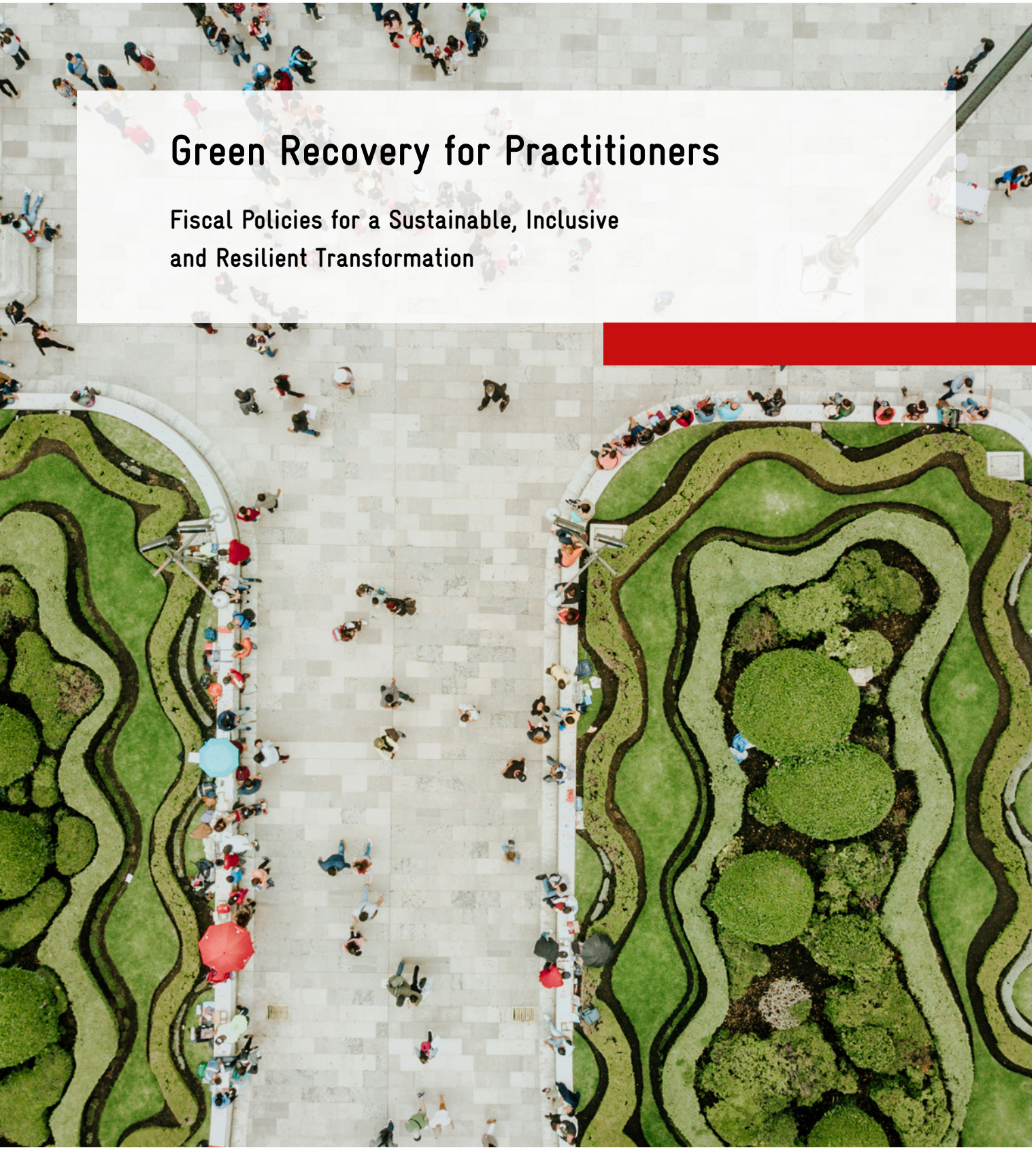

Green Recovery for Practitioners

Fiscal Policies for a Sustainable, Inclusive and Resilient Transformation

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Berlin, Brussels, November 2021

Key Takeways

How can fiscal policy help make Covid-19 recovery sustainable, inclusive and resilient?

The Covid-19 pandemic has created unprecedented challenges for countries worldwide. At the same time, it has underscored the importance of driving transformation through a green recovery and the opportunities to do so. Finance ministries and fiscal policies play a crucial role in shaping this recovery. While many governments have mobilised substantial fiscal resources to tackle socio-economic impacts of the pandemic, recovery packages have tended to perpetuate existing trends in spending and do not close the investment gap to tackle the climate and biodiversity crises. Against this backdrop, this report identifies four central challenges and action areas for advancing a green fiscal recovery:

1. Reforming fiscal rules to tackle limited fiscal space: Countries' abilities to mobilise resources strongly depends on their fiscal capacities, which have decreased significantly due to the impacts of Covid-19. High debt servicing payments can lead to investment traps for poorer countries. Fiscal spending rules need sustainable and controlled options for relaxation in order to increase fiscal space for green measures only. This can include: **implementing flexible standards, weighting sustainability of measurements against fiscal space, shifting fiscal ratios, employing the public sector net worth or establishing a Green Golden Rule.**

2. Green public financial management for a holistic green recovery: Integrating green public financial frameworks can merge fiscal, social and green considerations, using tools such as: **the Climate Budget Tagging (CBT) framework, green procurement systems, green taxation (e.g. carbon taxation) and incentivisation of biodiversity and climate-friendly activities, e.g. in the waste and building sectors.** This can help linking existing national development plans, Covid-19 recovery efforts, National Biodiversity Strategies and Action Plans (NBSAPs), Nationally Determined Contributions (NDCs) and long-term green finance strategies.

3. Carbon pricing as an instrument for a sustainable recovery: Finance ministries can **establish carbon prices and carbon markets** to internalise the cost of greenhouse gas (GHG) emissions caused by companies and citizens. If combined with distributional measures, this can reduce negative externalities and thus mitigate GHG emissions while avoiding negative social impacts of such taxation. Similar market-based instruments can be applied to other environmental externalities (i.e. related to ecosystem services).

4. Developing capacities and networks for integrated recovery actions: Reduced environmental budgets, limited capacities and expertise exacerbate existing **coordination challenges and conflicting viewpoints between finance, environment and planning ministries** in developing and executing green policies. Governments and authorities can strengthen expertise and capacities through **integrated teams, executive coherence across relevant ministries, the establishment of activities and events among peer groups and the assessment of gaps** including plans on how to fill them.

