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INCLUSIVE GREEN FINANCE

INCLUSIVE GREEN FINANCE (IGF) WORKING GROUP

# INCLUSIVE GREEN FINANCE: A SURVEY OF THE POLICY LANDSCAPE

SECOND EDITION

AFI SPECIAL REPORT

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# INCLUSIVE GREEN FINANCE: A SURVEY OF THE POLICY LANDSCAPE 2ND EDITION





Cover image: Farming next to the turbines on Tolo 1Jeneponto wind energy power plant in South Sulawesi, Indonesia. July 2019. (Photo by Hariandi Hafid/SOPA Images/LightRocket via Getty Images)

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Chinese workers walk on a section of a large floating solar farm project under construction by the Sungrow Power Supply Company on a lake caused by a collapsed and flooded coal mine in Huainan, June 2017. When finished, the solar farm will be made up of more than 166,000 solar panels which convert sunlight to energy, and the site could potentially produce enough energy to power a city in Anhui province, China. (Photo by Kevin Frayer/Getty Images)

## EXECUTIVE SUMMARY

# CLIMATE CHANGE DEEPENS POVERTY

It is widely accepted in the AFI network that climate change is a threat to development and that it has already imposed a high cost on low-income and vulnerable populations in developing and emerging economies. However, research shows that financial inclusion is one of the best ways to build individual and collective resilience to the effects of climate change.

Savings, credit, insurance, money transfers and new digital delivery channels all provide a financial buffer against climate-driven events like changing weather patterns, cyclones and storm surges, as well as aid in recovery and reconstruction. Meanwhile, supportive financing for green technologies, like solar-powered home energy systems and cleaner cookstoves, help to mitigate the effects of climate change, and include those at the base of the economic pyramid in the transition to low-carbon economies.

Inclusive green finance (IGF) is a rapidly evolving policy area, and AFI member institutions are beginning to devise and implement policies, regulations and national strategies to mitigate or build resilience to the sweeping environmental, health, social and economic effects of climate change. To understand the scale and scope of these efforts, AFI conducted member surveys in 2018 and 2019 that asked why financial regulators were working on climate change, how they have been integrating climate change concerns in their national financial inclusion policies and other financial sector strategies, and how they are collaborating with national agencies or institutions.[1] AFI also conducted a member survey in 2019 that asked financial regulators about IGF policies targeted at the MSME sector.

The surveys uncovered a growing trend in the AFI network to link financial inclusion and climate change at the national level, either in National Financial Inclusion Strategies (NFIS) or other financial sector strategies. Many of the countries included in the survey have explicitly linked climate change and financial inclusion in these national strategies, and many have already enacted a broad range of policies to turn their strategic objectives into reality. In line with the Sharm El Sheikh Accord on Financial Inclusion, Climate Change & Green Finance[2] —and more recently the Nadi Action Agenda[3] —these policies include individuals and MSMEs in climate mitigation and resilience efforts and have three things in common: they catalyze financial services for climate action from the private sector; they use financial infrastructure to deploy them; and/or they strengthen the resilience of financial institutions that are providing financial inclusion solutions in the face of climate change impacts.

### FURTHER INFORMATION

- Sharm El Sheikh Accord
- Nadi Action Agenda



1 For more information on the AFI member survey and results, see Appendix 1.

2 Alliance for Financial Inclusion, 2017b

3 Alliance for Financial Inclusion, 2018

The policies and initiatives fall within four key pillars of inclusive green finance known as the "AFI 4Ps": Promotion, Provision, Protection and Prevention. This framework provides financial policymakers and regulators with a typology of policy options.

## PROMOTION

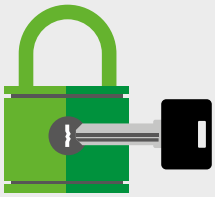
Policies and initiatives prepare the private sector to offer financial services for green projects or related climate action activities to qualified beneficiaries, for example, through awareness raising, information sharing, capacity building and data collection.

## PROVISION

Policies help to ensure that financial resources for green projects or related climate action activities are provided to qualified beneficiaries, whether through lending policies, refinancing, structural adjustments or other financing schemes.

