Nationally Determined Contributions

MoFs can approach the following interventions in their pursuit of creating green budgets and comprehensive climate-sensitive PFM systems:

Information collection, analyses, and dissemination: Evaluating climate risks including the financial risks associated with natural disasters and their potential impact on debt levels (and sustainability). Dissemination of risk information and climate policy through budget circulars and other budget documents.

Regulation: Incorporating climate change into investment and purchase decisions through the public investment management systems (PIMS) with procurement guidelines geared explicitly towards adaptation and decarbonization. Decarbonization could be promoted by consistent and predictable policies combined with clear and progressive regulations and, where necessary, complementary fiscal policies to prioritize or accelerate behavior change.

Taxation: Assessing the potential impact of new/higher carbon tax, removal of/reduction in fuel subsidy on consumer demand, tax revenues, and other taxation policies to drive decarbonization and choices (ideally) in line with adaptation policy; and

Financing: Facilitating access to existing sustainable finance (especially private sector and donor funding) and to new, innovative finance, such as green bonds, blended finance, and specialized funds.

Incorporating climate considerations into the PFM system remains nascent in many countries. However, interest among governments is growing, especially in sustainable budgeting, because it allows consistent reporting on the implementation of climate policies, influencing their revision and awareness. It involves the use of tools of budgetary policy making, such as climate budget tagging systems. These offer useful support for reporting, and to an extent prioritization, and serve a broad range of objectives such as increasing awareness; increasing the prioritization of programs that deliver mitigation or adaptation outcomes; and helping to improve the design of expenditure programs to improve their effectiveness in delivering equitable responses (CABRI, 2021).

Ireland's experience with green budgeting, introduced in 2018, as highlighted in Box 3.1, provides insights on how the country has adopted a multipronged approach over the long-term.

Box 9 - IRELAND: Implementation of Green Budgeting to Support Climate Action

The implementation of green budgeting—tagging climate-related expenditures and assessing the effectiveness of expenditures against stated goals—began in fiscal year 2018/19. It was motivated by Ireland's 2017 National Mitigation Plan, in which the government committed to develop proposals for the monitoring and reporting of climate-related public expenditures and to issue Ireland's first sovereign green bond, which it did in 2018.

As a first step in implementing green budgeting domestically, the Department of Public Expenditure and Reform (DPER) tagged all public climate-related expenditures. The DPER defined climate-related expenditure as: "Any expenditure which promotes, in whole or in part and whether directly or indirectly, Ireland's transition to a low carbon, climate-resilient, and environmentally sustainable economy." As a result, climate-related expenditures are now consolidated in a table included in the Revised Estimates Volume for Public

Services (REV), published annually in December. The REV provides more detail on the allocations in the Budget, announced every October, including program-by-program expenditure allocations that the government considers green.

The DPER is currently evaluating the effectiveness of these climate-related expenditures based on stated goals. The evaluation started in 2020 by assigning ex-ante performance metrics to all programs that benefited from additional funding via the carbon tax increase (announced in the 2020 Budget).

The DPER also published a paper, The Use of Carbon Tax Funds 2020, to discuss how the government intends to use the revenues raised through the carbon tax; it also outlines the ex-ante performance metrics used in the evaluation. Future iterations of the REV will include an ex-post performance evaluation of these programs based on the selected metrics and the results of these evaluations will influence future uses of carbon tax revenues.

At a later stage, the DPER intends to broaden the impact analysis of climate-related expenditures funded by the carbon tax to include wider climate-related public expenditures in future iterations of the REV. Doing so will increase transparency on the progress being made toward the achievement of Ireland's climate goals.

As part of Budget 2022, the Department of Finance (DOF) published the paper Budget 2022: A Review of Green Budgeting from a Tax Perspective, which, for the first time, examines green budgeting practices from a *tax* perspective. The DOF used the methodology presented in the paper to analyze the likely effects—both positive and negative—of the fiscal policy measures and expenditures included in Budget 2022 (presented in October 2021) on carbon emissions. The approach also complements the efforts of the EU and the OECD to advance green budgeting practices at the national level. This approach has been built upon in Budget 2023 and will be further developed for use in future national budget evaluations. (See section 6 of Budget 2023: Beyond GDP – Quality of Life Assessment)

3.3 Improving Countries' Enabling Environments

Unlocking investments needed for NDC implementation requires technical support in project preparation and better access to international climate finance. Elements central to strengthening NDCs include the development of climate-finance strategies, prioritizing activities that build strong financial foundations for revised NDCs based on investment strategies, designing financial roadmaps, and integrating climate finance into climate-smart public investment plans (NDC Partnership 2020d).

MoFs play a major role in mobilizing climate finance from national budgets and private financing through the implementation of economic and fiscal policies (for example, taxes and smart subsidies); and screening the budget for allocations to avoid lock-in of high carbon infrastructure and technologies, which would result in stranded assets and ultimately hinder low-carbon transition. Identifying, mobilizing, and tapping climate finance has become even more critical because of natural disasters or the COVID-19 pandemic, which, in some countries, resulted in public climate funds being diverted to support the governments' pandemic responses.

Against this background, developing countries have a renewed focus on creating an enabling environment to attract private sector investors to access climate finance—by issuing green bonds; and accessing international climate finance such as through the Green Climate Fund (GCF), the Global Environment Facility (GEF), and the Adaptation Fund.

The survey indicates that 59 percent of respondent MoFs improve their countries' enabling environments through the development and review of investment plans, while 51 percent do so through fiscal policy reform (See question 13 Appendix A). A relatively small number of MoFs has endeavored to reform procurement policy (27 percent) or revised their PFM system to link NDCs (27 percent). Introduction of procurement reforms remains a challenge—survey respondents indicate that additional resources will help advance action in this focus area.

In Mexico (Box 3.2), both the Ministry of Finance and the Central Bank are key actors mobilizing funds for environmental and social governance projects, including climate. The Mexican MoF is developing a taxonomy aligned with its NDC; supporting the assessment of environmental, social, and governance (ESG) risks by banks and ESG risk disclosure by financial agents; and developing innovative financing instruments to steer private capital toward green projects.