A green recovery must go hand in hand with green fiscal policy

The COVID-19 pandemic has caused a worldwide health, humanitarian and economic disaster. Global poverty levels rose for the first time since 1998, hundreds of millions of jobs were lost and livelihoods destroyed, trade stalled and commodity prices dropped. Developing countries were hit particularly hard by the twin supply and demand shocks of the pandemic. Private finance fled in record amounts – about USD 700 billion in 2020, a drop 60% larger than after the global financial crisis in 2008-09 **– compounding the problem of fiscal space already limited by rising public debt and debt servicing costs.** Meanwhile, the climate and biodiversity crises continue to worsen. According to the recently released sixth report by the Intergovernmental Panel on Climate Change (IPCC), global warming of 1.5°C and 2°C will be exceeded during the 21st century unless considerable reductions in CO2 and other GHG emissions are made in the coming decades. The Global Assessment by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) warns that the unprecedented biodiversity loss we are witnessing today is expected to continue until 2050 and beyond in the absence of a transformative change.

A green recovery is vital for tackling both the economic consequences of the pandemic and interrelated challenges of the climate and biodiversity crises. Experience suggests that green recovery can catalyse additional biodiversity and climate finance, crowd in the private sector and generate economic multipliers, especially in key climate change sectors and in ecosystem restoration. Climate and biodiversity concerns have been embedded in the political agendas of many advanced economies, as demonstrated by the recent enactment of the European Climate Law, the European Green Deal and the US Executive Order on Tackling the Climate Crisis at Home and Abroad. **Many governments are mobilising fiscal and monetary resources not seen out of wartime.** These huge stimulus packages pose an opportunity to maximise the positive impact of investments in the environmental sphere. However, these commitments and resources cannot close the investment gap to tackle the climate and biodiversity crises. Without making significantly more ambitious green recovery efforts, countries face the risk of locking-in carbon-intensive, unsustainable modes of production and consumption and a high degree of global warming throughout the rest of this century.

Box 1

Green recovery is a widely used term for packages of measures addressing the social, economic and political consequences of the Covid-19 crisis in a way that sets a course for long-term structural reforms and a transformative shift towards sustainability, biodiversity protection, resilience and climate neutrality.

Finance ministries play a crucial role in the green recovery: They guide the design of domestic fiscal policy, including providing immediate relief and attaching conditions to recovery spending and stimulus packages such that it is channelled into green rather than brown activities. They can also **help ensure an inclusive, global green recovery** through coordinated action internationally. Moreover, both individually and collectively, they can **shape incentives to accelerate the transition of private finance toward green, sustainable investments.**

As part of the *Green Recovery for Practitioners* series (Box 2), this briefing looks at fiscal responses to the Covid-19 pandemic and aims to identify entry points and approaches for positioning climate and biodiversity aspects in fiscal policies for recovery. It first assesses the greenness of the fiscal response to the pandemic before outlining key challenges for integrating climate and biodiversity objectives into fiscal recovery. The challenges include: (1) a lack of fiscal space, (2) the absence of integrated strategies and management for green public financing, (3) putting a price on carbon emissions, and (4) the need to strengthen institutional capacities and coordination between environment and finance ministries. We look at these challenges and identify approaches, examples and concrete steps to tackle them.

Box 2

A publication series for practitioners

This report is the third publication in the series *Green Recovery for Practitioners*. The first part in the series, titled *Setting the Course Towards a Sustainable, Inclusive and Resilient Transformation*, maps out key arguments in support of a green recovery and the various components, stakeholders and instruments it might entail. The second report *Examples from around the World for Building Forward Better* presents a compilation of practical examples from countries worldwide. This third publication offers an overview of challenges and opportunities for integrating climate and biodiversity concerns into fiscal approaches to green recovery.

Assessing the fiscal responses to the pandemic

Around the world, countries have mobilised substantial fiscal resources to tackle the pandemic, although significant regional variation exists. President Biden unleashed the US's largest-ever stimulus package, totalling USD 1.9 trillion (including fiscal and monetary measures), which is estimated to be 4% of the country's Gross Domestic Product (GDP) in 2021. Meanwhile, through its EUR 750 billion recovery package, Next Generation EU, the EU has established a centralised fiscal facility – the EUR 672.5 billion Recovery and Resilience Facility (RRF), accounting for a total of 5% of the EU's GDP. The RRF regulation requires that at least 37% of spending in the individual member countries' Recovery and Resilience Plans (RRPs) supports the green transition, with the remainder of the funding doing no harm to the transition.

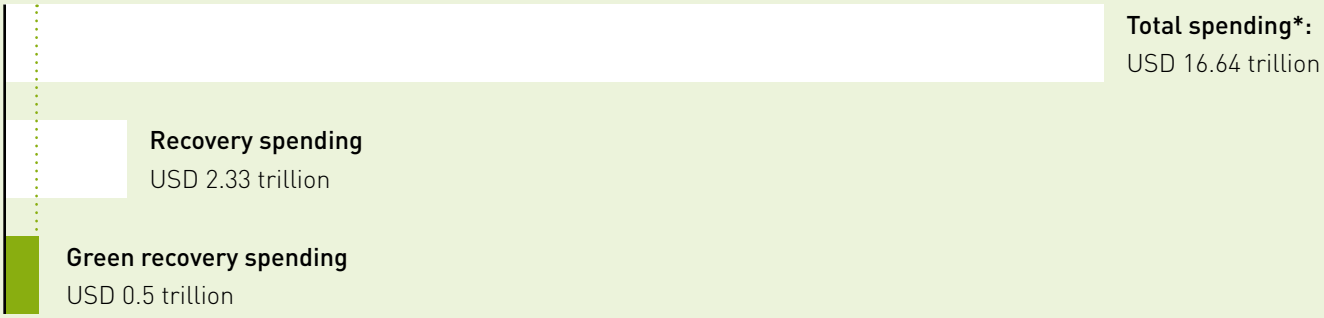
In many developing and emerging countries, fiscal spending has been much lower largely because of limited pre-existing fiscal space and access to international capital markets. In Latin American and the Caribbean (LAC), for example, countries mobilised significant fiscal resources in response to the pandemic, reversing the fiscal conservatism of recent years. Fiscal recovery packages totalled USD 485 billion across 26 countries, with the average package in the region accounting for approximately 8.5% of GDP. However, this average is less than half of what most advanced economies spent and is heavily weighted by a few large packages in countries such as Brazil. In emerging market economies, countries incurred USD 3.4 trillion in debt in 2020, which is 35% higher than the average of all five previous years.

