



Driving Climate Action Through Economic and Fiscal Policy and Practice

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A product of the Helsinki Principle 4 workstream

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Context

The Coalition of Finance Ministers for Climate Action recognizes the critical role of ministries of finance in responding to climate change and its causes and impacts. This report, prepared under the Helsinki Principle 4 Workstream (see box 1), highlights the importance of robust action—and the potential consequences of inaction—by ministries of finance. It outlines five key areas to help ministers of finance take leadership on climate change: macroeconomic modeling, climate-informed fiscal risk assessment, green budgeting, public investment and asset management, and green public procurement. The report draws on experiences and practices from member countries and includes a curated list of frameworks, guidance, and tools to support ministries of finance in mainstreaming climate change in economic and fiscal policy and practice (see annex).

Box 1. What Does Helsinki Principle 4 Cover?

Members of the Coalition of Finance Ministers for Climate Action are working to align their economies with the goals of the Paris Agreement. The Coalition works under Helsinki Principle 4 to mainstream climate change mitigation and adaptation into macro-fiscal and macroeconomic policy and practice. Helsinki Principle 4 calls for identifying and sharing best practices and common approaches, building expertise, gathering research, and producing information and analysis for the benefit of its members.

Mainstreaming measures to halt climate change and mitigate its impacts in policy planning, budgeting, public investment management, and public procurement is essential to effective action. Some countries have made progress in these areas, building on robust, evidence-based planning and financial management systems. Under Helsinki Principle 4, member countries and institutional partners share their experience and contribute to the development of tools that can be applied across all countries, including those with more limited capacity.

The two key agenda items under Helsinki Principle 4 are:

- Identifying, assessing, and reducing government fiscal risks arising from climate change, and using macroeconomic modeling to integrate climate considerations into macroeconomic and fiscal policy and management and to identify and quantify trade-offs and inform choices.
- Using green budgeting, green procurement, and climate-informed public investment management to integrate climate considerations into policymaking and budgeting and drive effective and equitable climate action that can deliver climate policy goals.

The Coalition's work in these areas includes supporting research, developing guides and tools, and sharing experience and lessons through seminars and events. Because context matters crucially in responding to climate change, the Coalition, through its implementing partners, will support member countries in developing and applying approaches to mainstreaming climate measures that respond to members' particular needs, priorities, and capabilities.

1) Crucial Opportunities for Ministries of Finance—and the Risks of Failing to Act

Action on climate change requires a whole-of-government, whole-of-economy, and whole-of-society response (see boxes 2 and 3). Ministries of finance are essential to climate action because of their central role in government and in driving actions across the economy. While leadership on climate policy typically resides in other ministries, ministries of finance have multiple essential roles related to climate action, though specific responsibilities may vary across countries:

- Assessing economic and fiscal costs and benefits
- Implementing sectoral climate policies
- Implementing other climate policies related to finance ministries' leadership on public investment, procurement policy and practice, and intergovernmental fiscal relations, and their governance of state-owned enterprises
- Analyzing the economic and cost impacts of National Determined Contributions and Long-Term Strategies to achieve Paris Agreement goals

This report describes opportunities for finance ministers to use economic and fiscal policy tools to lead climate action—and the risks of failing to act (section 1). It outlines five areas in which ministries of finance can strengthen their engagement (section 2) and provides links to helpful resources (annex). The report closes with a list of priorities for Helsinki Principle 4 over the next year (section 3). Throughout, it provides examples of countries' use of these tools (boxes 3–9).

Box 2. Whole-of-Government Perspective—US Climate-Smart Public Budgeting

The United States has set a target to reduce greenhouse emissions by 50–52 percent from the 2005 level by 2030 and to become a net zero emissions economy by no later than 2050. To meet this commitment, the United States is pursuing a whole-of-government approach to reduce emissions in every sector of its economy, increase resilience to the impacts of climate change, protect public health, and support the most vulnerable communities. Integrating climate consideration into public budgeting is central to this strategy, including:

- Prioritizing public investment in innovation, commercialization, and deployment of clean energy technologies and infrastructure, and taking steps to ensure that budget expenditures are not directly subsidizing fossil fuels.
- Directing federal government agencies to procure carbon pollution-free electricity and clean zero emission vehicles and to develop plans to increase the resilience of facilities, operations, and missions to the impacts of climate change.
- Integrating the measurement, disclosure, and mitigation of climate-related risks into government budgeting, procurement, and financial management practices.
- Requiring that permitting decisions consider the effects of greenhouse gas emissions and climate change.
- Creating a government-wide initiative with the goal of delivering 40 percent of the overall benefits of climate investments to disadvantaged communities.

Opportunities for Action

The green transition will entail massive societal and economic changes. Ministries of finance around the world can drive action on climate change through their role at the core of economic and fiscal policymaking.

Leading on responses to climate change offers opportunities for ministers of finance to:

- *Promote long-term economic and fiscal sustainability* by modeling the impacts of climate change—including physical risks and transition risks—on future revenue and expenditure needs.
- *Support the achievement of climate objectives through the most cost-effective means* by assessing the effects of climate policies, costing the policies, incorporating the cost of carbon, and factoring these analyses into government budgetary decisions to drive climate action.
- *Transform economies* by investing in climate mitigation and adaptation measures and the decarbonization of public infrastructure.
- *Tip the balance to green energy* by shifting spending and regulation to eliminate the advantage of fossil fuels and provide a level playing field for clean energy.
- *Maximize green job opportunities* by assessing the likely impacts of global policy and technological changes on business opportunities and the labor market and using regulation and public investment to drive climate action in both the public and private sectors.
- *Mobilize finance*, including through green bonds, concessional climate financing, and private investment, by implementing a regulatory environment, budget practices, and public investments that support capital for new green industries and resilience.

