

FISCAL AND FINANCIAL POLICY FOR CLIMATE CHANGE ADAPTATION AND RESILIENCE BUILDING IN ACP COUNTRIES

CLIMATE SMART INVESTMENT SERIES

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REPORTS IN THIS SERIES

This paper is one of three in a series focused on the need in African, Caribbean and Pacific Group of States (ACP) countries to mobilise private investment for climate change adaptation. It is a product of the Investment Climate Reform (ICR) Facility that supports specific and targeted interventions at the economy-wide, sectorial and value chain level to create a more conducive business environment and investment climate. It does this through Technical Assistance for up to 90 days based on requests. The ICR Facility is co-funded by the European Union (EU), the Organisation of African, Caribbean and Pacific States (OACPS) under the 11th European Development Fund (EDF), together with the German Federal Ministry for Economic Cooperation and Development (BMZ) and the British Council. The ICR Facility is implemented by the Deutsche Gesellschaft fuer Internationale Zusammenarbeit GmbH (GIZ), the British Council, Expertise France, and SNV.

The ICR Facility intends to deliver a series of Knowledge Products on climate smart investment (CSI) in climate change adaptation as the ACP Group represents some of the world's most vulnerable countries to the effects of climate change. This paper is the third in the series, illustrating the role of domestic financial and fiscal policy in shaping and incentivising finance flows towards adaptation and away from investments that could introduce greater climate change vulnerability.

It should be read alongside paper one in this series that sets the scene by identifying why engaging the private sector is vital to deliver climate adaptation in ACP countries. It describes the potential business cases for private investment for adaptation and the barriers that prevent such investment occurring at the moment. It finds that many of these barriers are related to Investment Climate Reform and concludes that embedding adaptation in investment climate reform has the potential to stimulate private adaptation finance.

This paper is also complemented by the second paper in this series which highlights priority actions that, if introduced, can help catalyze ACP enterprises' engagement in providing goods and services that build a country's resilience to climate change. It also considers the role and solutions that international concessional finance can provide in stimulating private adaptation investment in ACP countries. It highlights the need for countries to translate National Adaptation Plans into clearer investment priorities and ultimately into potential investment cases. It recommends Development Finance Institutes provide more innovative blended financial products, recognising the need for early stage support to prepare potential projects and blended financial vehicles, which can better deal with the multiple risks of investing in climate adaptation projects in ACP countries.

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EXECUTIVE SUMMARY

The countries of Africa, the Caribbean and the Pacific (ACP) have identified adaptation actions to be a priority in water and wastewater management, agriculture, forestry and land use, disaster risk management and coastal protection. The investment costs of adaptation are high, however. The commitment from developed countries to provide climate finance in ACP countries remains strong, yet no single finance source will be sufficient to meet the needs for financing climate action. Government actors, with a strong influence on the complex system of financial flows, can make use of a number of policy levers that can directly and indirectly change the allocation of capital and could be more meaningfully pulled to influence climate action.

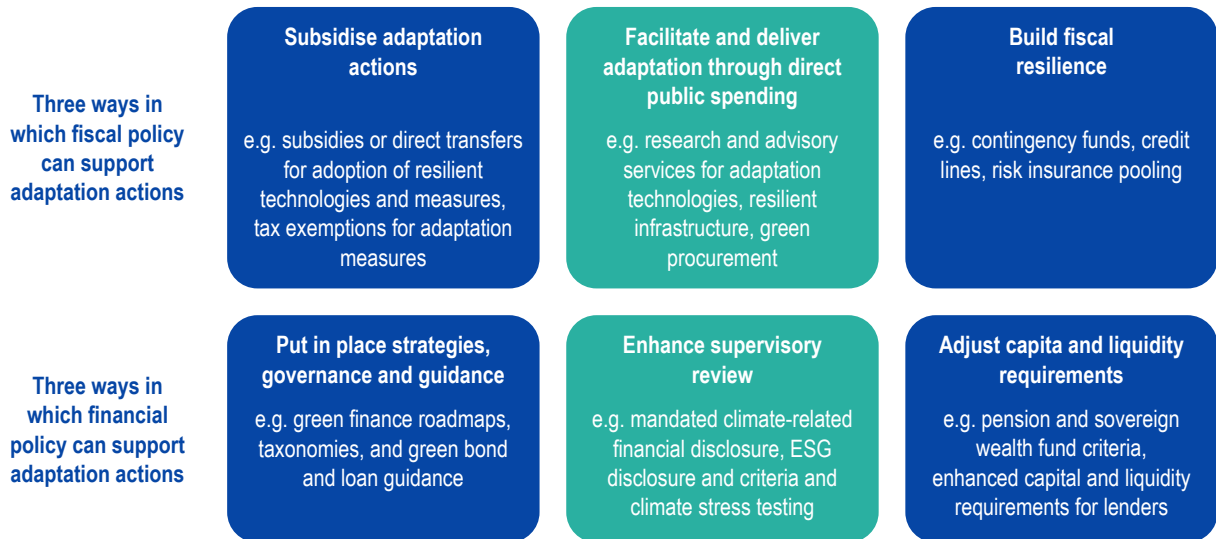
Using fiscal policies to support adaptation actions and resilience to the adverse impacts of climate change is a nascent area. Changing prices for consumers and investors through fiscal policy, however, has long been used to steer behaviours towards certain policy objectives. This paper identifies three ways in which fiscal policies can be applied to influence private investment in adaptation, to increase the supply of goods and services for adaptation, as well as to see fiscal resilience that allows an economy to continue functioning in the event of a climate-related shock.

The role of financial policy in addressing climate change risks is growing. It can regulate and supervise the financial sector to better ensure climate risks are reflected in investment decisions across many levels and scales, avoiding their build up in the financial system. This paper identifies three ways in which policymakers can encourage central banks and other regulators to take action that increases investment in adaptation and climate resilience, as well as reduces spending that is not climate resilient or that is mal-adaptive.

Mitigation remains core to climate action, as does finance for mitigation. Reductions in emissions can reduce the adverse impacts of climate change and therefore some adaptation needs. Yet, even with ambitious mitigation, adaptation to a changing

climate will be needed: we are already locked into climate change and adaptation needs will not be removed.

Not all adaptation outcomes are necessarily linked to financial incentives from government actors. Wider policy changes will be critical and build on existing climate and development policies. The Paris Agreement seeks to make finance flows consistent with low-emission, climate-resilient development pathways. Coupled with the need for countries to start to implement and, therefore, finance their Nationally Determined Contributions for mitigation as well as National Adaptation Plans, more conversations are needed on how finance can better facilitate climate change adaptation towards more climate resilient households, corporations and economies.



KEY MESSAGES FOR POLICYMAKERS



Fiscal policy and financial policy are tools that are familiar to government and quasi-government actors. They can leverage existing government structures and tools in the pursuit of country adaptation priorities. Their application, however, will still rely on the existence of clear and detailed policy objectives and targets for adaptation, a context specific and cross-sectoral challenge.



These tools will need to be considered as part of a suite of actions to increase finance for adaptation. There are wider adaptation policies that do not focus on financial institutions or shift price incentives. Public investment, both national and international, remain critical, even in supporting the design and implementation of fiscal and financial policy for adaptation, as well as soft levers such as awareness campaigns, certification and labelling. The exact combination of measures that can deliver on a country's adaptation priorities will be dependent on the specific country – and even sub-national – context. This includes a country's debt and revenue raising capacities, their specific physical climate risk vulnerability and wider social and political economic growth and development objectives.