Recovery spending falls short of closing the gap to counter climate change and environmental degradation, however (Box 3). Investments of between USD 180 billion and USD 300 billion are estimated to be required annually for adaptation alone up to 2030 along with USD 2.7 trillion per year to achieve low-carbon transport pathways, over USD 1.6 trillion to USD 3.8 trillion in new investments for the supply side of the global energy system by 2050 and an estimated average of USD 711 billion per year to reverse the decline of biodiversity by 2030. However, lessons from past crises suggest that green stimulus policies often have advantages over traditional fiscal stimuli. For instance, it is estimated that, compared with fossil fuels, renewables generate more jobs in the short term, boosting spending, demand and GDP also, every dollar spent on nature restoration leads to at least USD 9 economic benefits. In tmhe long term, renewables make more efficient use of labour, which, coupled with fuel savings, generates positive effects on the economy related to increased access to clean energy. There is evidence that the **green recovery has generated positive economic signals and attracted additional finance** – including from the private sector – which is key to stimulating the economy and closing the biodiversity and climate investment gaps.

Box 3

How green is recovery spending?

According to the Global Recovery Observatory, **21.5% of recovery spending by 50 leading economies** can be considered '**green**'.



*Public spending by 50 leading economies (figures as of 29 September 2021).

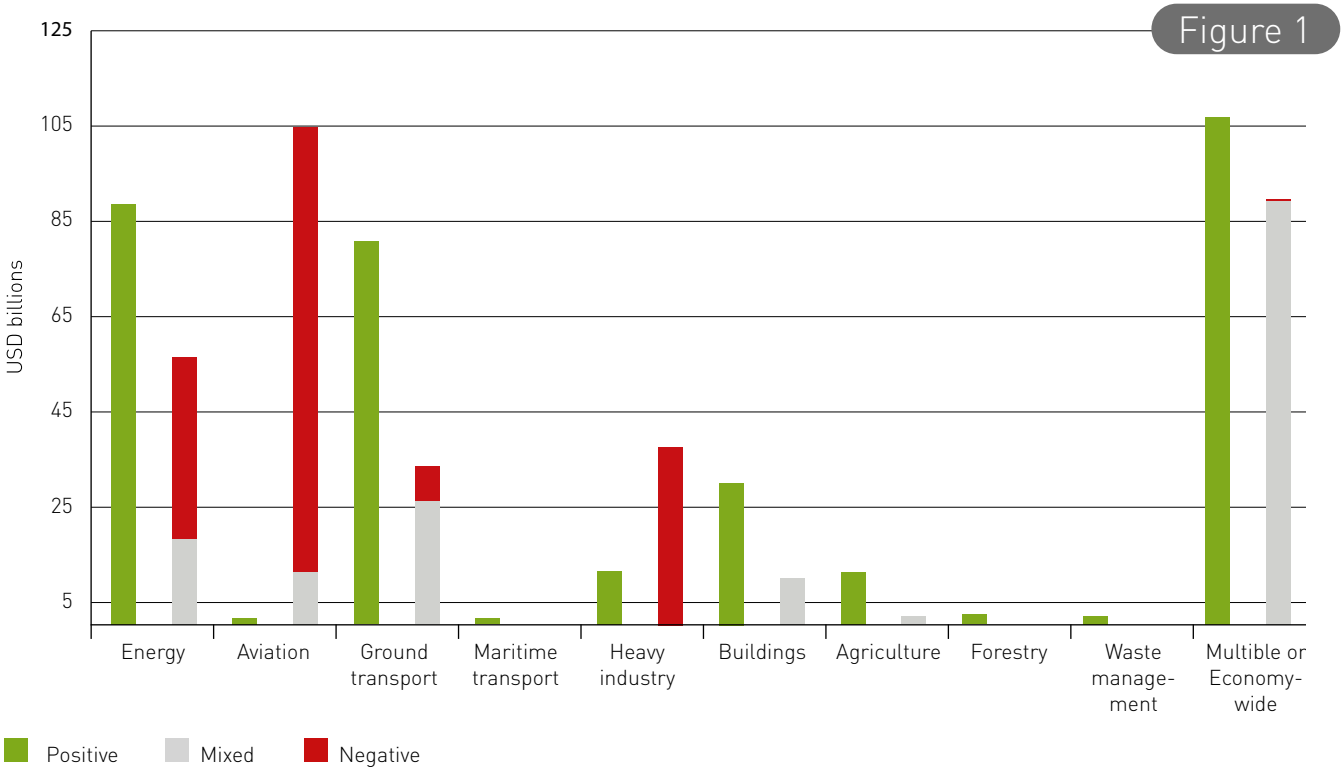
Yet recovery packages have tended to perpetuate pre-Covid trends. In general, government responses to the Covid-19 crisis have tended to intensify patterns that existed prior to the pandemic: countries that already heavily subsidised the production of fossil fuels have increased this support, such as the US, Russia, Turkey and Indonesia, while those with stronger commitments to a transition to clean energy are now using stimulus and recovery packages to accelerate this shift, including Germany and France. According to the Economic Commission for Latin America and the Caribbean (ECLAC), this is also the case in LAC, where – instead of advancing towards sectors that support a net-zero transition – recovery spending is largely characterised by a return to reliance on the primary sector and commodities.

What fiscal measures have been used in Covid-19 recovery packages?

Green fiscal policy relies on a wide range of funding and spending measures to raise revenue while also furthering climate mitigation and adaptation efforts as well as halting and reversing biodiversity loss. These measures include 1) taxation, loans, fees, fines or the sale of (exchangeable) permits on the funding side and 2) budgetary expenditure or subsidies on the spending side. OECD member-, accession- and key partner countries used a wide variety of fiscal measures throughout 2020 and 2021 to tackle the pandemic, mostly grants and loans, followed by tax reductions and subsidies, of which most measures are in the energy and transport sector or affect multiple industries (Figure 1).

Total funding volume and environmental impact of fiscal measures per sector

Figure 1



Total funding volume for fiscal measures likely to have a positive and/or negative environmental impact across different sectors. Most (positive) measures are in the energy, ground transport and construction sector, cover multiple sectors or address the economy as a whole. Other sectors, such as agriculture or waste management, however, are covered substantially less. Source: OECD.

Note: "Multiple or other" category includes economy-wide or non-specific measures.

In choosing fiscal approaches to the green recovery, it is useful to distinguish between its different temporal phases: rescue, recovery and consolidation.

- In the **rescue phase**, fiscal policies focus on providing immediate relief spending to prop up households and businesses through the crisis (short-time work schemes, support to firms and assistance to households).
- The **recovery phase** aims to tackle both growth and demand to bring the economy back on track. Many industrialised countries have already introduced long-term economic stimulus measures, as have some emerging economies. In others, stimulus and recovery efforts are still being debated and contested.
- The **consolidation phase** goes beyond fiscal instruments to address broader public financial questions on how to manage debts and consolidate budgets while at the same time bringing public finances further into line with environmental goals. Green public financial management, including green budgeting and the reform of fiscal rules, debt management and restructuring, debt swaps, tax reforms and longer-term public investment programmes play a significant role here.