Box 3. Adopting a Whole-of-Government Approach in the Philippines

The Philippine government, spearheaded by the Secretary of Finance, has adopted a whole-of-government approach to climate change, developing climate change initiatives across sectors to achieve its Nationally Determined Contribution of reducing greenhouse gas emissions by 75 percent by 2030 (compared with a business-as-usual scenario).

The government is shifting investments to clean energy sources and green technologies. It has declared a moratorium on endorsements for greenfield coal power plants and liberalized foreign investments in geothermal energy. Through an interagency collaboration called “Green Force,” led by the Department of Finance and the Central Bank of the Philippines, the country is establishing a sustainable finance ecosystem to synergize public and private investments in green projects.

The Securities and Exchange Commission, meanwhile, has issued guidelines to allow green, social, and sustainability bonds to flourish. The Department of Finance is also expanding assets for the Philippine Crop Insurance Corporation and the crops that it covers to provide farmers with better protection from crop losses while reinforcing risk mitigation and resilience efforts. The department is likewise pushing for passage of a bill banning single-use plastics to end marine pollution.

Risks of Inaction

If ministries of finance fail to respond promptly and effectively to these opportunities to drive action on climate change, risks arise in multiple areas:

- ***Failure to meet climate policy objectives*** as a result of budgetary and regulatory decisions that do not capture climate impacts and costs.
- ***More frequent economic shocks*** as the physical impacts of climate change and the global decarbonization transition adversely affect asset values, economic activity, and jobs.
- ***Budgetary shocks*** as the failure to assess and mitigate climate-related risks leads to higher public expenditures for reconstruction of infrastructure, disaster relief, and write-downs of stranded assets, coupled with adverse impacts on the tax base.
- ***Inefficient use of public resources*** as the relative costs and benefits of climate policies are not properly assessed, making adaptation and decarbonization costlier than necessary.
- ***Increased cost of capital*** as ratings agencies take into account limitations in the preparedness of economic governance institutions to respond to climate risks.
- ***Reduced market opportunities*** as consumer preferences change and border carbon adjustment mechanisms are introduced.
- ***Increased technology costs for the government and private sector*** as legacy investments in carbon-intensive industries become costlier to operate and upgrade, while investments in clean technologies become more cost effective.
- ***Social discontent*** as groups negatively affected by the transition face increased vulnerability and poverty.

2) Key Areas for Ministries of Finance to Mainstream Climate Change into Policy and Practice

Ministries of finance in a wide range of countries are developing robust experience with ways to maximize climate change opportunities and minimize risks. Countries can consider activities in the five areas discussed below to mainstream climate change into economic and fiscal policy and practice. Across each area, countries should assess the impacts of climate change on the poorest and most vulnerable people. Poor people are likely to suffer the most from the physical impacts of climate change and, in many countries, have historically borne the brunt of environmental damage. Countries should also consider measures for a just transition for people who might be harmed by changes in policy, whether workers, consumers, or the public at large.

Using Macroeconomic Modeling of Physical and Policy Changes to Guide Action

What: It is crucial for countries to integrate considerations of climate change into economic, financial, and fiscal policy and decision-making to promote a sustainable green recovery following the pandemic. Climate-informed macroeconomic modeling can support assessments of the economic effects of policies related to decarbonization, mitigation, and adaptation, as well as of the physical effects of climate change. Modeling can reveal how economic policies affect climate objectives and vice versa, so that the identified effects can inform decision-making.

Why: The physical impacts of climate change, as well as international and domestic policies on decarbonization and adaptation, will affect growth, jobs, and government finances. Climate-induced outcomes, including severe weather events, can reduce productivity, destroy physical and human capital, and harm vital economic sectors including energy, infrastructure, agriculture, and healthcare. Adaptation measures can limit the negative environmental effects but will likely have economic impacts. Similarly, decarbonization efforts globally and through domestic taxes, subsidies, and sectoral policies will change the nature of economic activity and government finances.

Macroeconomic models enable policymakers to better understand the economic impacts of climate change and design economic policies that support climate goals. Modeling can be used to analyze the implications of policies to reduce greenhouse gas emissions and of measures to build resilience and adapt to the effects of climate change and to assess the economic and fiscal risks of future climate impacts. While recognizing the limitations of models, ministries of finance can use them for planning and evaluating climate change policies alongside other priorities and for informing evidence-based decisions.

Who: Most high-income countries and at least 17 developing countries have started to integrate climate change into macroeconomic models to inform decision-making and policy design. Experts are developing modeling systems to assist countries in these efforts. A partial list of institutions supporting these activities includes international and bilateral aid organizations such as the World Bank, International Monetary Fund, African Development Bank, Interamerican Development Bank, French Development Agency, and German International Cooperation Agency, as well as private sector, academic, and nonprofit groups such as E3, Massachusetts Institute of Technology, and the World Resources Institute.

How: Each national context gives rise to its own policy trade-offs, choices, and priorities, which partly determine which model or models are best suited to that context. A wide variety of modeling frameworks and tools are available, including those focused on:¹

- *Modeling* specific aspects of climate change, including poverty impacts, supply-chain effects of disasters, and agriculture impacts.
- *Using global databases for quick diagnostics*, including first-order approximation of the impacts of carbon pricing on emissions, pollution, and health.
- *Providing economic ministries with tools* that fit into their daily workflow but that also incorporate emissions, mitigation policies, climate economic damage, and adaptation policy.