Box 10 - MEXICO: Greening the Finance Sector

Mexico is committed to promoting the transition towards a more sustainable economy that maximizes the opportunities for economic and social development. As part of this endeavor, the MoF (Ministry of Finance and Public Credit/La Secretaría de Hacienda y Crédito Público) has successfully raised funding for environmental and social governance (ESG) projects, including climate projects, by issuing sovereign sustainability-linked bonds. These bonds are linked to the UN 2030 Agenda and the SDGs, which, to some extent, overlap with NDC objectives. In the case of Mexico, the MoF believes that adaptation projects are more urgent than mitigation projects, given the impact of climate-related extreme events on the most vulnerable groups.

The first sustainable issuance was on the Euro market, it consisted of two rounds: The first, in 2020, with the issuance of bonds for a total amount of €750 million with a 7-year term, made Mexico the first country in the world to issue a sustainable sovereign bond linked to the SDGs promoted by the United Nations. The second issue was worth €1,250 million, with a 15-year term.

The second Federal Government Development Bond aligned with ESG criteria, was BONDES G, denominated in pesos and issued In July 2022 for a total amount of 15 billion pesos, with terms of 3 and 6 years. The following month, Mexico issued a 10-year sustainable sovereign bond in the U.S. dollar market for a total amount of US$2.2 billion with a 10-year term. The country also issued five new benchmark bonds in Japanese yen with maturities of 3, 5, 10, 15 and 20 years. The total value is 75.6 billion yen and Mexico became the first Latin American country to place sustainable bonds in Japan. This placement of sustainable debt is the largest ever made by any country in the Japanese debt market.

In 2020, the Financial System Stability Council (CESF) created the Sustainable Finance Committee (CFS). The Committee is chaired by the MOF with the Mexican Central Bank (Banco de México) acting as Secretariat, and all Mexican financial authorities participating as members, with chairs of financial-sector associations serving as observers. The Committee's role is to promote dialogue towards defining a national taxonomy for sustainable investments; mainstreaming climate and environmental risks in financial strategies; establishing clear rules for companies and intermediaries; and establishing an agenda to take advantage of the opportunities created by the low-carbon transition. In 2020 the CFS set up four working groups: (1) Taxonomy, led by the MOF; (2) Capital Mobilization, led by institutional investors; (3) ESG Risk Methodologies, led by the Central Bank; and (4) ESG Disclosure and Reporting, led by the National Banking and Securities Commission (CNBV).

The Taxonomy Working Group is developing a classification system to determine which economic activities can be deemed "sustainable", including not only the environmental and climate dimension, but also the social dimension. Therefore, the taxonomy will be aligned with climate commitments under the NDC and with the SDGs. The focus will be on agriculture, energy, construction, manufacturing industry, transportation, and waste management. In 2021, Mexico developed the conceptual and methodological framework for Sustainable Taxonomy. In 2022 a group of experts started working to determine the technical criteria that will permit evaluation of whether the economic activities in each sector included in the first phase of the taxonomy are sustainable or not. This process is being carried out in conjunction with key stakeholders from the public, private, and financial sectors, academia, civil society, and international organizations. In the final quarter of 2022, socialization and capacity-building exercises will be carried out with potential users of the taxonomy to ensure its applicability and effectiveness. The launch of Mexico's Sustainable Taxonomy is expected in early 2023.

3.4 Implementing a Monitoring and Evaluation System

Fiscal constraints, exacerbated by the COVID-19 pandemic, are creating pressure on governments, especially MoFs, to showcase the value of each dollar being invested, including on climate-related actions. Ministries of Finance increasingly want to have a better understanding of the effectiveness of their climate spending—what works, for whom, when, where and under what circumstances. This helps them to make decisions on whether to continue funding those actions, or to re-evaluate and pivot to other measures. Climate change indicators measuring climate performance can help assess the progress on implementing mitigation and adaptation measures, and thus the effectiveness of climate spending. This closely relates to the Transparency of Support under Article 13 of the Paris Agreement, a '*framework to provide clarity* *on support provided and received by relevant individual Parties in the context of climate change actions, and, to the extent possible, to provide a full overview of aggregate financial support provided…*'.

Climate finance MRV systems are especially relevant to *conditional* contributions where countries commit to climate action conditional on the provision of international climate finance. Compared to earlier NDCs, there is a shift away from conditional NDCs with a decline from 30 to 18 percent (Fransen 2021).

The Colombia case study provides an illustrative example of a comprehensive MRV framework for tracking climate finance from public, private, and international sources.

Box 11 - COLOMBIA: Policy Review and Fine Tuning Based on the Climate Finance MRV System

The first Colombian NDC included a Climate-Finance MRV System—developed with the National Strategy for Climate Finance and the National Climate Change Policy—making monitoring and evaluation a crucial element of planning and financing. Climate finance flows are monitored in accordance with the *Methodological Guide to Measure and Classify Financial Resources Associated with Climate Change Mitigation and Adaptation in Colombia*, published in 2016. While "finance" in this context often includes technology transfer and capacity building, Colombia's MRV system currently only covers financial flows.

The Climate Finance MRV system, to which the Ministry of Finance and Public Credit (*Ministerio de Hacienda y Crédito Público*) contributed, serves to compile and consolidate climate finance information, identify financing gaps and opportunities for climate action, and analyze the evolution of climate finance.[b] It provides valuable information for policy making and prioritization of climate activities, as it compares planned and actual public investments by sector and region, thus also allowing policy makers to assess where the country stands in terms of meeting its NDC commitments. This has created an important feedback loop for national, subnational, and sectoral policy review and planning processes.

The MRV system is a result of a coordinated, participatory process—it was built on available sectoral information to propose viable mitigation measures marked by added value for the country. Reporting on climate finance is not only the responsibility of environmental entities but also of the sectoral and regional entities that can influence climate outcomes. The MRV system improves the transparency and comparability of climate finance data, thus making it easier for donors and recipients to mobilize resources for climate change and fostering trust in the reporting between national and territorial entities.

The updated NDC includes an improved, slightly expanded SISCLIMA (the National Climate Change Decree) that consists of integrated MRV systems covering: (1) GHG emissions and emission reductions; (2) adaptation measures; and (3) climate finance. The updated MRV systems added more types of climate finance (for example, private green bonds) and fiscal measures such as the new carbon tax proposed for the power and industrial sectors in early 2021. The integration of the MRV systems for (reductions in) emissions and climate finance will make it possible to analyze the effectiveness and efficiency of climate policies and measures.