## PROTECTION

Policies reduce financial risk by "socializing" potential losses through insurance, credit guarantees, social payments or any other related risk-sharing mechanisms. Policies in this category provide a much-needed safety net and help to build resilience by accelerating and facilitating recovery from extreme climate events.



## PREVENTION

Policies aim to avoid undesirable outcomes by lowering financial, social and environmental risks. As part of this effort, financial regulators are enacting Environmental (and Social) Risk Management (ERM or ESRM) Guidelines to proactively assess and address the social and environmental externalities and risks of their institutions' activities, including the unintended consequences of financing.

There is still much to learn, but policymakers and regulators are finding there is often no need to reinvent the wheel. In many cases, existing policy tools and techniques for low-income populations and MSMEs can be refined and repurposed with a green focus. This allows policymakers to act swiftly while taking the time to prepare the groundwork for more innovative policies.

There is fast-growing demand in the AFI network for policy and regulatory guidance on inclusive green finance. The AFI Inclusive Green Finance Working Group is currently working on providing further guidance, as well as policy leadership on IGF.

This second edition of AFI's Inclusive Green Finance Policy Landscape Survey reveals new and emerging policy practices that are guiding the transition to more inclusive and resilient low-carbon economies, and contributing to the global effort to implement the Paris Agreement and achieve climate-related Sustainable Development Goals (SDGs).[4]

4 Financial inclusion is linked with three Sustainable Development Goals: Goal 1: No poverty – End poverty in all its forms everywhere; Goal 7: Affordable and clean energy – Ensure access to affordable, reliable, sustainable and modern energy for all; and Goal 13: Climate action – Take urgent action to combat climate change and its impacts.

## INTRODUCTION

# SUPPORTING CLIMATE ACTION THROUGH FINANCIAL INCLUSION

The imperative to use financial inclusion policy to support climate change adaptation and mitigation, known as inclusive green finance (IGF), has never been more urgent. Climate change continues to produce more frequent extreme weather events, such as storms, droughts and floods, all of which have a disproportionate effect on the poor.[5]

Timely access to finance for disaster relief and recovery following extreme weather events is critical, as emergency funds, savings and insurance make a significant contribution to the adaptation capacity of individuals and MSMEs.[6] These products are also relevant in the long term, as "it is not just the immediate impacts of an extreme weather event or catastrophic crop failure which need insurance cover … longer term, hidden risks from climate change include food insecurity, malnutrition, illness, job losses and poor economic growth."[7]

Between 1998 and 2018, for example, 91 percent of storm-related fatalities were in low- and middle-income countries, even though these countries accounted for just 32 percent of storms.[8] Cyclone Idai affected Madagascar, Malawi, Mozambique and Zimbabwe in March 2019, and Cyclone Kenneth affected Mozambique the following month, causing loss of life and significant damage to property and livelihoods. It is estimated that USD 4 billion will be needed to address these losses.[9] While similarly devastating weather events occurred in other regions of the world, Cyclone Idai affected a region where most of the population lives in poverty, there are significant levels of financial exclusion,[10] and government resources and budgets are constrained. Seven months after the cyclones, representatives from Malawi, Mozambique and Zimbabwe stated that they "had not been able to attract enough financial support to rebuild lives and fast track early recovery, rehabilitation and reconstruction after Cyclones Idai and Kenneth." [11]

While financial support for catastrophic disasters is needed even in high-income countries with high levels of financial inclusion,[12] the amount of support needed for populations and businesses with low levels of financial inclusion is higher, since "financial inclusion helps poor people save in forms less vulnerable to natural hazards than in-kind savings like livestock and housing, which diversifies risk. It also enables the poor to access credit, thereby accelerating and improving recovery and reconstruction."[13]

Science continues to point to the need for significant and urgent reductions in carbon emissions to avoid higher mitigation costs in the medium and long term, and the risks of failing to meet the target to keep global warming well below 2°C by 2100.[14] This would also help avoid the future costs of adapting to the effects of climate change. Financial sector policymakers and regulators are increasingly expected to develop strategies to support decarbonization, and there are rapid developments in green finance

People wade through flood waters affected by Cyclone Idai, Buzi, Mozambique. March 2019. (Photo by Andrew Renneisen/Getty Images)

globally. Having effective IGF policies in place is therefore necessary and timely.