This is a critical decade of action for climate change, adaptation actions are needed fast. Yet, more climate information and research into best-practice design and implementation of fiscal and financial policy for adaptation is needed. In particular, these policy tools remain to be tested for their effectiveness and efficacy in mobilising actors, including private actors, to invest in adaptation.



No policy or policy reform, neither its introduction and implementation, is easy. There is a strong need to ensure just and equitable implementation of new policies or appropriate mitigation of adverse distributive effects, as well as to resource efforts to build social consensus around the need for adaptation and pathways to climate resilience. There further remains a need for ongoing efforts and support in investment climate reform and business environment reform that can facilitate the uptake of fiscal and financial policy for adaptation.



1. BACKGROUND

The countries of Africa, the Caribbean and the Pacific (ACP) are some of the most vulnerable in the world to climate change (Eckstein et al 2020). Preventative investments in adaptation have been shown to result in higher GDP growth rates than waiting to take adaptation action, or taking no adaptation action; largely as a result of the capital stock being more resilient to climate change (World Bank 2019a). Four sectors have been identified in ACP countries as national priorities for adaptation: water and wastewater management; agriculture, forestry and land use; disaster risk management, and coastal protection (Box 1). McFarland (2021) outlines in more detail the role of private sector actors across these priority sectors for adaptation.

The costs of adaptation remain high. The United Nations Environment Programme (2021) refers to an adaptation financing need of USD 140–300 billion a year by 2030. The international community is committed to provide financial support to developing countries to support both climate change mitigation and adaptation efforts under the United Nations Framework Convention on Climate Change (UNFCCC 2010). Despite growth in international climate fi-

nance flows from developed to developing countries (CPI 2019), they remain below estimated financing needs. This is particularly true for adaptation finance (UNEP 2021).

No single channel of finance will be sufficient to meet climate financing needs. The financing of climate action will need to be met by a combination of international and domestic, public and private finance in developing countries (GCF 2020). The need to mobilise domestic finance flows for climate change adaptation does not negate the need for the international provision of adaptation finance. Instead, it reflects that in order to meet the scale and urgency of the climate emergency, all finance flows must be consistent with low-emission, climate-resilient development pathways. This is embodied in the third long-term goals of the Paris Agreement (UNFCCC 2015).

Governments make use of a suite of public levers to mobilise finance. These range from the application of financial policies and regulations operating through the force of law, through fiscal policies that alter prices, public financial instruments affecting investment risk, to tools that promote

BOX 1:

Priority areas for adaptation in Africa, Caribbean and Pacific countries

While they are a geographically and economically diverse group of states, there are some areas that are common priorities for climate adaptation in many or most ACP countries. Based on country adaptation priorities and current flows of adaptation finance the first policy brief in this series, *investment climate reform and the adaptation finance gap: mobilising private investment for climate adaptation in ACP countries*, identified four key sectors, which are used as the basis of discussion and analysis in subsequent papers in the series. These are:

<p>Water and wastewater management Examples of investment needs and opportunities:</p> <ul style="list-style-type: none"> ■ Municipal water supply and distribution ■ Industrial water supply ■ Waste treatment for industrial use or irrigation ■ Desalination plants ■ Multi-purpose water storage 	<p>Agriculture, forestry and land use Examples of investment needs and opportunities:</p> <ul style="list-style-type: none"> ■ Sustainable intensification of agriculture ■ Improved livestock systems ■ Reduced food loss and waste ■ Irrigation efficiency and expansion ■ Forestry landscape restoration
<p>Disaster Risk Management Examples of investment needs and opportunities:</p> <ul style="list-style-type: none"> ■ Climate-resilient urban infrastructure ■ Early warning systems ■ Climate information services ■ Insurance 	<p>Coastal protection Examples of investment needs and opportunities:</p> <ul style="list-style-type: none"> ■ Coastal flood control infrastructure ■ Ecosystem based solutions ■ Port and harbour infrastructure ■ Coastal protection and sustainable blue economies





Source: McFarland 2021.

and change behaviour through information and awareness campaigns (Figure 1). This paper illustrates how fiscal and financial policy can be used to stimulate investment in adaptation and resilience to adverse climate change impacts. The focus on these two tools specifically reflects the under-examined, but important potential use of domestic budgets to support adaptation action (Allan et al. 2019), and the growing attention paid to the materiality of climate risk in investment decision making (IMF 2019; NGFS 2019).

This paper does not represent the breadth of government actions to support adaptation. With a focus on fiscal policy and financial policy, it does not cover the role of public investment. This includes the spending through majority state-owned financial institutions and agencies, such as national development banks, as well as international public finance channels, including for example multilateral development banks and the tools they can utilise to reduce financial risks. Paper 2 of this series has considered in more detail how public finance instruments, particularly

international concessional finance flows, can further unlock private finance flows for adaptation in ACP countries (McNally and Watson 2021). This paper does not consider the role of wider policies and regulations, such as land use planning, zoning, and or climate plans, policies and their integration in economic growth and development strategies. Finally, as an emerging area, this paper puts forwards arguments for the application of financial and fiscal policy in ACP, though it does not consider the extent each are most applicable to various ACP countries and their contexts. This is due to the nascence of these policy tools for adaptation, as well as the ACP countries themselves being divergent in capital market structure and governance, leading to varying potential of these policy tools. In this paper, Section 2 considers the emerging understanding of how changes in fiscal policy can support adaptation actions, while Section 3 considers the role of financial policy. Section 4 considers the next step for policy makers towards using these government tools, while Section 5 concludes with key messages.

FIGURE 1:
Government tools that can be used to mobilise private finance flows

 Financial policies and regulations	 Fiscal policy levers	 Public finances	 Information instruments
(Primarily influence behaviour through force of law)	(Primarily influence behaviour through price)	(Primarily influence behaviour by shifting financial risk)	(Primarily influence behaviour through awareness)
<ul style="list-style-type: none"> • lending requirements • accounting systems • mandates of supervisory authorities • standards • plans and strategies • disclosure requirements 	<ul style="list-style-type: none"> • taxes • levies • royalties • price support or controls • public procurement • budget support 	<ul style="list-style-type: none"> • grants • debt • equity • guarantees • insurance 	<ul style="list-style-type: none"> • certification and labelling • transparency initiatives • corporate strategies • awareness campaigns • statistical services • scenario analysis and stress testing • standards • plans and strategies • disclosure requirements

Source: Watson, Robertson and Ramadin (2020).

2. UNDERSTANDING THE ROLE OF GOVERNMENT TO INCENTIVISE ACTIVITIES FOR ADAPTATION THROUGH FISCAL POLICY

Fiscal policy largely refers to the use of direct government spending, its use of subsidies and tax policies. Levers such as these change investment and consumer behaviours as a result of their impact on prices.

There is a strong knowledge base on the use of fiscal policy for climate change mitigation (see for example the overview in IMF 2019). The application of carbon pricing is perhaps the best-known fiscal policy application in the pursuit of stabilising global greenhouse gas emissions. It encourages changes in both consumption and production towards low-carbon options. There exist over 60 carbon pricing instruments in place globally – including explicit and implicit carbon taxes and emission trading schemes – though there is room for improvement on emissions coverage and pricing (World Bank 2021). Other efforts to introduce, reform or remove fiscal policies impacting on climate change mitigation include those directed towards the reform of fossil fuel subsidies, the subsidisation of renewable energy, and many of which are represented in countries intended Nationally Determined Contributions (NDCs) that contain their domestic climate policy targets and intentions (UNFCCC 2015).