*This is an updated version of box 8 of the Coalition's first HP6 report.
[b] For details on this MRV system, see the articles "What is the Climate Finance MRV system and why was it created?" (June 2020) and "Experience Spotlight: Colombia Implementing a Climate Finance MRV System" (March 2020).

Leveraging MoF Strengths for NDCs: From Concept, to Means, to Creation

The MoF role is similar to that of other ministries that also contribute to the NDC process: performing data collection and analysis, which are then used to create transformational policies and make economic sectoral adjustments that contribute to lowering global greenhouse gas emissions. However, the Coalition of MoFs exists because the MoF role in the NDC process has a significance or uniqueness that sets it apart from the others. These advantages are highlighted throughout this document. For example, given its oversight of public spending and financial management expertise, the MoF is ideally placed to bring together—or provide a platform for—key finance stakeholders, relevant government departments, and public and private institutions to develop and implement climate action at several levels.

The transition to low-carbon societies will gain momentum as global understanding of its importance and relevance grows. Countries will increasingly have to make far-reaching structural changes in their economies to accomplish the transition. This document has explained the crucial ways in which MoFs are indispensable as most countries embrace the green transition. From the structural changes that will need to be analyzed, evaluated, and addressed to identifying the economic costs and benefits for creating climate-action oriented rigorous national budgets, the MoFs will play a key role in the transition.

The COVID-19 pandemic, the energy crisis, and the increasing frequency and cost of natural disasters adds further economic uncertainty to governments. Recovery from the pandemic and other compounded disasters will take considerable time and effort; MoFs will need to assess the impacts and prepare appropriate economic recovery packages. Every MoF faces these challenges. Simultaneously, the need to produce creative budgets and financing instruments to meet these realities is also an opportunity to include space for robust NDCs. There are many possibilities for NDCs to be a part of COVID-19 or disaster recovery packages, as the large-scale investments and support can be used to address environmental sustainability challenges (OECD 2021). Stimulus packages could include NDCs that identify green investment opportunities (Hammer et al. 2020). Focusing recovery budgets and fiscal strategies towards sustainable economies, which deliver benefits such as job creation, enhanced energy security, energy access, and public-health benefits will be the norm going forward. MoFs are well positioned to prioritize and finance these investments, off-setting some of the risks associated with climate change.

4.1 Lessons for Next Submission Round of NDCs

Each of the country case studies presented herein offers more than examples of what was done—or could be done—to develop NDCs. They offer experiences that can inspire, learning opportunities (lessons for what worked and what did not work), and critical analyses of assumptions regarding components of NDC preparation and implementation. As a part of the process, they add momentum as MoFs strengthen their engagement in the NDC process.

The following passages encapsulate the key messages from each of the country case studies:

- **The French MoF** experience with macro-modelling approaches in the NDC preparation process was instrumental in bringing main stakeholders together and in discussing sector-related assumptions that

play an important role in sector models and scenarios including energy price and macroeconomic trends.
- High-level support, with a direct mandate from the Office of the President, such as the **Philippines' Department of Finance**, was crucial in its ability to engage in climate action from preparation to implementation of its NDCs.
- **Ireland's Department of Finance (DoF)** plays a key role in the implementation of the EU's NDCs through carbon pricing and environmental taxation.
- **In Rwanda, the Ministry of Finance and Economic Coordination** (MINECOFIN) contributed to the coordination of its NDC revision and was instrumental in engaging the private sector and civil society organizations. On NDC implementation, MINECOFIN leads coordination through sector working groups that track the implementation of sector priorities; chairs the economic cluster to inform policy and strategic decisions; and leads tracking finance of NDC implementation.
- **EU MoFs** are playing a central role in NDC planning, update and implementation, as demonstrated by the alignment of policies with overarching climate goals and targets.
- **The Chilean MoF** is a primary convener of its country's green transition through, among others, leading the development of a "Financial Strategy for Climate Change", the goal of which is to establish guidelines and enabling conditions for the transition towards a resilient and low-carbon economy, and seeks the implementation of the sustainable development objectives that will enable the achievement of GHG-emission neutrality by 2050.
- **Kenya's National Treasury and Planning Ministry (TNTP)** is a facilitator by transmitting policy into operationalization of guidelines and processes through building the capacities of line ministries, CSOs, the private sector, and subnational governments to access sources of climate finance, including requirements needed to access such resources. It is also an implementer, mobilizing financial resources for climate action and tracking climate finance.
- **In Norway, the MoF** is responsible for implementing economic measures such as taxation of GHG emissions, as well as coordinating central government activities and drawing up a framework for efficient resource use.
- **The Mexican MoF** and the Central Bank are key actors mobilizing funds for environmental and social governance projects, including climate. The MoF is developing a taxonomy aligned with its NDC; supporting the assessment of environmental, social, and governance (ESG) risks by banks and ESG risk disclosure by financial agents; and developing innovative financing instruments to steer private capital toward green projects.
- **Colombian MoF** engagement and contribution to the Climate Finance MRV system provides an illustrative example of a comprehensive MRV framework for tracking climate finance from public, private, and international sources. The system serves to compile and consolidate climate finance information, identify financing gaps and opportunities for climate action, and analyze the evolution of climate finance.

This report has shown how MoFs' contributions help to create robust Nationally Determined Contributions to meet the objectives of the Paris Agreement through:

- **Costing, by:**
  - Costing NDCs and assessing macro-fiscal impacts of their implementation;
  - Evaluating the cost of inaction; and
  - Costing the international climate finance components of conditional contributions.

- **Tracking climate finance and identifying finance needs, by:**
    - Developing and implementing a robust MRV system to track climate finance.

- **Assessing the macroeconomic impacts of climate risks and opportunities for NDCs, by:**
    - Analyzing how climate-change scenarios impact economic forecasts, and identifying applicable measures in the national context;
    - Assessing the impacts of different scenarios for the implementation of carbon pricing (such as considering price trajectories, economic sectors, and products subject to a carbon tax, or the gradual removal of fossil fuel subsidies);
    - Analyzing the impacts of effort-sharing combinations of sectoral carbon budgets and emission ceilings on key macroeconomic and social indicators, such as GDP growth, unemployment, and external debt;
    - Analyzing the impacts of the transition to a low-carbon economy—especially through a breakdown of the impacts on the most severely affected sectors, population groups, and regions—to allow governments to design a "just transition" component for their NDCs;
    - Conducting modeling of the long-term macroeconomic impacts of energy and climate policies;
    - Co-preparing projections of GHG emissions with agencies such as the National Statistics Office and the Ministry of Environment or of Climate Change, based on the country's GHG inventory and input–output tables or other data; and
    - Facilitating the use of financial and economic models, and the availability of robust data.