1 Reforming fiscal rules to tackle limited fiscal space

What is the challenge?

A lack of fiscal space, decreasing tax revenue and rising debt servicing costs

Financing the green transition is partly about mobilising additional resources. While most advanced economies can continue to issue debt at record low interest rates, many other countries face volatile, expensive and pro-cyclical capital markets. Access to international capital markets is limited for many developing countries and has closed off entirely for some governments.

Investments come with increasing debt servicing and capital costs in developing and emerging countries. Global asset managers and investment firms profit from emerging market government bonds. The relatively high coupons are due to the **greater risk in developing countries, leading to a 'climate investment trap' when high debt servicing and low fiscal space come together.**

In the wake of the Covid-19 pandemic, **decreasing tax revenue** due to reduced production and household income as well as specific tax cut measures pose an additional challenge in promoting green policies. The reasons lie in reduced demand – and thus production – due to compulsory confinement measures, reduced wages and thus household incomes and declining commodity prices (e.g. for crude oil) that have affected export revenues. Tax cuts and deductions are designed to sustain some activities, but they also entail detrimental effects on GDP, the budget available for recovery, sustainability, biodiversity protection, resilience and climate neutrality. In contrast, direct transfers to households (including public cash transfer programmes, Box 4) and companies to sustain production and employment levels have proven to be more effective, with better economic, social and environmental impacts.

How can it be approached?

Reforming fiscal rules for a green transition

Fiscal rules are rules set by a government to limit its own spending. They impose constraints on spending, particularly in good economic times, to ensure fiscal responsibility and debt sustainability. Fiscal rules generally involve putting numerical limits on budgets, including elements such as debt and deficit spending as a share of GDP. Relaxing those rules in a sustainable and controlled way while taking environmental implications into account enables governments to increase deficit and debt-based expenditure and thus

increases fiscal space. Reforming such rules by expanding fiscal space to invest in decarbonisation, climate resilience and biodiversity rehabilitation is a crucial component of a green fiscal recovery.

Which countries can we learn from?
Examples

In March 2020, **the European Commission recommended that EU fiscal rules be relaxed – specifically to activate the general escape clause of the Stability and Growth Pact (SGP) – to help member states finance the recovery.** The SGP binds EU members to budget deficit and debt limits to ensure fiscal stability. This is because of a combination of changing international consensus and realities – debt levels increasing everywhere, interest rates much lower in OECD economies, a growing recognition that the world needs significant amounts of green investment – and in connection with this a softening of key members' positions on fiscal policy since the advent of the crisis. The balance of power between countries with low debt-to-GDP ratios and countries with high debt-to-GDP ratios has shifted dramatically; the 60% debt-to-GDP (percentage of governmental debt in relation to the country's GDP) ceiling is no longer seen as a tenable benchmark – it does not relate to the inherent greenness of a financed measure and thus complicates the differentiation of financing for positive or negative measures. EU members have tacitly agreed that governments can take on more debt to finance expenditure. This opens up space to significantly increase public investment in green activities (see potential policy interventions below).

Similar to EU members and other countries, **many LAC countries have also initiated debt-financed recovery spending by relaxing fiscal rules** and have taken advantage of the flexibility within their fiscal institutions to finance increased deficit spending. Ten out of the 11 LAC countries that have established fiscal rules and an escape clause (the ability to suspend or temporarily not meet a given fiscal rule) have exercised this clause during the pandemic. Most countries have expressed their intention to return to the fiscal rules in 2021; the rest are planning to do so in 2022 or later.

Many other emerging countries have also relaxed fiscal rules to help finance the recovery. For example, Indonesia has paused its 3% of GDP budget deficit cap for 2020-2022 to provide policymakers with more fiscal breathing room. Members of the West African Economic and Monetary Union (UEMOA: Benin, Burkina Faso, Côte D'Ivoire, Guinea-Bissau, Mali, Niger, Senegal, and Togo) recently suspended the union's fiscal framework, including the 3% of GDP deficit ceiling. Ghana suspended its rule limiting the fiscal deficit to 5% of GDP in line with its Fiscal Responsibility Act.

What steps can practitioners take?
Potential policy interventions

The pandemic has opened up previously limited political space to reform fiscal rules in order to accelerate the green transition. National governments should take advantage of this political space to reshape fiscal rules with green criteria. Policy recommendations formulated by the European NGO Finance Watch include:

- Replace arbitrary fiscal limits with more flexible fiscal standards.
- Weigh up long-term environmental and social sustainability against short-term fiscal sustainability within those standards.
- Consider shifting the focus from debt-to-GDP ratios towards debt servicing costs-to-GDP or interest cost-to-GDP ratios.
- Enhance the quality of spending through better accountability by employing the concept of public sector net worth (PSNW) rather than public sector debt.
- Implement a 'Green Golden Rule' that exempts green public investment from the constraints of fiscal rules (such investments could be defined by taxonomies that are emerging in multiple jurisdictions, e.g. in the EU and Chile and/or NDCs).
- Practitioners can help support these recommendations by: assessing what types of fiscal standards may be appropriate for their given country/policy context; supporting knowledge sharing and peer learning on some of these concepts, including PSNW across relevant ministries (e.g. ministries of finance, economy and the environment); and exploring how to best connect green fiscal rules with taxonomies of sustainable activities (e.g. setting up expert and working groups, taking stock of policies and compiling good practices).

Box 4

Enhancing public cash transfer programmes to contribute to climate resilience and adaptation

Expanding cash transfer programmes during the Covid-19 pandemic can be a tool to boost climate resilience and to protect the most vulnerable. International research shows that these types of emergency cash transfers are cost-effective and save lives. Social protection can thus be a solution to address the impact of both Covid-19 and the climate and biodiversity crises. Among the financing options available to governments are reserve funds, contingent credit lines, disaster insurance and bonds.

Examples include the mass cash transfer programmes in Ethiopia, Kenya and Uganda, which can make a strong contribution to the capacity of individuals and households to absorb and anticipate the negative effects of climate change. Similarly, disaster risk insurance funds can also be used to promote social protection and climate adaptation. Mexico's Natural Disaster Fund (FONDEN) has been exhausted and the World Bank issued four catastrophe bonds totalling USD 485 million to shift some of the country's risk to international capital markets.

Countries can institutionalise this practice by making cash transfer programmes responsive to shocks, meaning that programmes would automatically scale up amounts and be expanded to include additional beneficiaries following a crisis. By institutionalising money transfers, governments will be able to respond in a more timely, orderly, efficient and transparent manner when the next pandemic, earthquake or climate-related impact such as flooding strikes. To make these programmes effective, it will be necessary to set rules on the scope and conditions for scaling up before disasters hit and to take financial steps in advance.