A set of principles has emerged to guide model development and use across varying national contexts. Strong coordination and cooperation among policymakers, technical experts, and key stakeholders, which promotes the design of more accurate and user-friendly models, increases political buy-in, and provides policymakers with practical guidance to address policy issues. Emphasizing transparency in model development by articulating assumptions, highlighting limitations, and releasing model source code to the public. Enhancing the transparency of public decision-making allows third parties to test model results, strengthening their overall quality and design and leading to wider acceptance. Ultimately, modeling exercises must be linked to decision-making, delivering timely information that is relevant to policymakers and quantifying policy trade-offs to inform economic, fiscal, and sectoral policy choices.

Box 4. Denmark's GreenREFORM Model

Denmark has set a target to reduce greenhouse gas emissions by 70 percent by 2030 over 1990 levels. Delivering on this ambition goal requires transformational change of the Danish economy and society. As the green transition becomes an integral part of economic policy, Danish Minister of Finance Nicolai Wammen has announced that it also needs to be part of the Danish Finance Ministry's core business.

To that end, the Danish Research Institute for Economic Analysis and Modelling (DREAM), with involvement of university researchers and experts, is developing a new macroeconomic model, GreenREFORM. The aim is to create a readily available one-stop-shop for consistent assessments of the economic and fiscal impacts of climate policies and the climate impact of economic policies, along with traditional budgetary and fiscal objectives. The project aims to integrate state-of-the-art data on technology costs and comprehensive data from Statistics Denmark's environmental-economic accounts into a dynamic general equilibrium model.

The Danish Ministry of Finance has dedicated considerable in-house resources to develop GreenREFORM and build capacity to use the model for policy assessment in all parts of government. Government departments and external stakeholders are now calibrating and testing GreenREFORM so that it becomes a rigorous tool for assessing the effectiveness and impacts of climate policy proposals.

Identifying, Assessing, and Reducing Government Fiscal Risks to Climate Change

What: Climate-informed fiscal risk assessments quantify the risks of climate change to the government’s financial position. This includes impacts on revenue, expenditure (for example, to protect and replace government infrastructure or enhance government-funded social programs), and government portfolio holdings and backstops. A fiscal risk assessment is typically prepared as a supporting document to the budget, setting out the impact on budget outturns of known climate risks and the government’s management measures. Managing the risks associated with climate change means developing and implementing a framework focused on risk reduction, risk retention, and risk transfer in a context of budget constraints.

Why: Efficient financing of responses to climate change requires robust assessments of risk and effective risk layering. Some climate risks may be large but unfold slowly, making them easier to manage with regular budgetary instruments. Others may exceed a government’s liquidity, requiring risk transfer instruments. Recognizing that different instruments offer different amounts of liquidity at varying costs allows governments to use risk layering and ensure that cheaper sources of money are used first, with the most expensive instruments used only in exceptional circumstances.

Box 5. Integrating Climate Change into Fiscal Sustainability Analysis in Switzerland and the United Kingdom

Environment- and climate-related factors will become increasingly important in assessing the long-term fiscal sustainability of public finances. While fiscal sustainability reports are becoming more common, they typically focus on projecting the fiscal consequences of demographic aging, rather than the potentially disruptive and transformative factors arising from climate change.

A article on climate change and long-term fiscal sustainability of government budgets describes channels through which climate change has a fiscal impact.¹ It discusses the uncertainties that make a quantitative assessment difficult and provides examples of qualitative and quantitative studies on how to integrate fiscal impacts into fiscal sustainability reports. Based on that article, the fiscal sustainability report 2021 of the Swiss Federal Department of Finance, for the first time, includes a chapter dedicated to qualitative analyses of the potential consequences of climate change on public finances, which suggests that climate change will strain public finances.² It highlights the importance of considering climate change in economic and fiscal decision-making and underscores the use of economic policy instruments to achieve climate goals in an efficient manner.

The most recent fiscal risk report by the United Kingdom’s Office for Budget Responsibility, using a pioneering quantitative approach, estimates the fiscal cost and public debt impact of reaching the United Kingdom’s 2050 net zero emission target.³

¹ Baur, M., P.-A. Bruchez, and S. Nicol. 2021. “Climate Change and Long-term Sustainability.” Scoping Paper, OECD Publishing, Paris. <https://www.oecd.org/gov/budgeting/scoping-paper-on-fiscal-sustainability-and-climate-change.pdf>.

² FDF (Federal Department of Finance). 2021. Report on the long-term sustainability of public finances in Switzerland. Berne: FDF. <https://www.efd.admin.ch/efd/en/home/fiscal-policy/report-long-term-sustainability-public-finances.html>

³ OBR (Office for Budget Responsibility). 2021. Fiscal Risks Report. London: OBR. <https://obr.uk/frr/fiscal-risks-report-july-2021/>.

Who: Government interest in managing fiscal risk has risen since the 2008 financial crisis and the recent Covid-19 pandemic, which have highlighted the uncertainty surrounding macro-fiscal forecasts. A growing number of countries routinely estimate the fiscal costs of short-term climate risks associated with acute physical impacts of climate change—extreme weather events and disasters. The nature of climate change, however, warrants assessment of longer-term and transition risks as well, which is much less commonly done. The International Monetary Fund recently reviewed and revised its surveillance mandate to include a greater role under Article IV consultations for the assessment of risks to economic stability and debt sustainability posed by climate change.

How: Fiscal risk assessments must deal with uncertainty (of climate impacts and policy changes), nonlinearity (as impacts transmit through real economy sectors and the financial sector), and endogeneity (as choices made by governments, the private sector, and households evolve in response to climate change). Climate change risk management also requires close attention to tail risks—impacts with a small chance of occurring but that, if they materialize, could lead to devastating consequences.