Appendix: Survey Results

Annual Coalition HP6 survey

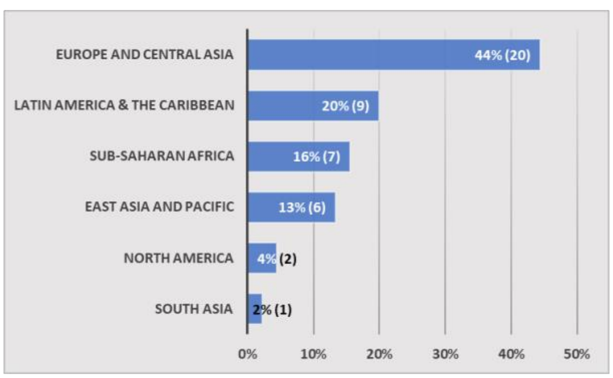
As part of the deliverables for 2021, the Coalition conducted a second HP6 survey among its members to gain a better understanding of MoFs' involvement in the NDC update process in 2020–2021. The objectives of the survey were to:

- *Learn* how MoFs are engaging in the preparation and implementation of NDCs;
- *Map* various levels of MoF engagement with NDCs;
- *Facilitate* the selection of countries for case studies, events, and HP6-related work; and
- *Guide* the identification of priorities and activities to achieve the HP6 goals.

At the time of the survey, the Coalition consisted of 62 members, 45 of the members participated in the survey**.** To assess how MoFs' engagement with NDCs has evolved, data from the Coalition's first (2020) HP6 survey are compared with data collected through its second (2021) HP6 survey, wherever relevant.

A total of 45 Coalition member countries were surveyed in 2021. The small sample size and lack of geographic or other notable representative country categories (Figures A.1 and A.2) means that all discussions and any inferences made regarding the nature and extent of MoF engagement with NDCs should be carefully qualified.

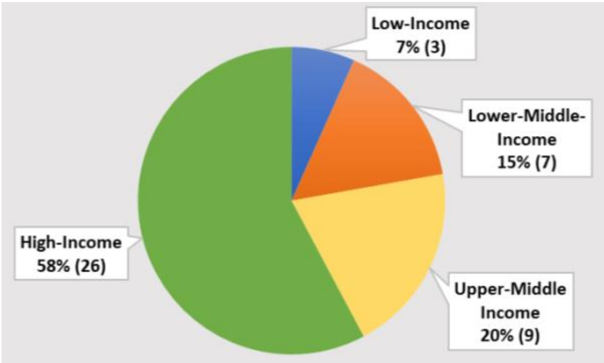
BREAKDOWN OF SAMPLE BY REGION



Countries in the Europe and Central Asia Region (ECA) make up almost half of the respondents; 17 of these countries (85 percent) are EU members.

Note: Percentages do not add up to 100 due to rounding. The regions shown refer to the World Bank Regions.

BREAKDOWN OF SAMPLE BY INCOME



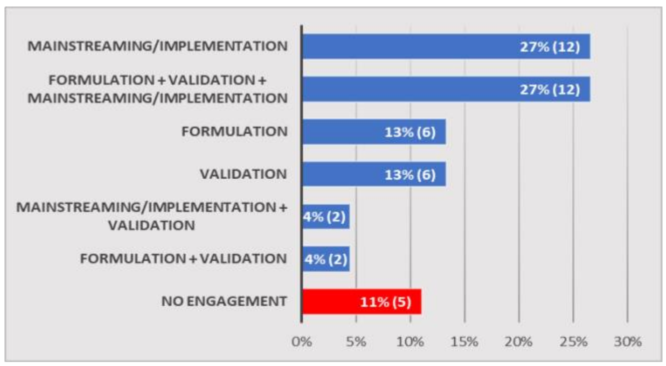
High-income countries (HICs) make up almost 60 percent of respondents; 65 percent of the HICs are EU members. Low-income countries (LICs) and lower-middle income countries (LMICs) are the least represented

For the reader's convenience, the numbering of the survey questions is maintained. The first four and last three questions are omitted because they were added for administrative purposes. The total count for each option is shown in brackets after the relevant percentage figure.

5. **In your country, how is the Finance Ministry involved in NDC preparation and implementation?**
 PART 1: STAGE OF ENGAGEMENT

Please select ***all*** *that apply*
Note: Questions 5-8 all relate to how the Finance Ministry is involved in NDC preparation and implementation

- ☐ NDC formulation
- ☐ NDC validation
- ☐ NDC mainstreaming/implementation
- ☐ No engagement

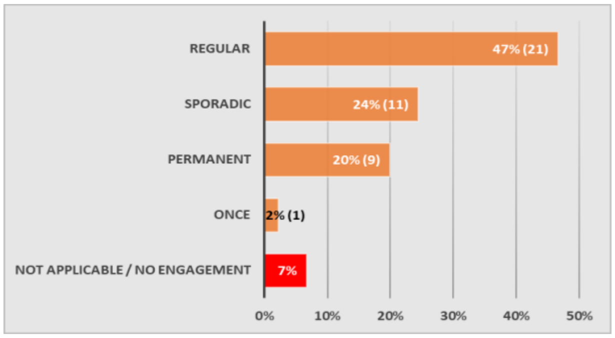


Note: Percentages do not add up to 100 due to rounding.