Practitioners can support government action in this area by assessing which financing options are most suitable for a given transfer programme, learning from the best practices of well-established public transfer programmes and monitoring the conditions that governments attach to programmes for their impacts on equity, climate and biodiversity.

2 Green public financial management for a holistic green recovery

What is the challenge?

Setting up green taxonomies and integrating climate and biodiversity concerns into budgeting, financing and taxation frameworks

Financing the green transition involves classifying climate and biodiversity effects of existing and planned financial policies and tagging expenditures for their greenness. However, many countries lack a classification system with a common language and a clear definition of what is 'sustainable' or 'green'. This increases the difficulty of ending fossil fuel financing and environmentally harmful subsidies. As part of the EU Sustainable Finance Strategy and Action Plan, the EU taxonomy provides a framework that helps to direct recovery spending to those economic activities that are consistent with the ideas of a green recovery. This can serve as a blueprint for similar efforts in other countries.

Apart from classification systems, fiscal policies are also disconnected from climate change and biodiversity policies. **Many countries have not quantified the net costs and benefits of greening their economies.** As a result, laws or criteria for budget allocation do not integrate climate change or biodiversity considerations and fiscal instruments continue to incentivise harmful activities. Medium-term and long-term planning instruments, such as national development plans and medium-term expenditure frameworks, need to integrate strategic elements of environmental policy in order to green fiscal policies, expenditure allocation and incentives.

In addition to the missing link between fiscal and environmental policy, many developing and emerging countries also **lack the financial and organisational resources to link this integration to 'green public financial management'**. Moreover, the transition to a green economy is costly and countries may temporarily reduce competitiveness in the process, as a number of enabling conditions (i.e. changes in taxation, regulations, policies, market conditions, skilled professionals, macro-economic approach) need to be in place before the benefits are manifested. However, the green economy has the potential to increase competitiveness in the long run, as it is less capital intensive and generates more employment, income and value added compared with the traditional economy (Box 5).

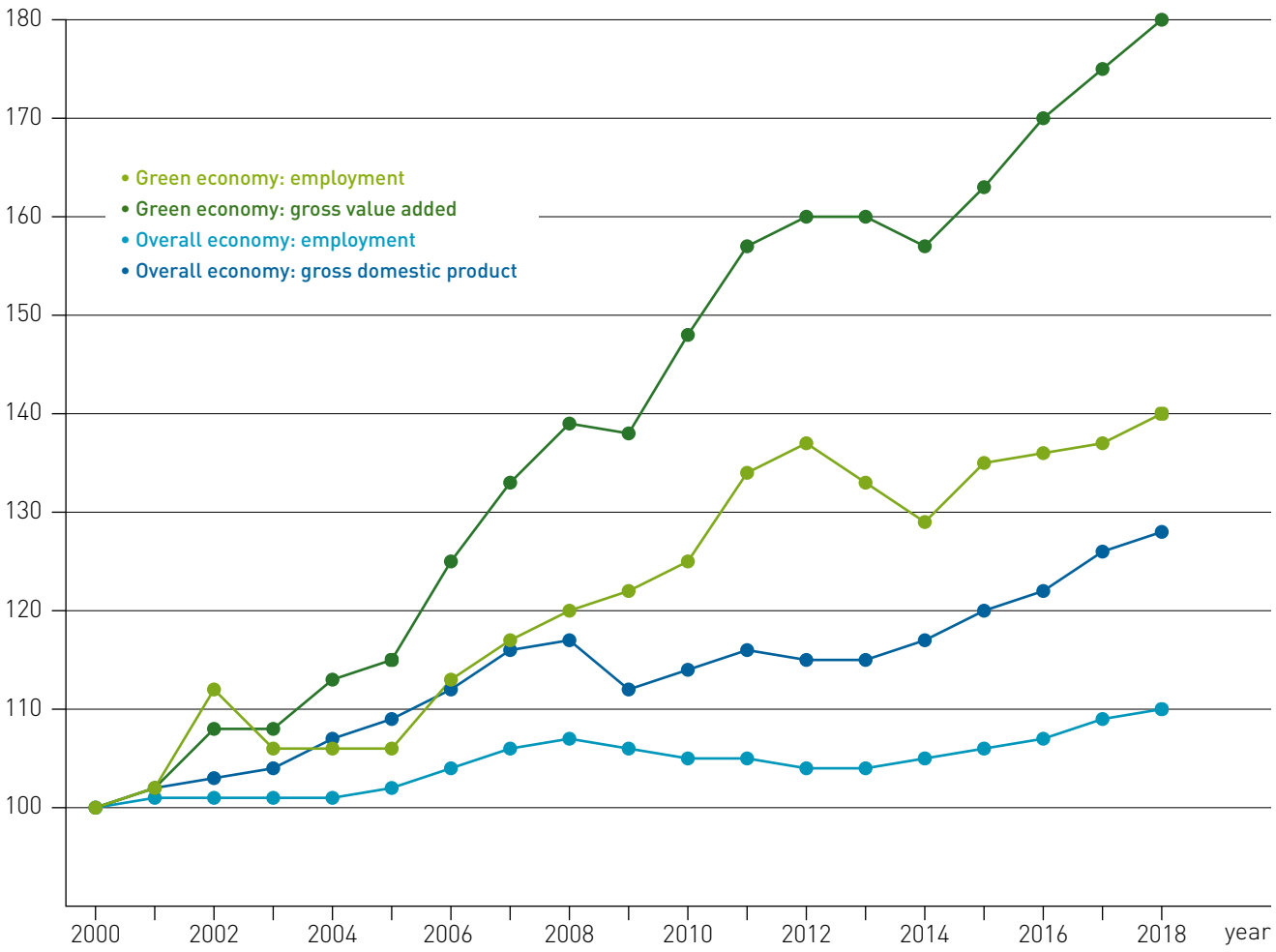
Box 5

Why a green economy benefits climate and biodiversity, but also economic development: evidence from the European Union

The green economy is a growing segment of the overall economy in the EU, covering producers of goods and services across the economy that focus on environmental protection and resource management. **Even though the EU's green economy is small (2.3% of GDP in 2018), it has been outperforming the overall economy since 2003.** Statistics show that green economy activities grew rapidly from 2000 to 2018, with an average (inflation-adjusted) real growth rate of 3.2% per year, whereas the overall economy expanded by only 1.4% annually. Most of the green growth took place in 2000–2011, remaining strong during the 2009 financial crisis and in the aftermath. During that period, employment in the environmental sector also grew much faster than in the overall economy (by 40% compared with 10% overall), increasing from 3.1 million full-time employees in 2000 to 4.4 million full-time employees in 2018. Since 2014, gross value added in the environmental sector has been growing by an average of 6% annually, thereby showing a higher growth rate than GDP in that period (1.3%).