A typology of climate-related fiscal risks distinguishes the source of the risk (physical, transition), time horizon (short-, long-term), and the degree of certainty of the government’s obligation (known, contingent). Risk management approaches include nascent practices (quantifying acute climate risks and identifying limited risk holders and assigning them some responsibility for risk reduction and mitigation); emerging practices (quantifying a broader set of risks, and assigning explicit responsibility to more risk holders); and advanced practices (elaborating a risk financing strategy containing layered risk management practices to enhance cost effectiveness). Ministries of finance can benefit from coordinating closely with central banks to leverage their capacity and conduct joint comprehensive vulnerability assessments of sources of vulnerability in the economy, the financial system, and public finances and propose responses.

Box 6. Colombia’s Fiscal Risk Approach

To inform preparation of Colombia’s medium-term fiscal framework, the Ministry of Finance routinely quantifies fiscal risks associated with contingent liabilities from legal proceedings, government guarantees, public–private partnerships, and natural disasters, which are the largest of these risks (estimated cost of 5 percent of GDP in 2020). This analysis feeds into projections for revenues, expenditures, and debt dynamics, with scenario analyses modeling how these indicators fare under differing disaster scenarios. Slower onset climate risks are not presently modeled under the framework.

The government of Colombia defines specific mitigation instruments and financing sources for each category of contingent liability. For natural disasters, the government has a national disaster fund to cover disaster expenses, operates an agricultural insurance scheme, and mandates insurance for all public assets and those of public–private partnerships. Colombia also has a Catastrophe Draw Down Option with the World Bank, which facilitates rapid access to financing in the event of a disaster and which has been deployed for a range of disasters, from La Niña to the Covid-19 pandemic.

Driving Climate Action through Green Budgeting

What: Green budgeting refers to raising, allocating, spending, controlling, and reporting on public resources in ways that drive environmental and climate action, support climate policy commitments, and respond to climate impacts.

Why: A government's budget is a key instrument for translating climate policy into climate action through both revenue and expenditure measures. Before the pandemic, government expenditure represented 28 percent of global GDP (2019).² Because government activity is a major source of carbon emissions, public services will need to adapt and become more resilient. Governments also influence private decision-making, through the way they raise revenues, spend, and regulate. A proactive ministry of finance can use the budget process to allocate and prioritize resources for the achievement of just climate policy goals, ensure that those resources are efficiently used, and account for the direct and indirect effects of budget policies on climate.

Who: An increasing number of countries at all income levels have been developing and applying green budgeting tools and approaches. Ministries of finance, government spending departments, the cabinet, and heads of government are crucial stakeholders in putting green budgeting into practice. Various implementing partners, including the Organisation for Economic Co-operation and Development (OECD), International Monetary Fund, and World Bank have supported the development of tools and approaches to green budgeting.

How: Ministries of finance can translate climate policies into costed strategies; factor climate policies into medium-term fiscal frameworks and annual budgetary proposals; and, in setting expenditure ceilings, prioritize climate policies so that they are adequately funded. Through green spending reviews, ministries of finance can assess the impact on and responsiveness of the budget to climate change. They can require spending and investment proposals to integrate actions to green government programs by reducing their carbon footprint, adapting them to changes in climate, and investing in resilience.

When presenting expenditure choices and options to cabinets and heads of government, ministries of finance can highlight the extent to which climate change has been considered and the trade-offs and consequences of different spending scenarios. Fiscal transfers can be used to leverage climate action by subnational governments and delivery agencies. During budget implementation, ministries of finance can establish sustainable resource targets and monitor whether spending agencies are taking appropriate climate-related actions. Expenditure tagging of climate-related actions can help inform choices and monitor actions but cannot drive them. Ministries of finance can incorporate climate change into financial reporting and encourage supreme audit institutions to assess the compliance of government programs with climate-related objectives and requirements. Situated at the center of government, ministries of finance can coordinate actions among other stakeholders, such as ministries of environment, parliaments, and independent fiscal institutions.

Box 7. Green Budgeting in France

France uses a green tagging tool to enable green budgeting to estimate environment-compatible revenues and expenditures. Green budgeting was established to support more effective policy assessment and budget decision-making in response to demands from Parliament, civil

society, and citizens for more transparent environmental information. Central government expenditures are tagged according to their favorable, neutral, or unfavorable impact on six climate and environmental goals, guided by the European taxonomy of activities: climate change mitigation, climate change adaptation, water protection, waste and risk prevention, pollution prevention, and biodiversity conservation.¹

The first green budget report was released in September 2020 for the 2021 budget bill. It was prepared by a multidepartment taskforce comprising the Directorate General of the Treasury, the Budget Directorate, and the Tax Legislation Directorate of the Ministry for Economy, Finance, and Recovery and the General Commissariat for Sustainable Development in the Ministry for Ecological Transition. The second edition of green budgeting analysis, for the 2022 budget bill, incorporates performance information.

¹ Government of France. 2020. Report on the Environmental Impact of the Central Government Budget. Paris. https://www.budget.gouv.fr/files/uploads/extract/2021/PLF_2021/report_environmental_impact_french_central_government_budget_2021.pdf.

Driving Decarbonization and Resilience through Public Investment and Asset Management

What: Climate-informed public investment and asset management take climate impacts into account in decision-making on new investments and the use and management of current public assets, with a view to encouraging private capital and catalyzing deployment of new net-zero technologies.

Why: Government investments affect the responses of the public sector, households, and businesses to decarbonization and the transition to a zero-carbon economy, as well as how these sectors prepare for a future that is resilient to climate change. Public assets have long lifespans. Climate change will alter the environmental, regulatory, technological, and market conditions of government assets during their lifetime. Failure to anticipate future conditions, and to invest in adaptation and resilience, not only puts public assets and the services they provide at risk, but also increases the vulnerability of the households and businesses that rely on them. Additionally, anticipating technological and market changes will create new job and growth opportunities.