Fiscal policy to encourage adaptation to climate change remains a nascent area. There is very little data on how much governments are already spending on adaptation. In part, this is because adaptation actions are not easy to sep-

arate from good development and remains locally-context specific (Fankhauser and Schmidt-Traub 2011; UNEP-FI 2016; Hallegate et al 2018). Between \$232 billion a year of domestic public expenditure is estimated to be spent on climate action, \$157 billion in developing countries and \$75 billion in developed countries. However, the data suffers from large gaps. It is not possible to identify the proportion of these estimates going to climate change adaptation, versus mitigation for example (UNFCCC 2018). The use of a governments' own budget is well-suited for encouraging adaptation actions, however, given that resilience to climate change is often built as a result of routine investments in development, rather than as standalone targeted investments (Allan et al 2019).

Three ways in which policy makers can use fiscal policy to support adaptation are identified. **Figure 2** outlines these as subsidising adaptation actions, directing public spending towards adaptation actions and increasing fiscal resilience. All three work to increase adaptation to climate change, though they have different mechanisms through which they can affect finance flows. While subsidising adaptation action will work to increase investment by adjusting pricing, directing public spending increases both the supply and demand for investments in adaptive goods and services. Fiscal resilience, instead, considers the ability of the economy to continue to function in the event of an adverse, climate-change related shock.

FIGURE 2:

The ways in which fiscal policy can support adaptation to climate change



2.1. SUBSIDISE ADAPTATION ACTIONS

Directly incentivising adaptation actions can be achieved through shifting the prices of such actions, in investment and consumption decisions. These are largely guided by the Finance Ministry of a country but can also be implemented through sectoral ministries.

Subsidies or direct transfers can provide financial support to encourage the uptake of adaptation technologies. Since adaptation actions are diverse and locally specific, the potential for subsidies and direct transfers is broad. They can be provided directly to consumers, or to service providers through transfers covering operational expenditures, subsidised input prices, loan guarantees, for example. Overall, however, they can work to reduce the capital costs of adopting adaptation measures and therefore build resilience to adverse climate change impacts.

Farm-level payments are common in the agriculture sector in many countries. It is increasingly being shown that shifts can be made in public agricultural support so that it contributes to climate change mitigation and adaptation (Galt et al 2021; USAID and Climate Focus nd). These shifts largely reflect that natural patterns of biodiversity and nature are more resilient and more able to provide vital ecosystem services to humans, including carbon sequestration and storage, water cycling and purification (IPBES 2021). The EU Common Agricultural Policy between 2014-2020 provided direct top up payments where farmers diversified crops, maintained grasslands and buffer strips (European Parliament 2020). China has recently phased out its nitrogen fertiliser subsidies, while concurrently increasing public agricultural support for reforestation and regenerating grasslands (Locke and Lowe 2021; Searchinger et al 2020). In 2017/18, Zambia experienced a rise in the uptake in access to insurance by small-scale farmers as a result of a weather index insurance product as part of the Government's Farmer Input Subsidy Programme (which has also been digitised). The programme compensates farmers in case of late dry-spells or excess rainfall, for example (World Bank 2019b).

There are also many subsidies in the water and sanitation sector. The World Bank (2019c) estimates \$320 billion is spent annually on water and sanitation subsidies, but note that few are programmed with regard for sustainable development goals, inclusive of climate change. In Vietnam, where 90% of water withdrawals is by the agricultural sector, Canales Trujillo et al. (2015) identified the use of tariffs on water supply, solid waste and irrigation, exemptions for water companies from corporate income tax. They suggest there is room for improvement in water sector tariffs, particularly making the use of the international provision of climate finance, to improve the prospects for private investment in water and

sanitation priorities at national and regional priorities, though reform has been challenging (World Bank 2019d).

Social protection – a wide array of policies and interventions – is largely funded through public budgets and donor funds (Longhurst 2021; World Bank 2018). The focus of social protection is on strengthening economic, human and social capital. However, social protection is increasingly being shown to facilitate adaptation to climate change. This has arisen despite the fact that climate risks are often not yet well integrated into social protection programming (Aleksandrova and Costella 2021; Costella et al 2021). Tenzing (2019) describes how cash or asset transfers buffer households, in particular, from shocks and stresses, preventing households from falling into poverty and outlines its potential to build longer-term resilience to climate change. It is noted, however, that on their own, social protection schemes are not always sufficient, depending on the scale of the shocks and stressors and must focus on transforming and protecting productive livelihoods and are not reinforcing existing coping mechanisms (Davies et al 2008). Ethiopia's Productive Safety Net Program (PSNP), launched in 2005, actively seeks to build climate change resilience and contribute to mitigation. It includes cash and food transfers for soil and water conservation, rangeland management, restoring and counteracting deforestation, as well as supporting community asset development such as schools and health centres (EU nd; Woolf et al 2015).

The government can **forego revenues** in order to alter prices for investors and consumers. These are also called tax exemptions. These exemptions from tax obligations can include for example preferential treatment for particular inputs that would build climate resilience, outputs (adjusting Value Added Tax), special tax rates for income and preferential property tax rates. Norman et al (2016) have suggested to introduce tax breaks for the diversification of farming to build resilience should one crop fail. In Antigua and Barbuda, tax exemptions were introduced for hurricane shutters. These serve to reduce the damage costs of hurricanes. Without such tax exemption, the material for such shutters can be prohibitively expensive for some households. This is particularly true in times of low liquidity just before a hurricane hits when households are stocking up on essential goods (Watson, Robertson and Ramadin 2020). In Costa Rica, farmland valuation is based on not only the land use but also the production. With a view to conserving farmland, farmers that practice soil management and conservation practices are eligible for a reduction in annual property taxes of up to 40% (Galt et al 2021).

Eliminating mal-adaptive subsidies and inefficient resource use can also play a role in disincentivising activities that could reduce resilience to a future climate regime. Production payments in agriculture, for example, can result in the over-pumping of groundwater and inefficient

use of water. This is also linked to under-priced water and low-electricity pricing (Watson 2021; World Bank 2019a). Fossil fuel subsidy reform, while concretely a climate change mitigation measure also contributes to adaptation. It not only levels the playing field for more renewable energy sources – that are highly linked to adaptation sectors such as water in small island developing states – but it also creates fiscal space (that can be understood as the ability in a government budget to spend on a desired purpose without taking on significant risk on financial or economic stability). Freeing up public resources for other economic and development priorities could mean for health, education and social safety nets, for example, all of which also build household resilience through human capital (e.g. Winkler 2017; Climate Transparency 2020).

2.2. FACILITATE AND DELIVER ADAPTATION THROUGH DIRECT PUBLIC SPENDING

Government spends on the provision of public goods, such as research and advisory services and public infrastructure. Such spending may not directly alter producer costs and revenues, but indirectly affects prices and productivity. Public infrastructure pipelines also set the direction and vision for future infrastructure, that private actors and investors can then align behind.