Development of key indicators for the green economy and the overall economy in the EU

Figure 2



Source: Eurostat 2021

Eurostat defines the green economy, or *environmental economy*, as a heterogeneous set of producers of goods and services aiming at the protection of the environment and the management of natural resources (see definition).

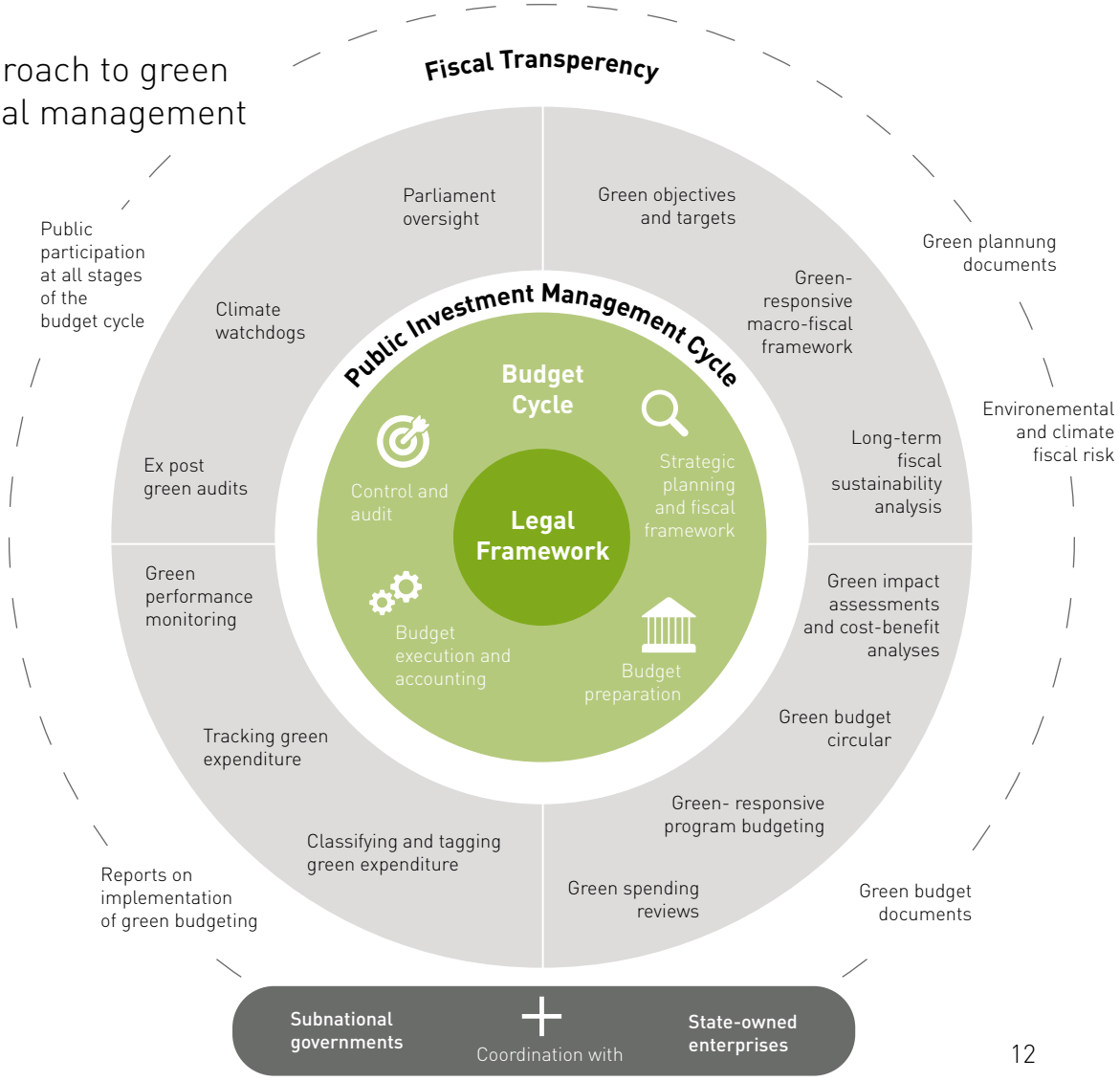
How can it be approached?
Developing integrated green public financial frameworks

To align fiscal priorities for recovery with climate and biodiversity targets, holistic green public financial frameworks are needed. The International Monetary Fund (IMF) recommends **integrating green considerations throughout the entire budget cycle of government spending.** Ideally, this kind of green budget cycle is embedded in a sound legal framework and encompasses the following steps: strategic planning and development of a fiscal framework (including a long-term fiscal sustainability analysis, for example); budget preparation (involving elements such as green impact assessments, green-responsive programme budgeting and green spending reviews); budget execution and accounting (including green tagging and performance monitoring); and control and audit from a green perspective (Figure 3).

Ministries of finance can play a coordinating role, working with their environment counterparts in government and line ministries to devise a green taxonomy and establish a holistic approach to green public financial management. If not yet defined, a green public financial framework can be an opportunity to outline the development benefits of environmental protection, integrating not only GHG emission reduction targets but also country's existing development and planning objectives.

A holistic approach to green public financial management

Figure 3



2021, Source: IMF

Which countries can we learn from?
Examples

By adopting its 2019 Financial Strategy on Climate Change, Chile has devised an integrated climate finance strategy. The strategy outlines three pillars of work that cover topics related to developing an investment plan, integrating climate criteria into public finance processes, financial instruments and engagement with the broader financial ecosystem. The strategy is an iterative process and can be updated over time as the country pursues carbon neutrality by 2050.

The seven countries Bangladesh, Ghana, Indonesia, Kenya, Nepal, Pakistan and the Philippines have applied the Climate Budget Tagging framework for green budgeting implementation. Based on this, they have integrated green budget taxonomies in their financial planning and policy processes.

South Africa is also making strides in this area with the South African Treasury publishing a technical paper on financing a sustainable economy last year and the government also establishing a working group to develop its own green finance taxonomy.