6. **In your country, how is the Finance Ministry involved in NDC preparation and implementation?**
 PART 2: DURATION OF ENGAGEMENT

Please select ***one*** *response only*

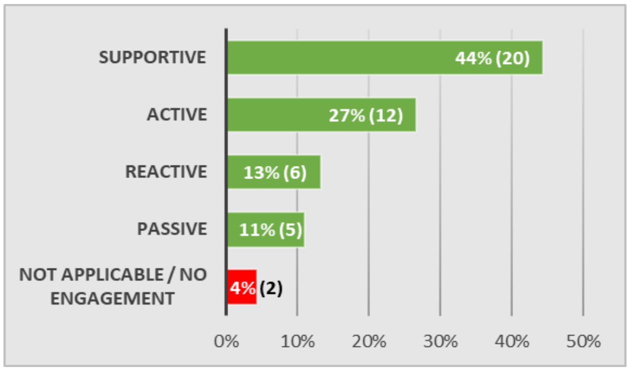
- ☐ Permanent
- ☐ Regular
- ☐ Sporadic
- ☐ Once
- ☐ Not Applicable/No Engagement



7. **In your country, how is the Finance Ministry involved in NDC preparation and implementation? PART 3: INTENSITY OF ENGAGEMENT**

*Please select **one** response only*

- ☐ Active
- ☐ Supportive
- ☐ Reactive
- ☐ Passive
- ☐ Not Applicable / No Engagement



Note: Percentages do not add up to 100 due to rounding.

PART 1: NDC COSTING AND RELATED ASSESSMENTS

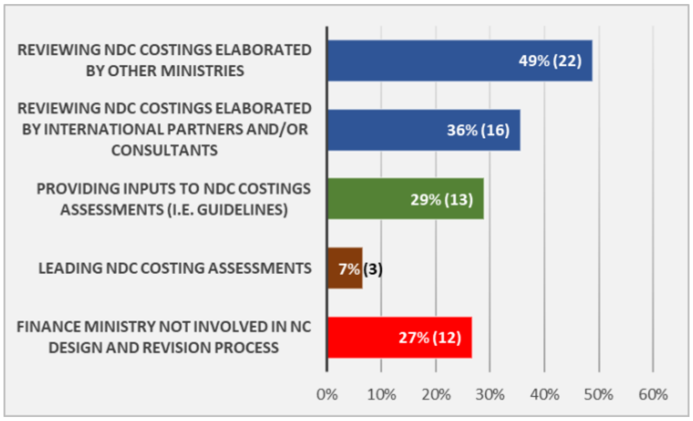
8. **If possible, please share more details on the Finance Ministry's engagement in NDC preparation and implementation**
[Some answers have been incorporated into the report.]

9. **In your country, how has the Finance Ministry contributed to the NDC design, revision, and implementation process?**

*Please select **all** that apply*
Note: Questions 9-13 all relate to how the Finance Ministry has contributed to the NDC design, revision, and implementation process

- ☐ Leading NDC costing assessments
- ☐ Providing inputs to NDC costings assessments (i.e., guidelines)
- ☐ Reviewing NDC costings elaborated by other ministries
- ☐ Reviewing NDC costings elaborated by international partners and/or consultants
- ☐ Finance Ministry not involved in NDC design and revision process
- ☐ Not Involved

☐ Other (please specify in the text box below)



One country did not answer this question.

The total counts of countries that checked "Finance Ministry not involved in NDC design and revision process" and that checked "Not Involved" were added up.

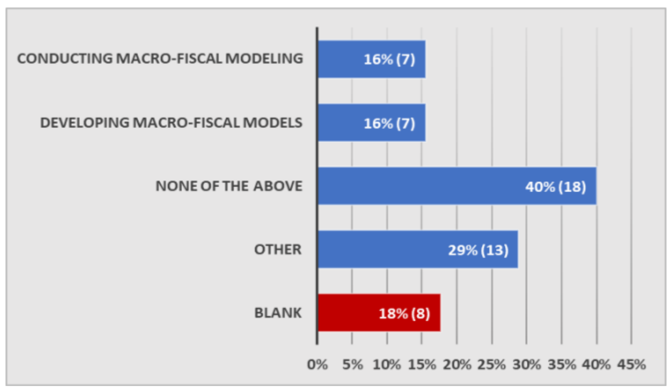
10. If you answered, "Finance Ministry not involved in NDC design, revision, and implementation process", please write a short explanation (if possible) and then skip to question 14
[Some answers have been incorporated into the report.]

PART 2: UNDERTAKING MACRO-FISCAL MODELING TO ASSESS THE FEASIBILITY OF IMPLEMENTING THE NDCS

11. In your country, how has the Finance Ministry contributed to the NDC design, revision, and implementation process?

*Please select **all** that apply*

☐ Developing macro-fiscal models
☐ Conducting macro-fiscal modeling
☐ None of the above
☐ Other [text box included for elaboration]

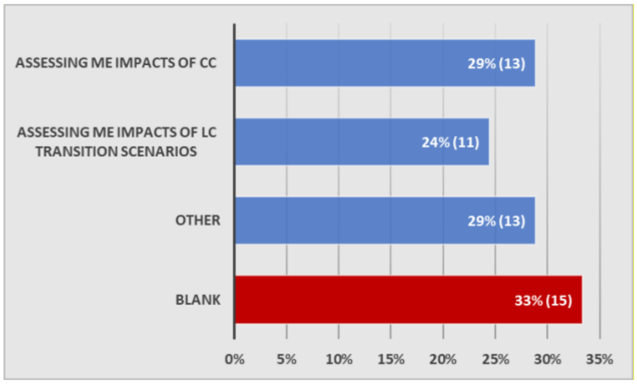


PART 3: UNDERTAKING MACRO-FISCAL MODELING TO ASSESS THE FEASIBILITY OF IMPLEMENTING THE NDCS

12. In your country, how has the Finance Ministry contributed to the NDC design, revision, and implementation process?

*Please select **all** that apply*

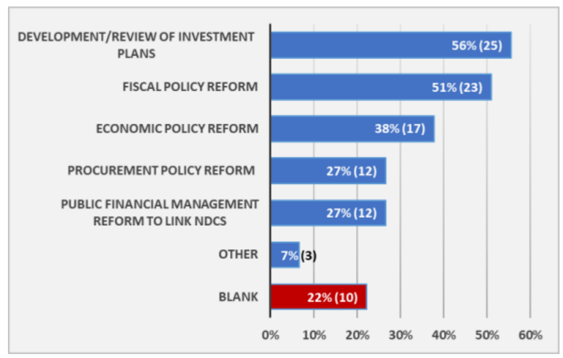
☐ Assessing macroeconomic (ME) impacts of climate change (CC)
☐ Assessing macroeconomic (ME) impacts of low-carbon (LC) transition scenarios
☐ Other [text box included for elaboration]