Limited and uncertain climate information can limit or prevent action, particularly in private sector actors (World Bank 2019c; Singh et al. 2018; WMO 2016; CARE 2014). **Research and advisory services** therefore can play a key role in climate change adaptation. Research can improve yields in a changing climate, for example, through the exploration of drought resistance crop varieties. Advisory services can provide climate information to key constituents so they are better able to adapt to a changing climate or be resilient in the face of a climate-related weather shock. The National Institute of Water and Atmospheric Research of New Zealand has worked with more than 25 Pacific Islands' Meteorological and Hydrological Services and supporting organisations to provide a regional drought potential advisory, for example. This supports the choice of crops for planting, livestock movement and can input into national drought policies. There are similar climate services being proposed and expanded in Africa (see WMO 2019)

The infrastructure being built today sets the future emissions trajectories and contributes to future climate resilience. Public investment in infrastructure has been found to raise the productive capacity and growth potential of an economy (OECD 2015). Together, this indicates that governments must invest in **climate-resilient infrastructure**. Much has been written on climate resilient infrastructure (NCE nd; Watson and Nakhooda 2016; OECD 2012). Building resil-

ience in infrastructure requires climate risk to be embedded in public procurement processes. This necessitates the accounting for the costs of climate risks over the lifespan of the infrastructure. Any public-private partnerships for delivering infrastructure would then need to ensure that climate-related risks are allocation between actors (OECD 2018).

Government and state-owned enterprises are major consumers in construction (as in the case of infrastructure above), but also catering, vehicles and transport. When considering **procurement** of goods and services, public authorities can be required to choose 'green' over other options. This implies that goods and services avoid harmful effects on the environment, capturing climate change impacts. The European Commission is actively considering green public procurement across member states to tackle its role in global deforestation (with intact ecosystems delivering greater system and human resilience to adverse climate impacts) (EU 2018).

Another role of public finance can be to raise capital for climate-resilient investments by influencing the real and perceived costs of capital. This role of public finance, both international and domestic through government-owned financial institutions, is explored more in Paper 3 (McNally and Watson 2020).

2.3. BUILD FISCAL CLIMATE RESILIENCE

Climate change shocks and stresses lead to fiscal risks that ultimately threaten fiscal stability. Fiscal stability can be understood as sustaining the balance between tax revenues and public expenditures at the national and subnational level, so that they do not threaten government solvency or lead to default on liabilities or promised expenditures. Fiscal risks are defined as the possibility of deviations of outcomes from what was expected when the budget was made or other forecasts (OECD 2021). The latter can arrive from short term disaster relief costs, reconstruction costs, forgone returns, lower labour productivity and poor human health, all of which lead to an increase in public spending or lowering of the revenue base (Volz et al. 2020).

Contingency planning can be considered a form of fiscal policy that plans for spending on climate-related weather event relief and recovery. Existing fiscal budgeting practice often focusses on direct liabilities and recurrent spending, pension and health care expenditure. Climate-related disasters are not always considered as contingent public sector liabilities before they occur that then lead to large costs to governments in relief, recovery and reconstruction assistance (Mechler, Mochizuki and Hochrainer-Stigler 2016). With an expected increase in frequency and intensity of climate-related weather events, budget planning will

increasingly need to account for fiscal and debt sustainability objectives (see Allan et al. 2019). This is particularly true in ACP countries with high climate vulnerability including, high natural hazard exposure or those with economic activities clustered in areas exposed to natural hazards (such as beach tourism), whose climate vulnerability can be coupled with constraints to using either domestic savings or accessing financial markets to cover disaster relief costs. The stronger integration of climate risks into planning and budgeting cycles can, therefore, build fiscal resilience.

It should be recognised that this paper does not advocate only contingency planning but recognises that all efforts should be put in place to reduce and manage physical climate risks. This can include supporting adaptation activities as noted above, as well as wider policy and regulation, for example applying building codes and zoning. Each country will, however, need to establish an acceptable level of risk that sets the need for contingency planning. This would consider the ability, for example, of a country to reallocate budget, generate new tax revenues to cover losses and/or rely on national reserves (Mechler, Mochizuki and Hochrainer-Stigler, 2016).

The options for governments to generate resources as a result of contingent events, including **reserve funds**, are where amounts are set aside to accumulate capital in the years where no disasters occur (they can also be called natural disaster funds). They allow liquidity in the immediate aftermath of a disaster allowing a rapid (humanitarian) response. There are opportunity costs to setting aside funds, however, and such an approach also becomes less practical where vulnerable countries face large scale events that cost more than annual GDP.

Contingent credit lines from official creditors are another option to spread risk over time. Through payment of an annual fee, a government (or institution) is given the right to take out a specified loan-amount after an event with fixed conditions. While such contingent credit lines work to increase the availability of funds after a shock, it remains new debt that a country or institution is taking on and therefore have implications for indebtedness (and how to generate future revenues that will service the new debt). The InterAmerican Development Bank (IDB), for example, has a Contingent Credit Facility for Natural Disaster Emergencies. It provides loans for extraordinary expenditures such as emergency sanitation equipment, medications and vaccines, temporary shelter, water and foodstuffs and debris removal, for example, up to six months after the disaster occurred. Countries are only eligible if they have a Comprehensive Natural Disaster Risk Management Programme in place

with regular monitoring of implementation. The loan terms are prepared with countries in advance, but only disbursed at verification of the type, location and intensity of a disaster event by the IDB. They commonly have a 25-year maturity period and a five and a half-year grace period (IDB 2019). Similarly, ADB has Contingent Disaster Financing under Policy-Based Lending in Response to Natural Hazards.

Insurance provides indemnification against losses in exchange for a premium payment. There are many forms and well-established markets. Parametric or index-based insurance has emerged in the context of climate-related disasters. The African Risk Capacity (ARC) of the African Union,¹ the Caribbean Catastrophic Risk Insurance Facility (CCRIF) and the Pacific Catastrophe Risk Insurance Company (PCRIC) are examples of multi-country risk pools that offer parametric insurance in the event of hurricanes, floods and other weather-related events, for example. Established in 2007, CCRIF was the World's first multi-country risk pool. Reinsured in capital markets, it provides short-term liquidity to its member countries after hurricanes, excessive rainfall and earthquakes. Premiums are based on exposure and total pay outs made by CCRIF since its commencement in 2007 until December 2020 have passed the USD 197 million mark, supporting 14 governments (CCRIF 2020). These regional risk pools are also found to offer data repositories, risk models and profiles that governments can also make use of (Martinez-Diaz, Sidner and McClamrock 2019). Insurance can be expensive. Sovereign insurance – the insurance of public assets – can be supported by international concessional finance (for example, the International Development Association (IDA) of the World Bank has helped some countries pay premiums and access insurance for CCRIF and PCRIC, though this raises similar debt sustainability questions as contingent credit lines). At a smaller scale, there needs to be public support of private policy holders' insurance. There are efforts to link insurance to pro-poor efforts, such as through social safety nets.

Catastrophe bonds also known as 'cat' bonds, cover the losses beyond that capacity of governments (and in some cases insurers), by transferring risk to the capital markets (including pension funds and wider institutional investors). They allow governments to raise debt for spending in the event of a catastrophe and go beyond traditional insurance and reinsurance approaches. The African Risk Capacity (ARC) insurance facility also has an Extreme Climate Facility (XCF) which is a multi-year funding mechanism with intention to issue climate change cat bonds. Launched by African member states capital is paid out based on parametric triggers or weather-index triggers. Eligibility to be part of the Facility will include participation in the ARC, as well as a need for robust, investment-ready climate adaptation plans (ARC nd).