Public investment in infrastructure offers an opportunity for governments to catalyze growth in emerging net-zero emissions industries and incentivize rapid deployment. Failure to plan and execute the transition to a zero-carbon economy poses significant risks. Countries will need an estimated US\$4 trillion per year in investments up to 2030 to build infrastructure to meet their development needs.³ Public financing will not be sufficient to address developing countries' adaptation and decarbonization goals.⁴ Private financing is available, but bankable, climate-resilient projects are in short supply. The main reason is inadequate risk-sharing arrangements in project design, exacerbated by inconsistent signaling from government along with private sector limitations in absorbing technology risk.

The allocation of risk between the public and private sectors is more important than ever to incentivize private investment in green growth. A government's infrastructure investments signal its expectations about the future and influence households' and businesses' investment and livelihood choices.

Who: An increasing number of ministries of finance are factoring climate change into public investment decisions. Global methods that are being developed to support climate-informed public investment and asset management include the International Monetary Fund’s new climate module for the Public Investment Management Assessment (PIMA) and the World Bank’s collation of approaches to climate-smart public investment management.

How: To get investment decisions right and maximize opportunities for green growth, ministries of finance ought to consider several measures:

- *Developing explicit policies* on how public investment should address physical and transition risks and drive decarbonization and adaptation.
- *Establishing project appraisal processes*, as needed, and emphasizing pre-appraisal screening and rapid risk assessment to swiftly block projects that are unlikely to be viable or that are inconsistent with policy objectives.⁵
- *Developing methodologies* to assess transition risk.
- *Creating project preparation facilities* to fund project designs that comply with climate-related environmental standards and regulation, including at the subnational level.
- *Establishing a comprehensive asset registry*, including identifying critical infrastructure, to assess vulnerabilities and make informed choices about mitigating risks and preparing for reconstruction efforts in the event of natural disasters.⁶
- *Adopting a risk management orientation* for projects in the operation and maintenance phases that considers climate risks and stranded assets.

Box 8. Climate and Disaster Risk Screening in Ethiopia

Ethiopia, highly dependent on rain-fed agriculture, is especially vulnerable to the impacts of climate change. In June 2020, the government issued the Federal Government Public Project Administration and Management System proclamation. To implement the proclamation, the Federal Democratic Planning and Development Commission, in collaboration with federal entities such as the Environment, Forest, and Climate Change Commission and the Ministry of Finance, developed public investment management guidelines, including a module on how to mainstream climate and disaster risk into project planning and decision processes. The Climate and Disaster Risk Screening Guidelines were informed by the World Bank’s Climate and Disaster Risk Screening Tool.

The guidelines lay out four steps: exposure, impact, adaptive capacity, and overall risk. The location of each proposed project is evaluated for exposure to climate vulnerabilities. Impact assessments examine how these vulnerabilities might affect a project’s operation, beneficiaries, and any broader network. Adaptive capacity identifies ways in which a project’s nonphysical components influence risk levels—for example, institutional capacity building and guidelines for maintenance financing and emergency preparedness can contribute to risk reduction. The project risk is then rated based on the outcomes and considerations laid out in each step. Every project must follow this process and receive approval from the Planning and Development Commission prior to submitting budget proposals to the Ministry of Finance. Implementation of the guidelines is likely to have a strong impact on project concept notes, feasibility studies, and appraisal processes. The proclamation is supporting Ethiopia in building resilience and enhancing effectiveness and efficiency in the development and management of investments.

Reducing Public Sector Impact and Catalyzing Markets through Green Public Procurement

What: Green public procurement (GPP) integrates climate change and other environmental considerations into the guidance, procedures, and methodologies for government procurement.

Why: Governments spend an estimated US\$11 trillion globally in public contracts each year, representing 25–30 percent of GDP in developing countries and 12 percent in OECD countries.⁷ GPP can directly address governments' climate impacts and risks by, for example, procuring more energy-efficient public buildings or electric vehicle fleets. GPP also stimulates the development of climate-readiness markets as firms develop products and services to meet government demand. Adopting and expanding GPP can signal a government's political priorities, supporting broader reform in areas such as fiscal policy and infrastructure development.

Who: GPP is becoming an essential part of modern procurement systems. More than 50 countries have adopted GPP strategies or action plans, and more than 66 countries have enshrined GPP in law. There are standardized methodologies for getting started with GPP, including a recently updated module for the Methodology for Assessing Procurement Systems (MAPS).

How: Although governments have taken different paths to GPP, global experience can be distilled into five pillars of effective and efficient reform:

1. **Develop the business case** to win buy-in from policymakers, procuring entities, the market, and the public.
2. **Design a tailored reform pathway** built on sound diagnostics.
3. **Establish the enabling framework** to support GPP implementation across the public sector through legislation, use of measurement indicators, and prioritized activities.
4. **Develop operational tools** that integrate environmental considerations into procurement operations, including environmental criteria, eco-labels, environmental management standards, and life cycle costing.
5. **Foster operational approaches** to manage demand, facilitate the application of GPP practices, and shift the focus from products to performance and innovation.

Box 9. The Dominican Republic's Green Public Procurement Journey

For the Dominican Republic, climate change means, among other changes, increased physical risks from hurricanes, flooding, and higher temperatures. To decarbonize, especially in the energy and transport sectors, the Dominican Republic has implemented green public procurement measures over the past five years. In 2016, it introduced a pilot program to purchase energy-efficient office equipment. In 2017, it completed a diagnostic of laws and regulations to assess their impact on green procurement.