What steps can practitioners take?
Potential policy interventions

Policymakers can **mainstream** climate and biodiversity concerns in planning instruments, climate finance strategies and public financial management more generally, e.g. by:

- **Integrating climate change and biodiversity considerations into national or subnational development plans**, thus making it easier to align public financial management systems (medium-term expenditure frameworks, annual budgets and fiscal laws) with green recovery objectives. This is particularly true in the context of results-based budgeting, as the budget is driven by the government's top objectives as expressed in national development plans.
- Using green public budgeting and procurements tools to **evaluate the environmental impact of budgetary and fiscal measures**. Tools and approaches include: green budget tagging, environmental impact assessments, carbon pricing, green perspective to spending review and green perspective in performance setting.
- Enacting **regulation to incentivise climate-friendly activities**. Entry points may include building and vehicle retrofitting, circular economy production and waste recycling.
- Practitioners can inform green public financial management by **analysing existing recovery plans** to identify areas of opportunity. Together with relevant line ministries, they can prioritise sectoral investments and policies, as well as opportunities for piloting new approaches. International technical assistance and resources from multilateral banks and bilateral agencies can provide funding to develop this work.
- It is equally important to **identify areas with high carbon lock-in and biodiversity impact,** such as support for fossil fuels – including consumer subsidies, producer subsidies, and public finance investment, and to make the case to reduce government spending in these areas. Technical resources can help to develop supporting analytic evidence, e.g. in the form of economic diversification analyses and fair transition plans for communities dependent on fossil fuels.

3 Carbon pricing as an instrument for a sustainable recovery

What is the challenge?
Putting a price on carbon

Putting a price on carbon is vital for paving the way for long-term green transitions by internalising the social costs of GHG emissions. **Carbon pricing presents multiple challenges that need to be addressed through proper instrument design and a participatory process.**

Box 6

Carbon pricing puts a price on every tonne of GHG emitted on the basis of the 'polluter pays' principle: emitters have to pay for the cost of carbon emissions. Higher costs encourage operators to reduce their emissions by investing in and switching to low-carbon technologies. Carbon pricing can come in the form of a carbon tax, an Emission Trading Scheme (ETS), internal carbon pricing or international carbon markets under Article 6 of the Paris Agreement. To date, 64 carbon pricing initiatives are being implemented, including carbon tax, ETS and internal carbon pricing, at both national and subnational levels.

Price setting must send the right economic signal. **If the price is too low, regulated entities or taxpayers may choose to pay the tax without perceiving the need to transform their economic activities.** If the price is too high, taxpayers or companies will face great economic hardship, leading to undesired economic and distributional impacts.

Another essential challenge when introducing carbon pricing is acceptance by the public. Revenues from a carbon tax or an ETS can be allocated to the general government budget or used for fiscal consolidation. They can also be used to finance climate protection, investing in green jobs and sustainable development. Careful use of revenue can greatly enhance public acceptance of carbon pricing. A consultative and participatory process to include stakeholder concerns in the design is also key to gaining acceptance.

Higher costs may translate into **undesired distributional impacts on the economically most vulnerable households.** Any such effects can be alleviated by using the revenue to compensate these groups. For effective, long-term and wide-ranging emission reduction, carbon pricing needs to be **combined with complementary policies**, such as feed-in tariffs, investment and subsidies in hard-to-abate sectors, research and development, and command-and-control policies.

A central risk of carbon pricing is carbon leakage. This may occur as enterprises, confronted with increased costs and thus comparative disadvantages, transfer their economic activities to another jurisdiction with lower or no taxes on carbon emissions. In this case, overall emissions do not decrease, as regulated entities produce and pollute from somewhere else. This risk can be reduced through careful policy design, e.g. by including a free allowance for regulated companies.

How can it be approached?
Deploying carbon pricing to achieve a green recovery

Carbon pricing is a crucial policy instrument to achieve sustainable economic growth that respects mitigation targets. It delivers an economy-wide signal that promotes investment in low-carbon technologies, encourages operators to adapt their economic activities and avoids locking in funding for fossil fuel-intensive sectors.

A carbon tax sets a tax rate per tonne of emission in each sector. Regulated companies or consumers must pay the amount per tonne of emission. Taxation of carbon-intensive sectors and activities generates revenues that can be used by governments. Revenues may be used to ease the burden on consumers and to cushion the distributional effects of the tax on socio-economically vulnerable groups. Revenues can also be invested in clean technologies (for instance in renewable energies or energy efficiency), thereby creating new, green job opportunities. Careful recycling and use of revenue help to make the transition socially just and more equitable while ensuring that investments are channelled into sustainable activities that support a green recovery.

Carbon pricing can help to decarbonise emission-intensive sectors, switch to sustainable economic activity and help support the most vulnerable groups of society. Although it is not a silver bullet, it is a crucial instrument in the decarbonisation of our economies. Setting the right price will be even more important once economies return to the growth patterns seen before the COVID-19 crisis in order to avoid a return to previous emission levels.

The pandemic had a limited effect on carbon pricing instruments, **demonstrating the resilience of this policy instrument in the face of external shocks.** In the European Union's ETS, the slowdown in economic activity caused a temporary drop in allowance prices. Yet prices for allowances quickly recovered and have now climbed throughout the past year, hitting an all-time high of USD 54 in April 2021.

Which countries can we learn from?
Examples

In 2014, **Chile established a** green tax **covering stationary emission sources**. In the context of a larger fiscal reform in 2017, the Chilean Government updated its carbon tax to cover more emitters. Today, the tax encompasses emitters beyond 25,000 tCO2 annually and/or 100 tonnes of particulate matter due to combustion processes per year. This modification also included a new mechanism that sets out to provide flexibility to regulated entities through a 'cap-and-trade' system. Emitters may now purchase domestic emission reduction certificates from other projects and sectors. Regulation of the offset scheme is currently under development, and the GHG emission limits might be implemented either as an ETS or as a tradable performance standard.

South Africa became the first African nation to launch a carbon tax after Parliament passed the Carbon Tax Bill in February 2019. The tax was delayed three times due to its unpopularity with businesses and to the South African economy's heavy reliance on coal. However, multiple rounds of consultations and several changes to the proposal following stakeholder input allowed it to reach this stage. **The tax will apply to the industry, power, building and transport sectors, irrespective of the fossil fuel used. In the first phase, the tax rate is modest in order to give emitters time to transition to cleaner technologies.** The carbon tax is therefore not expected to have any impact on the price of electricity. The tax is also coupled with flexibility mechanisms, including tax-free thresholds, and allows the use of carbon offsets for some activities (i.e. trade-exposed companies) to reduce their tax liability. A review of the impact of the tax will be conducted after at least three years of implementation and will consider the progress made in reducing GHG emissions in line with the NDC commitments. Future changes will also follow the consultative processes for all tax legislation. The South African carbon tax is one of the country's key instruments to meet its NDC pledge.