¹ The ARC has signed a Memorandum of Understanding with the African Development Bank to create the Africa Disaster Risks Financing (ADRIFI) Programme. Expected to run between 2019-2023, the programme aims to boost resilience and response to climate shocks by enhancing countries' ability to evaluate climate-related risks and costs and will promote, for example, sovereign parametric index-based insurance.

3. UNDERSTANDING THE ROLE OF FINANCIAL POLICY IN GUIDING FINANCE FLOWS TOWARDS ADAPTATION

Significant Financial policy refers to that which regulates, supervises and has oversight of financial and payment systems, including markets and institutions. In many countries, this role is split across agencies such as central banks and financial regulatory authorities working together to promote financial stability, market efficiency, increasing credit access and protecting investors (Labonte 2020; Park and Kim 2020). It also engages policy makers, finance ministries, for example.

In the last few years there has been a rapid increase in the understanding that climate change poses a material risk to the financial system's stability (Box 2). While wider climate-related policies and regulations are critical to drive adaptation action, this paper will focus specifically on the policies guiding the financial sector (influencing asset owners, asset managers and banks) to avoid duplication. It is about prudential and monetary policies, though it goes broader in noting wider actions that can be taken towards supporting the financing of climate action such as through governance and guidance.

The important role of central banks and other regulatory authorities has been emphasised by their role in the response to the COVID-19 crisis. They have introduced a wealth of measures that support liquidity, spending and ultimately economic recovery (Cantu et al 2021). While these institutions are increasing their focus on sustainability, it is noted that more could be done to account for climate- and other sustainability-related risks and objectives, accurately assessing and pricing them and, where appropriate, avoiding the build-up of these climate risks in the financial system (Bolton 2020). In particular, through four objectives for action (INSPIRE 2020):

1. To ensure that climate risks are accurately reflected in central banks' balance sheets and operations, particularly in the context of pervasive market failures
2. To reduce climate-related risks in regulated financial institutions through effective prudential supervision
3. To avoid the build-up of climate-related risks at the level of the financial system
4. To support the efforts of governments to deliver a green recovery from COVID-19 in line with the Paris Agreement and the Sustainable Development Goals.

Three ways in which financial policy can be used to support adaptation by financial policy makers, central banks and other supervisory and regulatory bodies, are identified in this paper. These are outlined in Figure 3 as putting in place strategies, governance and guidance; enhancing supervisory review; and, adjusting capital and liquidity requirements. They indirectly provide legal signals that influence and so direct finance flows towards adaptation and away from actions that can increase vulnerability to climate change.

3.1. PUT IN PLACE STRATEGIES, GUIDANCE AND GOVERNANCE

One way that countries can put adaptation to climate change on the agenda is through the creation of national or sectoral plans of intention and action. A number of countries have or are progressing **green or sustainable finance strategies**, for example. These can vary from statements of intent to more detailed financial system 'roadmaps', or plans to enhance the ability of the financial system to mobilise capital towards climate objectives (UNEP Inquiry 2017). This could be particularly valuable from an adaptation perspective as it necessitates thinking about adaptation targets, pathways and technologies which is a critical part of financing adaptation priorities (McNally and Watson 2021). It also engages the private sector in adaptation planning.

The emergence of **sustainable finance definitions and green finance taxonomies** can further the implementation of adaptation actions. These help investors understand if an activity is 'consistent' with climate objectives, or more specifically is considered as contributing to adaptation. The development of green or sustainable finance definitions and taxonomies is growing rapidly. This includes the EU, China, Japan, France and the Netherlands (OECD 2020). Where a taxonomy is applied widely, it can provide clarity on what can be considered adaptation, or identification of the discrete activities that build climate-resilience, thereby increasing investor confidence and facilitating market development through increased demand and visibility. Box 3 outlines the EU Taxonomy and its approach to adaptation. In the first half of 2021, South Africa's National Treasury – with the support of the IFC, Carbon Trust and National Business Initiative – called for stakeholder inputs on a draft green finance taxonomy for the country. It outlines definitions and

BOX 2:
The materiality of climate change risks

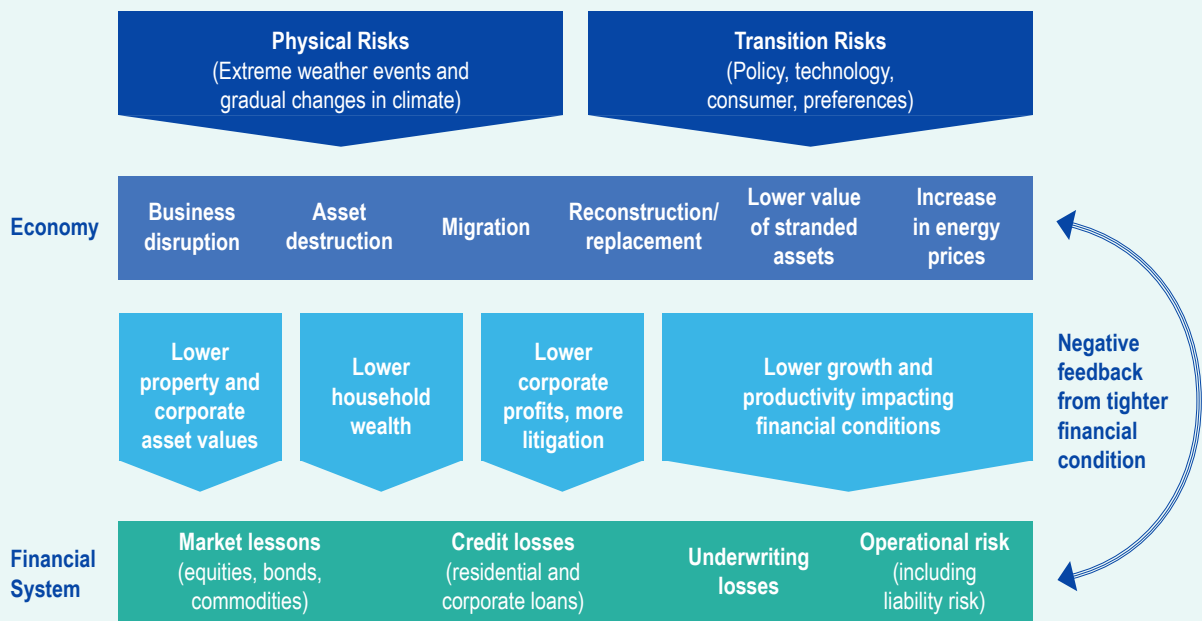
There are three types of climate change risks that are widely recognised and discussed in the literature:

Physical climate risks are those that result from shifts in climate and weather patterns as a result of global temperature rise. This includes the likely increased frequency and intensity of extreme weather events as well as the slower onset changes in precipitation and temperature regimes and their implications on the value of investments and productive capacity.

Transition climate risks are those associated with changes that will be made to policies and regulations, as well as developments of technologies and in markets that can, for example, shift asset longevity and so value, as well as, for example, shifting consumer preferences. In the fossil fuel industry, such risks include large balance sheet write offs of coal reserves in the ground, for example.

A third category is **liability climate risk** which is that associated with possible (and growing) legal actions taken by parties that are affected by climate change against those that are responsible for climate change. There are also knock on impacts for the insurers of those responsible for climate change.