More recently, training and awareness-raising activities have been prioritized. The General Directorate of Public Procurement has disseminated videos and messages on social networks and information media

about green public procurement as an engine of national development that aligns with the Sustainable Development Goals. Workshops have been held for contracting authorities and suppliers, and a pilot was organized to support suppliers in building social responsibility into their business models. Efforts have been made to integrate green thinking into government practices through initiatives to reduce paper use and carbon emissions.

In 2021, the Public Procurement Directorate and the Ministry of Environment jointly developed a National Policy of Sustainable Public Procurement, which includes provisions explicitly supporting environmental and social criteria in bid assessment and awards. Green purchasing guides have been developed for paper and event management. Circular and triple impact procurement are the latest priorities, focusing on reducing, reusing, and recycling. Currently, the Dominican Republic is modifying budgetary and public investment regulations to include climate considerations and disaster risk management, identifying related financial flows and gaps. These form the foundation of forward looking and comprehensive management of climate change in planning, procurement, and public investment.

3) Supporting Countries' Ability and Motivation to Act: The Agenda for Helsinki Principle 4

The Coalition of Finance Ministers for Climate Action aims to inspire and enable its members to integrate climate considerations and sustainability into economic, fiscal, and budgetary policy decisions and to drive climate action.

Actions by the Coalition of Finance Ministers for Climate Action

Under Helsinki Principle 4, the two key agenda items going forward are:

- **Identifying, assessing, and reducing government fiscal risks arising from climate change and integrating climate into macro-fiscal policy and management for a sustainable and green recovery.** *Climate change and efforts to mitigate and adapt will have major economic consequences and will affect the fiscal sustainability of government budgets in the medium and long terms.* The Coalition is supporting the development of methods for identifying, measuring, and managing fiscal risks and climate change impacts and the effects of efforts to mitigate them by reducing greenhouse gas emissions and building resilient societies. The Coalition will support the sharing of experience with economic models to help identify risks, choices, and policy trade-offs, including in areas such as energy generation. The aim is to inspire and enable finance ministers to act swiftly and effectively to limit impacts and risks to public budgets and showcase the experiences of front-runner countries.
- **Using green budgeting, procurement, and public investment to drive effective and equitable climate action that delivers climate policy goals.** *Government has a key role in climate efforts by using public policy and investments to spur innovation, reduce emissions, and build resilience to reduce inequalities.* The Coalition will work to enable ministries of finance to use effective tools of budgetary policymaking, policy assessments, and public investment and asset management to achieve sustainable goals. The aim is to strengthen the capabilities of ministries of finance to analyze the impacts of investments and policies and take action by implementing cost-effective measures and leveraging private investment.

The Coalition will advance these agenda items through two groups of activity:

- **Research and development:** Through its members and implementing partners, the Coalition will support a research agenda on countries' potential and actual experience with policies and actions to mainstream climate and sustainability into the work of ministries of finance.
- **Sharing knowledge and experience:** Thematic seminars and events will showcase member initiatives, facilitate peer-to-peer learning, and connect members with institutional partners and resources in ways that support taking action (box 10).

The Coalition will develop a work program setting out the activities in detail across the two priority areas and two groups of activity and report back on progress.

Box 10. Knowledge Sharing Under Helsinki Principle 4

Under Helsinki Principle 4, the Coalition of Finance Ministers for Climate Action has contributed to mainstreaming consideration of climate change into macro-fiscal and economic policy and practice by producing policy notes and hosting knowledge sharing events. A policy note on climate-smart public investment management was presented at the Coalition meeting in Abidjan in February 2020. Five events on green budgeting have been held in partnership with the OECD Paris Collaborative. The workshop in October 2021, hosted presentation of a composite indicator of green budgeting practices in OECD countries, based on a 2020 OECD and European Commission Joint Survey on Emerging Green Budgeting Practices. The Coalition has also held two workshops on macroeconomic modeling. The latest, in February 2021, included an overview on models from the World Bank and country presentations from Colombia, Denmark, and Switzerland.

Country-Level Action

As this report has shown, it is the imperative and responsibility of ministries of finance to act to halt climate change and mitigate its impacts. Countries' different situations, climate challenges, and capabilities must shape the approaches taken, decisions made, and climate actions driven by ministries of finance. The Coalition, through its implementing partners, will support ministries of finance in selecting, sequencing, and deploying appropriate tools and techniques, tailoring them as needed to drive climate action in their countries. To share experience and encourage mutual accountability, member ministries of finance will report back to their peers on the actions they have taken.

Ultimately, the success of the Coalition will be measured by how well and how comprehensibly ministries of finance drive climate action through economic and fiscal policy and practice within their countries and beyond.

Annex: Frameworks, Guidance, and Tools to Support Climate Action

Frameworks, guidance notes, and tools are available to support initiatives by ministries of finance to mainstream climate actions in economic and fiscal policy and practice. Institutional partners have developed global and regional guidance tools, which have been tested in different country circumstances. Countries continue to seek practical guidance on how to adapt and implement principles and methodologies to their own contexts. Further support is under development by the Coalition of Finance Ministers for Climate Action, member countries, and institutional partners.

Some of the key materials to support action are described below.