PART 4: IMPROVING THE COUNTRY'S ENABLING ENVIRONMENT

13. In your country, how has the Finance Ministry contributed to the NDC design, revision, and implementation process?

*Please select **all** that apply*

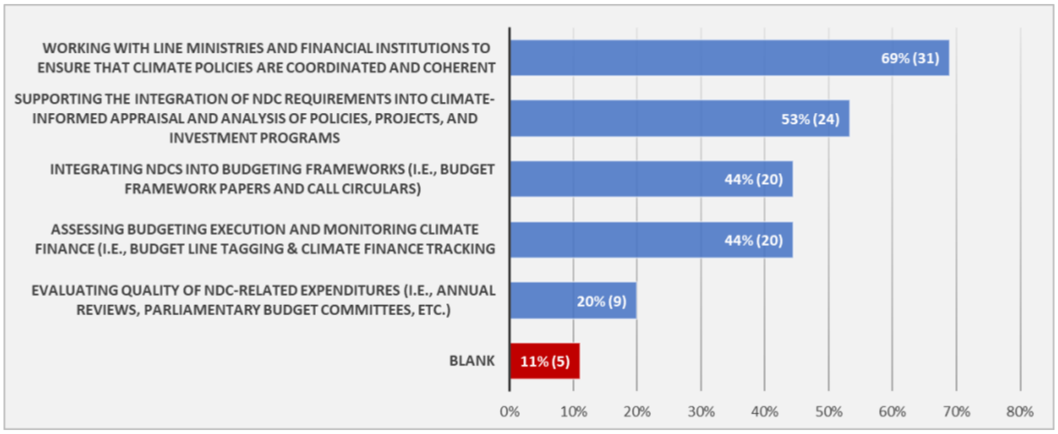


- ☐ Fiscal policy reform
- ☐ Economic policy reform
- ☐ Development/review of investment plans
- ☐ Procurement policy reform
- ☐ Public financial management reform to link NDCs
- ☐ Other [text box included for elaboration]

14. How does the Finance Ministry contribute to NDC implementation/mainstreaming?

*Please select **all** that apply*

- ☐ Working with line ministries and financial institutions to ensure that climate policies are coordinated and coherent
- ☐ Supporting the integration of NDC requirements into climate-informed appraisal and analysis of policies, projects, and investment programs
- ☐ Integrating NDCs into budgeting frameworks (i.e., budget framework papers and call circulars)
- ☐ Assessing budgeting execution and monitoring climate finance (i.e., budget line tagging & climate finance tracking
- ☐ Evaluating quality of NDC-related expenditures (i.e., annual reviews, parliamentary budget committees, etc.)

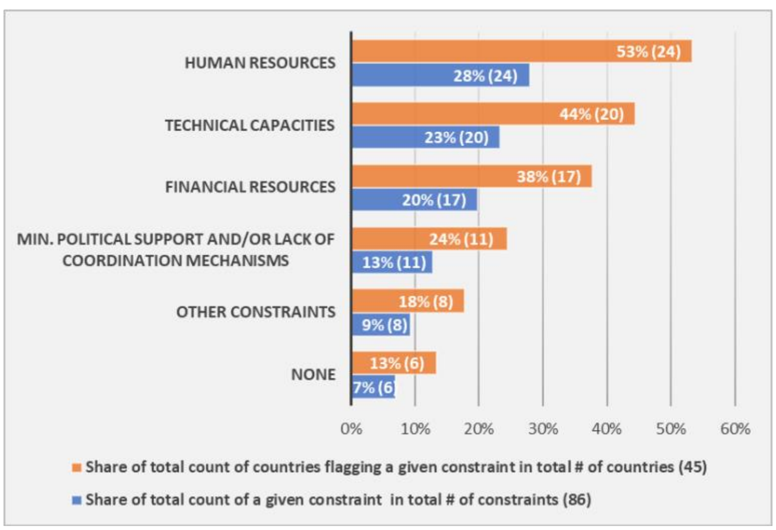


15. **If possible, please share more details on the Finance Ministry's contribution in NDC implementation/mainstreaming**
[Some answers have been incorporated into the report.]

16. **What constraints does the Finance Ministry have to further engage in NDC preparation and implementation?**

*Please select **all** that apply*

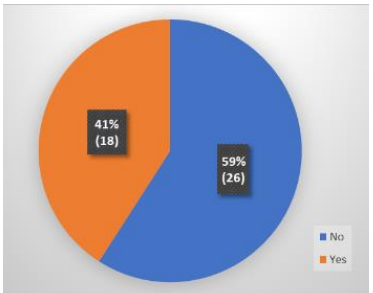
- ☐ None
- ☐ Human resources
- ☐ Financial resources
- ☐ Technical capacities
- ☐ Minimal political support and/or lack of coordination mechanisms
- ☐ Other [text box included for elaboration]



17. **If you selected "technical capacities", please specify the technical capacities that are lacking**

18. **In your country, does the Finance Ministry engage in the coordination of technical assistance and financing provided by international institutions for NDC mainstreaming and implementation?**

☐ Yes
☐ No



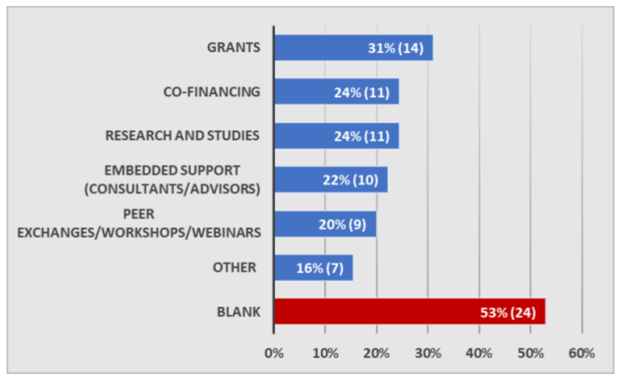
One country did not answer this question.

One country did not answer this question.

19. **If yes, please specify the type of support that the Finance Ministry coordinates**

*Please select **all** that apply*

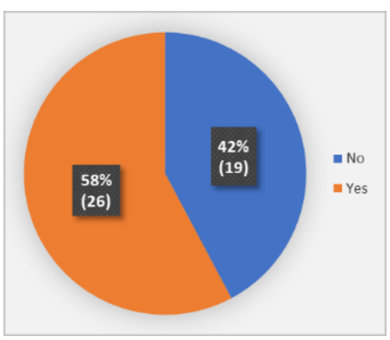
☐ Grants
☐ Co-financing
☐ Embedded support (consultants/advisors)
☐ Research and studies
☐ Peer exchanges/workshops/webinars
☐ Other [text box included for elaboration]



20. **If no, please state who has this responsibility in your country**
[Some answers are incorporated in the report.]