The adverse impacts of climate change in the real sector economy, through industry, corporations, enterprises or consumers will have implications for the financial system. For example, impacting on profitability, market and sector engagement and capital adequacy (the statutory minimum reserves of capital which a bank or other financial institution must have available). Operating costs can change, as the costs of capital and access to capital change, and there can be increased default risk for loan portfolios, lower values of assets and greater risks in mortgage portfolios. Damage to assets serving as collateral could also create losses that prompt banks to restrict their lending in certain regions, reducing the financing available for reconstruction in affected areas. At the same time, these losses weaken household wealth and could, in turn, reduce consumption. This illustrates that climate risks are, by far, currently not adequately reflected in balance sheets and asset prices, often owing to the concept of the tragedy of the horizon.



Source: Boton 2020; IMF 2019; Watson, Robertson and Ramadin 2020.

FIGURE 3:

The ways that financial policy and regulation can support adaptation



BOX 3:

The EU Taxonomy and its approach to adaptation

The EU Taxonomy aims to bridge the gap between international goals and investment practices by clearly signalling the types of activities that are consistent with the low-carbon transition, adaptation and other environmental objectives. Critically the EU taxonomy provides a road map via a common language for investors, issuers, policymakers and regulators to meet Paris Agreement and Sustainable Development Goal commitments.

The EU Taxonomy is one of three key regulations that are the first step towards the 2018 EU Sustainable Finance Action Plan. The Plan intended to connect finance with sustainability and, alongside the taxonomy, deliverables included making disclosures relating to sustainable investments and sustainability risks clearer and to establish low-carbon benchmarks. The 2021 EU Strategy for Financing the Transition to a Sustainable Economy, amends the Plan, further supporting the creation of markets for green investments while concurrently seeking standardisation that could avoid greenwashing.

The process of creating the EU taxonomy brought together experts from finance, academia, civil society and industry to identify initial economic activities and the level of environmental performance they must achieve. To be included in the EU Taxonomy, an economic activity must contribute substantially to at least one environmental objective and do no significant harm to the other five, as well as meet minimum social safeguards. Technical screening criteria set requirements for determining Substantial Contribution and Doing No Significant Harm. The six Taxonomy environmental objectives are: climate change mitigation; climate change adaptation; sustainable use and protection of water and marine resources; transition to a circular economy, waste prevention and recycling; pollution prevention and control; protection of healthy ecosystems.

The Taxonomy will be developed gradually with activities that make a substantial contribution to climate change mitigation and adaptation being prioritised over other environmental objectives. For adaptation the economic activity must have implemented physical and non-physical solutions that reduce physical climate risks, identified through climate and vulnerability assessments that span the expected lifetime of an economic activity, as well as an assessment of adaptation solutions that can reduce the identified physical climate risk. Adaptation solutions must also favour nature-based solutions, be consistent with local, sectoral or regional adaptation plans and strategies, and be measured and monitored over time.

Under the proposed EU Taxonomy regulation, institutional investors and asset managers marketing investment products as environmentally sustainable would need to explain whether, and how, they have used the Taxonomy criteria. Companies, if they wish, can reliably use the EU Taxonomy to plan their climate and environmental transition and raise finance for this transition. On the other hand, financial companies can use the EU Taxonomy to design credible green financial products.

Source: EU TEG, 2019, 2020.

principles, thematic areas and screening criteria for economic activities (South Africa National Treasury 2021).

Guidance for specific products that support adaptation can also emerge. Green bond guidance and principles, for example, have emerged in Japan and China (UNEP Inquiry 2017). Green bond guidelines also exist at an international level such as through the ICMA group (ICMA 2021). In 2019, the Climate Bonds Initiative published guidance for resilience bonds (CBI 2019). The emergence of **guidance for green, climate and resilience bonds** can support the standardisation of these products. Such guidance can serve to reduce the concerns about ‘green washing’ where a product is labelled green for little environmental benefit. Where widely adopted, bond standards can also drive up products quality and value. The creation of guidance can also apply to other green products emerging including for mortgages, lending, pension and sovereign wealth funds.

In some cases, strategies and guidance is accompanied by the creation of high-level, expert groups or in-country permanent bodies for green or sustainable finance. The introduction of **strong governance and accountability frameworks for climate risks** provide a signal of political awareness and willingness. The Reserve Bank of South Africa wrote in 2020 on the implications of climate change for central banks in emerging and developing economies, a report that led to the creation of its green finance taxonomy in 2021 (South Africa Treasury 2020), while the Bank of England now issues a climate disclosure report (Bank of England 2020).

3.2. ENHANCE SUPERVISORY REVIEW

Government and quasi government financial sector actors create standards of due diligence for banks and financial institutions in addition to being responsible for setting market rules. Their driving objectives are largely to ensure safety of the financial system, and can seek to do so by limiting an institution’s or financial market’s exposure to specific financial risks (Campiglio et al. 2018). In addition to such micro-prudential regulation, they also have macro-prudential tools that should work to avoid the build-up, either at an institutional level or in the financial sector, of systemic risk.

Mandated disclosure of climate risks would require financial reporting to include information on both physical and transitional risks. Such disclosure is particularly important in regulated financial institutions, notably banks, insurers, investment institutions and capital market intermediaries (such as exchanges and rating agencies) (INSPIRE 2020). Disclosure of climate risks in financial reporting can allow for more efficient capital allocation through transparency on the climate-risks to which specific financial institutions

are exposed, therefore, shifting capital allocation away from maladaptive assets or those with high physical climate risks and allowing regulators can better monitor financial activities (Feridun and Gungor 2020).

It is worth highlighting that the vulnerability of many ACP countries also has the potential to negatively impact credit ratings. It could, therefore, potentially restrict access to debt finance and so the ability of a government to invest in resilience (UNFCCC 2021). Supporting countries to plan and demonstrate how they will manage the risks of climate change will need to be made concurrently with efforts to ensure that these factors are considered by investors and market makers (such as rating agencies) To this end, a number of tools have been developed – focussing on both transition and physical climate risks – and there is increasing adoption of these in banking as well as development finance institutions (Buhr et al 2018; Carter 2020; Moody’s 2017). Many tools however, have yet to be harmonised (Bingler 2020).

Climate stress-testing can lead to the identification of financial institutions exposed to emission- intensive assets or highly climate-vulnerable assets, thus improving information and capital allocation. It uses different scenarios to identify the financial resources (capital and liquidity) that need to be retained in the event of these different stress scenarios. A further component is ensuring disclosure of these portfolio risks, to ensure full information in investment decision making. Climate-stress tests typically use much longer time-frames than other types of stress testing in financial institutions, however, so best practice is still emerging (BIS 2021).

3.3. ADJUST CAPITAL AND LIQUIDITY REQUIREMENTS

Tools adjusting capital and liquidity requirements for climate objectives are relatively nascent in their application (Moessa et al. 2020). Three broad categories of policy options might be considered:

Shifting liquidity requirements to encourage climate resilience – liquidity requirements ensure financial institutions have enough assets available if market conditions were to shift, therefore avoiding that too much of a particular type of assets exists on the balance sheet. Lowering liquidity requirements for sectors or technologies that lead to adaptation action or build resilience encourages investment in these areas by reducing the amount that financial institutions have to hold against their lending.