Macroeconomic Modeling and Fiscal Risk Management

- **Organisation for Economic Co-operation and Development—Introductory Note on Integrating Climate into Macroeconomic Modeling** summarizes insights from a February 2021 workshop of the Paris Collaborative on Green Budgeting, Coalition of Finance Ministers for Climate Action, and the Danish Ministry of Finance on integrating climate into economic modeling. The note describes the ongoing GreenREFORM project of the Danish Ministry of Finance and the Danish Research Institute for Economic Analysis and Modeling. It provides country examples and summarizes the key elements discussed at the workshop, at which countries shared their experiences and perspectives on integrating climate into economic modeling (<https://www.oecd.org/gov/budgeting/integrating-climate-into-macroeconomic-modelling.pdf>).
- **Paris Collaborative on Green Budgeting scoping paper on Climate Change and Long-term Fiscal Sustainability** discusses country-level approaches to assessing fiscal impacts of climate change (<https://www.oecd.org/gov/budgeting/scoping-paper-on-fiscal-sustainability-and-climate-change.pdf>).
- **The International Monetary Fund** is extending the **multi-country Dynamic Stochastic General Equilibrium framework** to include production and use of three types of energy to explore the macro implications of mitigation policies that encourage the use of clean energy.
- **International Monetary Fund—Fiscal Transparency Code** is the internationally recognized standard for disclosure of information on public finances endorsed by the members of the International Monetary Fund and World Bank under the Standards and Codes Initiative. One of the code's four pillars is fiscal risk management and includes a principle on environmental risks. The International Monetary Fund undertakes Fiscal Transparency Evaluations at the request of member countries to assess practices against the code, including on fiscal risk management (<https://www.imf.org/en/Topics/fiscal-policies/fiscal-transparency>).
- **The World Bank** is developing **climate-aware macro-structural models** with a medium-term focus for application as part of the regular forecasting and policy analysis of finance and planning ministries. The models consider the impacts of shocks to the real economy and countries' responses through adaptation investments and contingent financing policies, such as disaster risk insurance. The

modeling of mitigation policies includes the analysis of co-benefits for other development objectives to which well-designed mitigation policies may contribute while addressing climate change.

Green Budgeting

- **European Commission, International Monetary Fund, and Organisation for Economic Co-operation and Development—Green Budgeting: Towards Common Principles** (forthcoming) describes tools for including climate and environmental considerations in budgetary policymaking, such as greening medium-term fiscal frameworks by highlighting links between the economy, fiscal policy, and the environment; including climate change in fiscal risk assessments and management; tagging budgetary items that contribute—positively and negatively—to environmental objectives; conducting policy evaluations and environmental impact assessments; performing green spending reviews; and producing green accounting statements. Elements of a sound institutional set-up are described, with particular attention to independent oversight.
- **International Monetary Fund—Green Public Financial Management framework** highlights entry points across and beyond the budget cycle, including fiscal transparency and external oversight and coordination with state enterprises and subnational governments. The framework identifies key principles for effective implementation of a green public financial management strategy: securing political backing, establishing basic public financial management practices, developing strong stewardship of the ministry of finance, integrating the green strategy into the existing reform agenda, ensuring appropriate sequencing of reforms, and communicating to ensure buy-in and manage expectations of stakeholders (<https://www.imf.org/en/Publications/staff-climate-notes/Issues/2021/08/10/Climate-Sensitive-Management-of-Public-Finances-Green-PFM-460635>).
- **International Public Sector Accounting Standards Board—Climate Change Guidance** helps stakeholders understand how to apply the Board’s current guidance to provide clear, comparable, and relevant information on climate change. Building on this, the Board is considering developing standards for public sector sustainability reporting. (<https://www.ipsasb.org/publications/climate-change-relevant-ipsasb-guidance>).
- **International Organization of Supreme Audit Institutions Working Group on Environmental Auditing** has resources to support governments in auditing activities and their environmental and climate change outcomes, including courses for environmental auditors (<https://wgea.org/>).
- **Public Expenditure and Financial Accountability—Climate Module** provides a set of supplementary indicators building on the Public Expenditure and Financial Accountability (PEFA) framework to assess how well a country’s public financial management system supports the implementation of climate change policies (<https://www.pefa.org/resources/climate-responsive-public-financial-management-framework-pefa-climate-piloting-phase>).
- **Organisation for Economic Co-operation and Development—Green Budgeting and Tax Policy Tools to Support a Green Recovery** focuses on practical ways to use green budgeting and tax policy tools in developing stimulus packages to support a green recovery following the pandemic and ways to combine tax and spending measures to align stimulus programs with decarbonization objectives (<http://www.oecd.org/coronavirus/policy-responses/green-budgeting-and-tax-policy-tools-to-support-a-green-recovery-bd02ea23/>).

- **Organisation for Economic Co-operation and Development—Green Budgeting Composite Indicator** (forthcoming) outlines a composite indicator comparing the green budgeting practices of 14 OECD member countries. The indicator helps countries advance climate and environmental objectives through budgetary frameworks and policies.
- **Organisation for Economic Co-operation and Development—Green Budgeting Framework** sets out building blocks to evaluate the environmental impacts of budgetary and fiscal policies and assess their coherence in the delivery of national and international commitments. The framework provides links to public financial management frameworks (such as performance budgeting systems and spending reviews) (<https://www.oecd.org/environment/green-budgeting/OECD-Green-Budgeting-Framework-Highlights.pdf>).
- **Organisation for Economic Co-operation and Development—Green Budgeting in OECD Countries** presents the findings from the first survey on green budgeting across OECD countries. It provides information on how extensively countries have incorporated the elements of an effective approach to pursuing environmental and climate priorities (https://www.oecd-ilibrary.org/governance/green-budgeting-in-oecd-countries_acf5d047-en).
- **Organisation for Economic Co-operation and Development—Green Budget Tagging: Introductory Guidance & Principles** provides high-level guidance to design, implement, and improve green budget tagging. It was developed by the OECD under the Paris Collaborative on Green Budgeting in cooperation with institutional partners working under Helsinki Principle 4 (Inter-American Development Bank, International Monetary Fund, United Nations Development Programme, and World Bank) and draws lessons from country practice (<https://www.oecd.org/gov/budgeting/green-budget-tagging-fe7bfcc4-en.htm>).
- **Organisation for Economic Co-operation and Development—Green Spending Reviews** (forthcoming) discusses the integration of green criteria into spending reviews to support a government’s climate and environmental goals in a fiscally sustainable manner.
- **United Nations Development Programme—Climate Change Budget Integration Index** is a tool to assess the integration of climate change into national budgets across four dimensions: legal and policy issues, capacity of systems, accountability processes, and integration of development partner finance. The index highlights gaps in climate change integration and enables governments to measure progress on climate-aligned budgeting and planning (<https://www.climatefinance-developmenteffectiveness.org/topic/climate-change-budget-integration-index-ccbii>).
- **United Nations Development Programme—Climate Change Financing Framework Guidance Note** establishes principles and a methodology for developing climate change finance frameworks adapted to country contexts. The methodology is based on assessment of a country’s public financial management system—the institutional mechanisms for managing climate finance and climate change policy. The framework provides a roadmap for mainstreaming climate change into planning and budgeting and identifying changes in the policy regime (<https://www.climatefinance-developmenteffectiveness.org/sites/default/files/publication/attach/Hard%20Choices%20-%20Integrated%20Approaches.pdf>).