21. **Is the Finance Ministry linking the NDC to a national COVID-19 economic recovery plan?**

☐ Yes
☐ No



22. **If possible, please share more details**
[Some answers have been incorporated into the report.]

Bibliography

Allen, R., R. Hemming, and B. Potter. Eds. 2013. *The International Handbook of Public Financial Management*. Palgrave and MacMillan, London. Available at: https://link.springer.com/book/10.1057/9781137315304#toc

CABRI 2021. *The Integration of Climate Change into Budgeting and Finance: Keynote Paper.* Pretoria: CABRI Secretariat. Available at: https://www.cabri-sbo.org/en/publications/inclusive-budgeting-and-financing-for-climate-change-in-africa

CAPE (Climate Action Peer Exchange). 2019a. "Overview of the Santiago Action Plan: The Coalition of Finance Ministers for Climate Action." Briefing Note prepared by the Sherpas of the Coalition. Washington, DC. Available at: https://www.financeministersforclimate.org/sites/cape/files/inline-files/Overview%20-%20Santiago%20Action%20Plan.pdf

CAPE (Climate Action Peer Exchange). 2019b. *The Coalition of Finance Ministers for Climate Action*. CAPE, World Bank Group, Washington, DC. Available at: https://www.worldbank.org/en/news/feature/2017/05/10/cape-a-peer-to-peer-knowledge-exchange-for-finance-ministers-to-combat-climate-change

Coalition of Finance Ministers for Climate Action. 2020. *Ministries of Finance and Nationally Determined Contributions: Stepping Up for Climate Action.* Report on Helsinki Principle 6. Available at: https://www.financeministersforclimate.org/sites/cape/files/inline-files/Helsinki%20Principle%206%20-%20July%2015%202020%20update.pdf

Coalition of Finance Ministers for Climate Action. 2021. *Better Recovery, Better World Report. Available at: https://www.financeministersforclimate.org/sites/cape/files/inline-files/Building%20Momentum%20for%20Strong%20Recovery%20and%20Sustainable%20Transformation.pdf*

Doorley, K., C. Keane, A. McTague, S. O'Malley, M. Regan, B. Roantree, and D. Tuda. 2021. "Distributional impact of tax and welfare policies: COVID-related policies and Budget 2021." ESRI (Economic and Social Research Institute). Special Article. Available at: https://www.esri.ie/system/files/publications/QEC2020WIN_SA_Doorley.pdf

European Commission. 2020. *Update of the NDC of the European Union and its Member States.* Available at: https://unfccc.int/sites/default/files/NDC/2022-06/EU_NDC_Submission_December%202020.pdf

Finance Ministers for Climate. N.d. "About the Coalition". Available at: financeministersforclimate.org

Finance Ministers for Climate. N.d. "Helsinki Principles". Available at: financeministersforclimate.org/helsinki-principles

Fransen, T. 2021. "Making Sense of Countries' Paris Agreement Climate Pledges". World Resources Institute. Available at: www.wri.org/insights/understanding-ndcs-paris-agreement-climate-pledges

The Coalition of Finance Ministers for Climate Action

Fransen, T., I. Sato, K. Levin, D. Waskow, D. Rich, S. Ndoko, and J. Teng. 2019. *Enhancing NDCS: A Guide to Strengthening National Climate Plans by 2020.* World Resources Institute and United Nations Development Programme. Available at: https://www.ndcs.undp.org/content/ndc-support-programme/en/home/impact-and-learning/library/ndc-enhancement-guide0.html

Government of Ireland. 2021. *Climate Action Plan 2021: Securing Our Future.* Report produced by the Department of the Environment, Climate and Communications

Hammer et al. 2020. World Bank Blogs, Washington, DC. Available at: https://blogs.worldbank.org/climatechange/how-countries-climate-ambitions-can-support-sustainable-recovery-covid-19coronavirus

IMF (International Monetary Fund). 2019. *Fiscal Policies for Paris Climate Strategies: From Principle to Practice*. IMF Policy Paper, Washington, DC. Available at: https://www.imf.org/en/Publications/Policy-Papers/Issues/2019/05/01/Fiscal-Policies-for-Paris-Climate-Strategies-from-Principle-to-Practice-46826

IPCC (Intergovernmental Panel on Climate Change). 2022. *Climate Change 2022: Impacts, Adaptation and Vulnerability*. Available at: AR6 Climate Change 2022: Impacts, Adaptation and Vulnerability — IPCC

Levin, K.; D. Rich; Y. Bonduki; M. Comstock; D. Tirpak; H. McGray; I. Noble; K. Mogelgaard; and D. Waskow. 2015. *Designing and Preparing Intended Nationally Determined Contributions (INDCs)*. World Resources Institute, Washington, DC. Available at: https://www.wri.org/publication/designingand-preparing-indcs.

Ministry of Ecological Transition of France. 2020a. *National Low Carbon Strategy: The Ecological and Inclusive Transition Towards Carbon Neutrality.* Full (unabridged) version of the strategy. Available at: https://unfccc.int/sites/default/files/resource/en_SNBC-2_complete.pdf

Ministry of Ecological Transition of France. 2020b. *National Low Carbon Strategy: The Ecological and Inclusive Transition Towards Carbon Neutrality.* Summary Note. Available at: https://unfccc.int/sites/default/files/resource/en_SNBC-2_summary_compl.pdf

NDC Partnership. 2019. "NDC Partnership Experience with Multi-Stakeholder Engagement: Key Lessons Learned." Insight Brief. Available at: https://ndcpartnership.org/sites/default/files/NDC%20Partnership%20Multistakeholder%20Insight%20Brief.pdf

NDC Partnership. 2020a. *The NDC Partnership's Economic Advisory Support*. NDC Partnership. Washington, DC. Available at: https://ndcpartnership.org/economic-advisory-support

NDC Partnership. 2020b. *Helsinki Principle 6 Survey Results and Heat Map*. Internal report. NDC Partnership under the Coalition of Finance Ministers. Washington, DC: World Bank