Adjusting lending limits, credit caps and floors to encourage climate resilience – these can be used to limit exposure to emission-intensive investments or those that

are not resilient to climate impacts. They can also be used to set institutional targets for flows towards adaptation activities, by sector or activity type, or they can set caps that reduce overspending activities that might be mal-adaptive or reduce resilience to climate change and its adverse impacts.

Differentiate reserve requirements – another possible tool lowers the amount of minimum reserves must be held by a commercial bank as a counterpart to customer deposits and notes for green sectors, increasing exposure to these sectors -but there are also concerns that this could lead to the banking system creating excessive credit and so the effectiveness of such a policy is likely to depend on where it is implemented (Campiglio 2016).

It should be noted, therefore, that these tools remain to be tested for their effectiveness and efficacy, measures that likely will be dependent on country contexts as well as on the perceived mandate of the regulators.

4. NEXT STEPS FOR POLICYMAKERS

Adaptation to climate change can no longer be seen to be in direct competition with other development and economic growth objectives. Adaptation to climate change is instead a critical part of delivering and maintain such progress. The benefit of using fiscal and financial policy in the pursuit of mobilising finance flows for adaptation, is that they leverage existing government structures and tools. They can also deliver a more predictable source of funding – domestic revenues – than existing levels of international concessional finance for adaptation.

Fiscal policy additions and reforms are not easy to implement. Three broad steps are outlined here, that raise the challenges that are faced when implementing fiscal policies:

- **Determining policy objectives for adaptation**

Establishing the policy objectives and goods and services that facilitate adaptation is complicated as adaptation is hard to define and cross-sectoral. As noted in McNally and Watson (2021), taxonomies are emerging, most recently in the EU, but also in China, that identify the specific activities or investments that can deliver on environmental objectives, including adaptation to climate change (World Bank 2020). There remain, however, significant uncertainties in direct and indirect effects of current and future climate change, as well as many multi-causal factors of climate change vulnerability and even limits to adaptation (IPCC 2018). There are rapid improvements in climate modelling, however, that can support policy making for adaptation benefits despite these uncertainties and challenges in modelling.

Fiscal policy is put in place to meet many policy objectives. This means that making use of fiscal policy to adapt to climate change and increase climate change resilience will also need to understand and manage interactions and possible trade-offs with other policy objectives. Fiscal policies help increase employment, private investment and productivity and, for example, public agricultural support has long been provided to build food security. Taxing can also affect saving and investment decisions, so careful design is needed to avoid any adverse outcomes (including pushing households into poverty).

- **Raising and adjusting revenues for public spending to deliver and facilitate adaptation actions**

In identifying fiscal policy measures that can meet policy objectives, a key consideration will be its af-

fordability (and ability to target the most vulnerable). This paper is written at a time where many ACP countries have a large fiscal deficit or limited fiscal space – in Fragile States there can be very limited fiscal capacity – including that which has resulted from the ongoing COVID-19 pandemic (Buckle et al 2020; Hepburn et al 2020). Care will need to be taken not to challenge the delivery of other public subsidies and public spending. In some countries, it may be most appropriate to focus first on budget-neutral reforms rather than creating more fiscal space through raising taxes, cutting lower priority expenditures, borrowing or securing grants. Consideration will also need to be made of the revenue base of the implementing ministry or government at large and the ambition of any new measure, for example a subsidy covering full costs or partial costs; identifying how recurrent spending on operations and maintenance, or the continuity of measures put in place, can be financed by current and future revenues (that are linked to economic growth and the country's revenue generating capacity). Gramkov (2020), however, indicates that since poverty will be a key outcome of climate change in ACP countries and poverty will also negatively impact future fiscal balances, now is a window of opportunity to tackle structural development problems, through 'green' fiscal policies.

The coupling of fiscal policies for adaptation and climate resilience building measures with alternative revenue raising measures is an attractive option. Carbon taxes have already been identified in this paper as a cost-effective climate change mitigation measure with revenues raised by such schemes have been used for health, education and social safety nets (Whitely et al 2018). In Namibia, the Environment Investment Fund established by an act of Parliament seeks sustainable natural resource management. Following the transfer of the Fund to the Ministry of Finance, it became more feasible to ringfence a percentage of levies from plastic and batteries, for example, (rather than seeking budget appropriations for the Fund's activities), as well as being supported by international concessional finance flows and with objectives to leverage private finance flows. In 2020, Antigua and Barbuda introduced an accommodation levy, given the strong role of tourism in the country. The levy is likely to be a source of finance for the Climate Resilience and Development Fund, though legislation is awaiting to be passed (Watson 2020).

Links can also be made with fiscal policy for adaptation and concessional finance flows, even climate finance obligations from developed countries. There are, for example, climate-related budget support modalities where finance is contingent on the government meeting pre-agreed criteria - in this case related to climate change – as well as broader governance concerns. These development policy flows of finance can then be used for any expenditure purpose. In Samoa, 2018, the World Bank established a Development Policy Operation that provides budget support through upfront financing as well as disaster-contingent funding, providing Samoa is able to meet pre-set criteria on strengthening macroeconomic and financial resilience. These criteria include simplifying capital gains tax, amendments to money laundering acts, approving guidelines for national building codes and approving Community Integrated Management Plans to build climate change resilience, amongst others (Allan et al 2019). Development policy lending, however, also represents another form of lending and therefore have implications for debt sustainability.

There are many components of investment climate reform and business environment reform that link to fiscal policy for adaptation. Improved tax policy and administration and transparent financial management and domestic revenue mobilisation are key activities that can be supported under these efforts (McFarland 2021). In many ACP countries, there remain a large informal sector that may fall, not only outside of any revenue raising schemes, but also outside of any spending measures mentioned here. This suggests a role for ongoing efforts and support to appropriately broaden the tax base (including by reducing exemptions and preferential regimes), improve tax administration and stabilise debt management, among others.

- **Addressing the political economy of fiscal policy design and reform**

Political economy factors consider different beliefs, power structures and political interests. Fiscal policy development and reform is highly sensitive to political economy factors. In the land use sector, there are high entry barriers and high opposition to policy reform (Daugbjerg and Feindt 2017), partly because public agricultural support tends to be focussed on a small number of crop types that are important for food security and/or will influence the incomes of in-

fluential groups in society (Locke and Lowe 2021). The former pointing to the need to compensate losers or complementing policy change with other structural reforms that can support or motivate them.² The latter vested interests being highly relevant for many types of taxes and subsidies.

Public perception of the efficiency of the tax and subsidy systems (and any perceptions of mis-appropriation) and their reform is also important. Social consensus has been shown to be critical for successful fiscal reform implementation, suggestion that reforms need to be accompanied by good communications and political coalitions (World Bank 2019a).

Not all adaptation outcomes are necessarily linked to financial incentives from government actors. There are wider regulatory measures that countries can adopt to result in adaptation and building resilience. These include building standards and zone planning for resilient infrastructure, or strengthening property rights for water pricing. The diversification of the economy itself, is another risk reduction mechanism (World Bank 2019a).

Similarly, three ways in which fiscal policy can be used for adaptation as outlined here, is not the only way the budget can be adjusted to encourage adaptation to climate change and build climate resilience. Links can be made to efforts that ensure budget processes integrate adaptation and climate change, recognising that most public financial management systems do not yet address such cross-sectoral concerns (Allan et al 2019). Coined ‘climate budgeting’, this body of work better illustrates how the allocation, management, expenditure and reporting of public funds can be made more responsive to adaptation needs (see Annex 1). Climate budgeting therefore speaks to increasing efficiency for adaptation spending, while this paper is focussed on the role of government expenditure on expanding private finance flows for adaptation, increasing private sector engagement in adaptation goods and services, and longer-term fiscal stability.