- **World Bank—Adapting Fiscal Decentralization to Combat Climate Change** examines how the design principles of fiscal decentralization (expenditure and revenue assignments, transfers, and borrowing) can be adapted to engage subnational governments in addressing climate change. The paper critically reviews the ongoing global practices of subnational governments. Some of the most promising approaches analyzed include shared responsibility for policy and program design and implementation, fee- or charge-funded adaptation activities, objective-targeted intergovernmental transfers, and the use of green bonds (<https://openknowledge.worldbank.org/handle/10986/35899>).
- **World Bank—Climate Change and Public Financial Management: An Overview** (forthcoming) provides public financial management practitioners with guidance to integrate climate change considerations into public finance reforms, structured across the phases of the budget cycle. Different design options are proposed for each measure discussed, corresponding to different levels of capacity.
- **World Bank—Climate Change Budget Tagging: A Review of International Experience** provides an overview of the context and key design features of climate budget tagging initiatives based on a review of 18 tagging methodologies. The review is structured into five sections: lessons from three precursors of climate expenditure tagging (poverty tagging, gender-budget tagging, and budgeting for international development goals); an overview of climate finance reporting methodologies and climate expenditure reviews supported by international organizations; technical and institutional aspects of climate budget tagging methodologies and practices; links between climate budget tagging and green bond frameworks; and benefits and challenges in implementing a climate change tagging system (<https://openknowledge.worldbank.org/handle/10986/35174>).

Public Investment and Asset Management

- **International Monetary Fund—Climate Public Investment Management Assessment Module (PIMA)** (forthcoming) focuses on the climate aspects of public investment management. The climate PIMA assesses five public investment practices: climate-aware planning, coordination, project appraisal and selection, budgeting and portfolio management, and risk management. The findings of a climate PIMA are summarized in a report prepared by International Monetary Fund staff, with recommendations in the form of a roadmap.
- **World Bank—Practice Note on Climate-Smart Public Investment Policy and Management** (forthcoming) explores how to integrate climate change into the regulation, planning, design, management, and implementation of public investment projects.

Green Public Procurement

- **World Bank—Green Public Procurement Reform: An Overview of Green Reforms in Country Systems** supports the design and implementation of effective green public procurement reforms, customized to country contexts, informed by global experience, and structured around five pillars: the business case lays out objectives, defines priorities, and mobilizes support; the enabling framework helps green public procurement transition from a pilot activity to a mainstream policy and supports implementation across the public sector; operational tools integrate environmental considerations into procurement operations; operational approaches manage demand, facilitate the

application of green public procurement practices, and shift the focus from products to performance and innovation; and reform management helps countries define their own reform pathways, building on sound diagnostics (<https://openknowledge.worldbank.org/handle/10986/36508>).

¹ The model types include dynamic recursive computable general equilibrium (CGE) models, dynamic stochastic general equilibrium (DSGE) models; new-Keynesian models, macrostructural models, system dynamics models, microsimulation models, and simple excel-based financial programming systems.

² International Monetary Fund, Government Finance Statistics Yearbook and data files, and World Bank and OECD GDP estimates (accessed March 15, 2022), <https://data.worldbank.org/indicator/GC.XPN.TOTL.GD.ZS?view=chart>.

³ World Bank. 2021. *World Bank Group Climate Action Plan 2021-2025: Supporting Green, Resilient, and Inclusive Development*. Washington, DC: World Bank. Available at: <https://openknowledge.worldbank.org/bitstream/handle/10986/35799/CCAP-2021-25.pdf>.

⁴ 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/bitstream/handle/10986/33958/149871.pdf>.

⁵ The Coalition of Finance Ministers for Climate Action. 2020. *Better Recovery, Better World: Resetting Climate Action in the Aftermath of the COVID-19 Pandemic*. Washington, DC: The Coalition of Finance Ministers for Climate Action. Available at: <https://www.financeministersforclimate.org/sites/cape/files/inline-files/Better%20Recovery%2C%20Better%20World%20FINAL.pdf>.

⁶ Kaiser, K., and F. Seiderer. 2019. "Where Have All the Public Investments and Infrastructure Assets Gone? Monitoring and Optimizing Public Assets while Improving Financial Reporting." *Governance for Development* (blog), World Bank, June 14. Available at: <https://blogs.worldbank.org/governance/where-have-all-public-investments-and-infrastructure-assets-gone>.

⁷ For an overview of public procurement, see the OECD website at <https://www.oecd.org/gov/public-procurement/>.