NDC Partnership. 2020c. "Understanding NDC Financing Needs." Washington, DC: World Bank. Available at: https://ndcpartnership.org/sites/default/files/Understanding%20NDC%20Financing%20Needs%20Insight%20Brief.pdf

NDC Partnership. 2020d. "Finance in Latin American and Caribbean NDCs." Washington, DC: World Bank. Available at: https://ndcpartnership.org/sites/default/files/Insight_Brief-Finance_in_LAC_NDCs_October-2020.pdf

NDC Partnership, IGES (Institute for Global Environmental Strategies), and WGEO (World Green Economy Organization). 2021. *Good Practices in NDC Updates and Implementation: Challenges and Lessons Learned from Asia, the Middle East, and North Africa.* June 2021 Workshop Report

NGFS (Network for Greening the Financial System). 2020a. *Guide to Climate Scenario Analysis for Central Banks and Supervisors.* Technical Document. Available at: https://www.ngfs.net/en/guide-climate-scenario-analysis-central-banks-and-supervisors

NGFS. 2020b. *NGFS Climate Scenarios for Central Banks and Supervisors.* Overview Document. Available at: https://www.ngfs.net/sites/default/files/medias/documents/820184_ngfs_scenarios_final_version_v6.pdf

O'Malley, S., B. Roantree, and J. Curtis. 2020. "Carbon Taxes, Poverty and Compensation Options." ESRI (Economic and Social Research Institute)
Survey and Statistical Report Series Number 98. Dublin: ESRI. Available at: https://www.esri.ie/publications/carbon-taxes-poverty-and-compensation-options

OECD (Organisation for Economic Co-operation and Development). 2021. *Going for Growth 2021: Shaping a Vibrant Recovery.* OECD Publishing, Paris. Available at: https://www.oecd.org/economy/going-for-growth/

Tall, Arame; Lynagh, Sarah; Blanco Vecchi, Candela; Bardouille, Pepukaye; Montoya Pino, Felipe; Shabahat, Elham; Stenek, Vladimir; Stewart, Fiona; Power, Samantha; Paladines, Cindy; Neves, Philippe; Kerr, Lori. 2021. Enabling Private Investment in Climate Adaptation and Resilience: Current Status, Barriers to Investment and Blueprint for Action. World Bank, Washington, DC. Available at: https://openknowledge.worldbank.org/handle/10986/35203

UKCIP (United Kingdom Caribbean Infrastructure Partnership Fund). 2018. *Cost of Climate Impacts.* UKCIP, Oxford. Available at: https://www.ukcip.org.uk/wizard/ future-climate-vulnerability/costings/

UNFCCC (United Nations Framework Convention on Climate Change). 2016. *Report of the Conference of the Parties on its twenty-first session*. Meeting held in Paris from 11/30/2015–12/13/2015. UNFCCC, Bonn. Available at: https://unfccc.int/resource/

UNFCCC. 2021a. *Nationally Determined Contributions under the Paris Agreement: Synthesis Report.* Report by the secretariat on the 48 new/updated NDCs submitted as of December 31, 2020. Available at: https://unfccc.int/documents/306848

UNFCCC. 2021b. *National Adaptation Plans 2020: Progress in the Formulation and Implementation of NAPs.* Available at: https://unfccc.int/sites/default/files/resource/NAP-progress-publication-2020.pdf

UNDP, UNEP (United Nations Environment Programme), UNEP DTU (Technical University of Denmark), and WRI (World Resources Institute). 2020. *Implementing Nationally Determined Contributions (NDCs).* UNEP DTU Partnership Copenhagen, Denmark. Available at: https://unepdtu.org/publications/implementing-nationally-determined-contributions-ndcs/

UNDP and ODI (Overseas Development Institute). 2012. "The Climate Public Expenditure and Institutional Review (CPEIR): A Methodology to Review Climate Policy, Institutions and Expenditure." Working Paper. Available at: https://www.cbd.int/financial/climatechange/g-cpeirmethodology-undp.pdf

UNDP and WRI. 2019. "Scaling up Ambition: Leveraging NDCs and Long-Term Strategies to Achieve the Paris Agreement Goals." Input Document for the G20 Climate Sustainability Working Group. Available at: https://www.mofa.go.jp/files/000498437.pdf

World Bank. 1998. *Public Expenditure Management Handbook.* Washington, DC: World Bank. Available at: https://www.climateworks.org/independentglobalstocktake/

World Bank. 2013. *Beyond the Annual Budget: Global Experience with Medium Term Expenditure Frameworks.* Washington, DC: World Bank. Available at: http://documents.worldbank.org/curated/en/354601468330959258/pdf/Beyond-the-annual-budget-global-experience-with-medium-termexpenditure-frameworks.pdf

World Bank. 2014. *Climate Change Public Expenditure and Institutional Review Sourcebook*. Washington, DC: World Bank. Available at: https://www.greengrowthknowledge.org/sites/default/files/downloads/resource/World_Bank_CCPEIR_Sourcebook_0.pdf

World Bank. 2019. *The Coalition of Finance Ministers for Climate Action: An Overview*. World Bank Spring Meetings 2019. Washington, DC: World Bank. Available at: http://pubdocs.worldbank.org/en/646831555088732759/FMCoalition-Brochure-final-v3.pdf

World Bank. 2020. *World Bank Outlook 2050 Strategic Directions Note: Supporting Countries to Meet Long-Term Goals of Decarbonization.* Washington, DC: World Bank. Available at: https://openknowledge.worldbank.org/handle/10986/33958

World Bank. 2021. *The World Bank NDC Support Facility: Impacts and Lessons Learned Supporting NDC Implementation.* Washington, DC: World Bank. Available at: https://openknowledge.worldbank.org/bitstream/handle/10986/35412/The-World-Bank-NDC-Support-Facility-Impacts-and-Lessons-Learned-Supporting-NDC-Implementation.pdf?sequence=1&isAllowed=y

World Resources Institute (WRI). 2019. “Climate Action for Today and Tomorrow: The Relationship between NDCs and LTSs”. Available at: https://www.wri.org/insights/climate-action-today-and-tomorrow-relationship-between-ndcs-and-ltss#:~:text=Alignment%20of%20NDCs%20and%20LTSs,with%20the%20same%20development%20pathway.