Mexico has had a carbon tax in place since the fiscal reform of 2013 was approved. The carbon tax covers all fuels – except natural gas – and each of them is assigned a different tax level, depending on its CO2 content. According to the Secretariat of Finance and Public Credit, the tax is helping to reduce emissions and increase the Federal Government's budget through tax collection. Mexico is also implementing the pilot phase of the ETS with the support of the German Government, GIZ and the World Bank. This system covers direct CO2 emissions from entities in the energy and industry sectors generating at least 100,000 tCO2 per year. The initial phase of the ETS is a three-year period in which the pilot scheme will test the system design in 2020 and 2021, followed by a transition year in 2022. The aim of the pilot phase is to improve the quality of emissions data and build capacity in emissions trading for entities covered – approximately 300 entities accounting for almost 40% of national emissions. Input from this phase will be used to improve the design of the ETS before it becomes fully operational. The operational phase is scheduled to start in 2023. Mexico also has a few subnational carbon tax initiatives, such as the Baja California, Tamaulipas and Zacatecas carbon taxes.

What steps can practitioners take?
Potential policy interventions

- **Apply a carbon tax as a price-based instrument**: setting a fixed unit price for each tonne of GHG emissions that all regulated companies/sectors must pay.
- **Set up an emissions trading system (ETS) as a quantity-based instrument**: impose quantitative limits on total emissions and establish tradable rights to use the resource – the price is then determined by the market. Regulated companies need a permit for every tonne of emissions released, allocated or auctioned by the governments. Scarcity of emission permits leads to trading of the certificates of the emitting entities, referred to as 'cap-and-trade'. An ETS enforces a firm quantitative limit of the total emissions of a sector or a complete economy, but the price is decided by the market. Similar to a carbon tax, an ETS generates revenues for the government that can be used to promote a green recovery.
- **Reform the tax system by scraping fossil fuel subsidies** and other financial support for environmentally harmful sectors and industries.
- **Attach green strings when bailing out companies:** including more ambitious internal emission reduction goals or an internal carbon price as a condition before bailing out (fossil) industries.

4 Developing capacities and networks for integrated recovery actions

What is the challenge?

Strengthening institutional capacities and coordination between finance and environment ministries

Environmental budgets are being cut in many parts of the world: Brazil has reduced the budget available to the Ministry of Environment by 24% (other countries have made similar cuts). **Many finance ministries lack the capacity and/or expertise to integrate climate and biodiversity concerns into policy.** According to E3G's ecosystem mapping, many finance ministries lack the requisite environmental expertise to model climate and biodiversity risks appropriately and assess the financing needs for net-zero economies, thus potentially stalling the recovery processes. **These challenges are particularly acute in many developing countries and in countries with smaller ministries and weaker institutions.**

It is common that environmental ministries – as lead ministries for climate and biodiversity policy – do not open the room to work together with Ministries of Finance to avoid loosing leadership and budget. In addition, environmental ministries often do not speak the same 'language' of finance ministries, e.g. regarding economic planning and budgeting, making it difficult to identify opportunities for collaboration.

These differences can exacerbate existing **coordination challenges and conflicting viewpoints between finance and environment ministries** regarding green investments and other fiscal recovery approaches.

How can it be approached?

Engaging in peer learning and partnerships to increase alignment between finance and environment ministries

To help overcome capacity-related and institutional obstacles to greening fiscal policy and to enhance coordination and common understanding between finance and environment ministries, governments can engage in peer learning networks and partnerships, where they can learn from one another, and can share data, expertise and best practices.

Which initiatives can we learn from?
Examples

Similar to the Network for Greening the Finance System (NGFS – a network of central banks dedicated to greening monetary policy), the Coalition of Finance Ministers for Climate Action brings together treasuries from around the world to tackle climate change. The Coalition is expanding rapidly and recently announced several new members, including South Korea and Japan, bringing the total number up to 60.

The Green Fiscal Policy Network facilitates knowledge sharing and dialogue on fiscal policies for inclusive, green economies. As part of the NDC Partnership's Economic Advisory Initiative, the Green Recovery Network connects more than 50 advisors supporting planning and finance ministries in 34 countries in planning green recovery measures.

The LEDS Global Partnership launched a *Community of Practice for Green and Socially Inclusive Economic Recovery*. The objective is to facilitate knowledge exchange among practitioners from government ministries (national and sub-national), the private sector, NGOs, industry and academia.

Indonesia organised several days of outreach and training for ministerial staff in order to facilitate mutual understanding and peer-to-peer exchange. This included representatives of five ministries and covered a seminar and a capacity building workshop on green fiscal policy.

Bringing together the expertise of five UN Agencies, the Partnership for Action on Green Economy (PAGE) has designed and repurposed training resources to support countries in building green and inclusive economic recovery strategies, including analytical tools and a global policy training package of six freely available e-learning courses. In addition, the PAGE-supported Green Learning Network as well as the three Green Growth Knowledge Partnership (GGKP) Platforms on Green Finance, Green Policy, and Green Industry, help stakeholders exchange and make evidence-based decisions on green recovery matters.

What steps can practitioners take?
Potential policy interventions

- **Expand relevant policy expertise in finance ministries**, including dedicated climate and biodiversity teams if they have not already done so, in addition to ensuring coherence across relevant line ministries (finance, economy, energy and environment).
- **Develop capacity in environment ministries to promote the elaboration of economic analyses** as input to macroeconomic decisions made in ministries of economy and finance, and to promote the inclusion of environmental priorities in fiscal policy through dialogue with a common language.
- Governments can **join relevant forums**, look for environmental allies in the fiscal sphere and organise activities and events within fiscal peer groups.
- Practitioners can support these kinds of efforts by **identifying climate and biodiversity expertise gaps within ministries**, exploring existing platforms and assessing how their resources can be useful for greening fiscal policy.

Annex

Overview of E3G's political economy mapping of the global financial ecosystem

The think tank E3G has mapped the political economy of the global financial ecosystem. It aims to assess how key countries and institutions make decisions on various aspects of finance policy (e.g. fiscal, monetary, financial regulation), analyse the interactions between countries and institutions, and identify opportunities for green reforms. This involves desk research and stakeholder consultations on 14 specific "venues". Due to a variety of expertise and language constraints, E3G is working with a number of partners to carry out some of the venue mappings:

E3G-led group	**Partner-led group**
Central Banks (FRB, BoE, BoJ, ECB)	China
European Commission	Japan
Finance Ministers (G20-G7)	Indonesia
IMF	Brazil
US	India
France	Philippines
Germany	
Ghana	

E3G will continue to work with its partners to promote the policies above and push for a climate-safe world, including a series of convenings to discuss opportunities and challenges of financial reform in some of these countries (e.g. China, Japan, Indonesia).

The political economy mapping can help practitioners identify champions and blockers of a green recovery in different countries and institutions and better understand some of the key policy challenges and opportunities for greening national financial systems and the international financial system.

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