Financial policies and regulations that can support a transition to a low-emission, climate-resilient future are relatively nascent, though build on existing mandates of the institutions that employ them. As such, there is limited best practice on how to implement changes. Three broad steps are outlined here to support the application of financial policy for adaptation objectives:

² An example of a mechanism that does not fall into the fiscal policy categories here is the 2015 changes to the distribution of tax revenue in India amount the 29 state governments. While previously based on population, area and income, adjustments were made to include forest cover that could encourage forest conservation (Busch and Mukherjee, 2017). The status and effectiveness of this measure is not known.

- **Build the management of climate risk into the mandate of central banks and other regulatory authorities**

Although there has been a substantial uptick in the engagement of central banks and regulators with climate risk, it remains a new area for many of these institutions and their employees. Countries and regulators have different mandates or legal frameworks that will affect the degree to which they are required or wish to engage with climate change (Dikau and Volz 2020). Some regulators are more likely to work through voluntary measures rather than regulatory ones. Yet, there are wide calls for a shift from a suit of voluntary climate risk measures, to mandatory reporting and compliance, this is particularly the case for climate-related financial risk disclosure.

There remains a learning curve and a need for outreach and engagement across central banks and regulators to familiarise them with climate risks and the tools at their disposal to manage such risks and (re)direct finance to climate-resilient investments. It is worth, therefore, each country considering the degree to which existing regulatory requirements can be adjusted to include climate risks, rather than requiring new legal frameworks (Galt et al 2021).

- **Change mindsets and build public support for regulatory change**

Changing mindsets may be particularly challenging around the time horizon of financial regulation. While this has usually been three to five years, the risks from climate change are likely to occur over longer time scales. Backward looking data is also not sufficient to predict future impacts of a changing climate. It is therefore necessary to both extend the timeframe and integrate scenario analyses into operations (INSPIRE 2020).

Each country further has its own financial market context and maturity in which to enact possible policies, for example, some countries are not able to issue bonds on global capital markets, meaning that some tools mentioned here are more suited to some economies, over others. As with fiscal policy, the close engagement and consultation with stakeholders will be required to ensure emerging obligations are appropriate and avoid imposing excessive burden on particular companies.

- **Identify and research to fill gaps in data and methods**

There remain gaps in data and methods for financial policy and regulation to reflect the climate change emergency. The calibration of prudential policy instruments like climate stress testing, for example, will need sophisticated information and modelling on adverse impacts and their future likelihood. Furthermore, in order for banks to report on climate risks they will need to collect data from clients (corporates, small and medium enterprises and so on). New systems of data collection will be needed, including support to businesses that could otherwise be excluded from financing having unintended consequences.

There are increasing international initiatives that work to support the building of data and best practice for financial policy and regulation. They specifically include the Network of Central Banks and Supervisors for Greening the Financial System and The Task Force on Climate Related Financial Disclosures (TCFD) that deal with central banks and financial disclosure of climate risks, respectively (Box 4).

As noted above and even more so as a result of the COVID pandemic, supervisors and regulators need to be wary of limiting private investment and financing. Liquidity and spending are favourable for an economic recovery. But the appropriate signals now, that strongly identify the need to address climate change and adapt to its adverse impacts, are worthwhile. Planning and implementation is often not immediate and appropriate design could, for example, set time periods for compliance in the coming years to smooth the introduction of financial policy and regulation.

With the application of fiscal policy to adaptation and the building of resilience being nascent, it is not possible to give further detail on the effectiveness or efficacy of the possible tools. While the fiscal policies being put in place may already be leading to adaptation, few are explicitly doing to, documented to do so or monitored for such impacts. Furthermore, the inclusion of climate risk in financial decision making remains novel and best practice is yet to emerge (Bingler and Colesanti Senni 2020). While the report is written with highly climate-vulnerable ACP countries in mind, it has also been challenging to find examples in ACP countries. This paper is therefore considered a first consideration of fiscal and financial policy for mobilising investment in adaptation and more work is needed to understand which aspects of fiscal or financial policy are best suited to individual contexts in and across ACP countries.

BOX 4:

Exemplary initiatives supporting learning and advocacy for financial policy and regulation

The **Network of Central Banks and Supervisors for Greening the Financial System (NGFS)** established in 2017 helps to strengthening the global response required to meet the goals of the Paris agreement and to enhance the role of the financial system to manage risks and to mobilise capital for green and low-carbon investments in the broader context of environmentally sustainable development. To this end, the Network defines and promotes best practices to be implemented within and outside of the Membership of the NGFS and conducts or commissions analytical work on green finance. As of mid 2021, the NGFS consisted of 92 members and 14 observers.

The **Task Force on Climate Related Financial Disclosures (TCFD)**, established in 2015 by the Financial Stability Board has provided a platform and popularised the physical, transitional and liability related risks of climate change. It has developed voluntary climate-related financial disclosures focussed on governance, strategy, risk management and metrics and targets (TCFD, 2017). While the TCFD recommendations have received many endorsements, countries are slower to mandate climate-related financial disclosures.

5. CONCLUSION

Fiscal policy and financial policy hold potential to direct investment towards adaptation actions. They can also be used to build climate resilience of public spending and the financial system at large. Not all adaptation outcomes are necessarily linked to financial incentives from government actors, however, and such measures will need to be accompanied by wider policy changes that build on existing climate and development policies, strategies and plans. As countries implement and seek to finance their national adaptation priorities, international climate finance is needed as are conversations on how domestic finance and policy can better facilitate climate change adaptation towards more climate resilient households, corporations and economies.



This is a critical decade of action for climate change, adaptation actions are needed fast.

Yet, more climate information and research into best-practice design and implementation of fiscal and financial policy for adaptation is needed. In particular, these policy tools remain to be tested for their effectiveness and efficacy in mobilising actors, including private actors, to invest in adaptation.

KEY MESSAGES FOR POLICYMAKERS



Fiscal policy and financial policy are tools that are familiar to government and quasi-government actors.

They can leverage existing government structures and tools in the pursuit of ACP country adaptation priorities. Their application, however, will still rely on clear and detailed policy objectives and targets to be identified for adaptation, a context specific and cross-sectoral challenge.



No policy or policy reform, neither its introduction and implementation, is easy.

There is a strong need to ensure just and equitable implementation of new policies or appropriate mitigation of adverse distributive effects, as well as to resource efforts to build social consensus around the need for adaptation and pathways to climate resilience. There further remains a need for ongoing efforts and support in investment climate reform and business environment reform that can facilitate the uptake of fiscal and financial policy for adaptation.



Fiscal policy and financial policy tools will need to be considered as part of a suite of actions to increase finance for adaptation.

There are wider adaptation policies that do not focus on financial institutions or shift price incentives. Public investment, both national and international, remain critical, even in supporting the design and implementation of fiscal and financial policy for adaptation, as well as soft levers such as awareness campaigns, certification and labelling. The exact combination of measures that can deliver on a country's adaptation priorities will be dependent on the specific country – and even sub-national – context. This includes a country's debt and revenue raising capacities, their specific physical climate risk vulnerability and wider social and political economic growth and development objectives.

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