When AFI members adopted the Sharm El Sheikh Accord on Financial Inclusion, Climate Change & Green Finance in 2017, they were recognizing the need to design and implement financial inclusion policies and regulatory reforms aligned with the 2030 Agenda for Sustainable Development and the Paris Agreement on Climate Change. The Accord reaffirmed members' understanding that "financial inclusion policies should help achieve positive outcomes from climate change, green finance and sustainable development".[15]

In line with the 2018 Nadi Action Agenda, which provided further guidance on the implementation of the Sharm El Sheikh Accord, AFI published a report in June 2019 on the policy landscape for IGF based on comprehensive interviews with 20 AFI members. Since then, momentum has grown with the launch of the AFI Inclusive Green Finance (IGF) Working Group in September 2019, which in April 2020 had 40 members from 37 different countries. The inaugural Bank Al-Maghrib and AFI member training on IGF was held in October 2019, followed by a global conference on green finance.

This is the second edition of the IGF policy landscape report. It provides an update of AFI's June 2019 report based on interview with twelve AFI members, of which seven interviews are updates and five interviews are new additions to the landscape. It also includes information from another new survey and report, *Inclusive Green Finance for MSMEs*.[16]

5 United Nations, 2016; Hallegatte et al., 2017

6 Innovations for Poverty Action, 2017

7 Microinsurance Network, 2019

8 World Bank, 2019

9 UNECA 2019

10 According to a 2019 FinMark Trust report, "Measuring progress 2019: financial inclusion in SADC", 51 percent of Malawi's population and 51 percent of MSMEs are financially excluded (FinMark Trust, 2019). The 2014 FinScope Consumer Survey found that 61 percent of adults in Mozambique were financially excluded (FinMark Trust, 2015) while 75 percent of MSME owners in Mozambique are financially excluded (FinMark Trust, 2012b). The 2019 report also found that eight percent of the population of Zimbabwe was financially excluded and, in 2012, 51 percent of MSMEs were financially excluded (FinMark Trust, 2012c).

11 UNECA, 2019

12 In Italy, government expenditures on emergency response and reconstruction related to hydrological events are estimated at EUR 2.6 billion a year between 2010 and 2012 (OECD, 2016). In 2014, 98.2 percent of Japanese over the age of 15 had accounts at financial institutions, 56.6 percent had loans and 77.7 percent savings (World Bank, 2014).

13 Hallegatte et al., 2017

14 UNEP, 2018

15 AFI, 2017b

16 Twenty countries were interviewed for the initial IGF landscape report in 2018 and 2019: Armenia, Bangladesh, Brazil, Cambodia, Costa Rica, Egypt, Fiji, Guatemala, Jordan, Morocco, Nepal, Nigeria, Pakistan, Paraguay, Philippines, Rwanda, Sri Lanka, Tanzania, Thailand and Vanuatu. Twelve countries were interviewed for the updated IGF landscape report in 2019 and 2020: Argentina, Bangladesh, Cambodia, Ecuador, Egypt, Ghana, Mongolia, Nepal, Philippines, Sri Lanka, Thailand and Zimbabwe. Five of these countries were not interviewed before: Argentina, Ecuador, Ghana, Mongolia and Zimbabwe. This brings the total number of countries interviewed for the IGF landscape report to 25.

Five policy examples from five countries were taken from the IGF MSME report in 2020 and included in the IGF policy landscape study. Of these countries, three were only interviewed for the IGF MSME study and not the IGF landscape study: Eswatini, Peru and Seychelles.

# FINANCIAL INCLUSION AND CLIMATE CHANGE:

# MAKING THE CONNECTIONS

## CLIMATE CHANGE DEEPENS POVERTY

Most of the world's unbanked live in developing countries, which are the lowest carbon emitters, yet suffer the most from the impacts of climate change.

There is abundant evidence that climate change has a disproportionate impact on poor and vulnerable populations.[17] Those living in low-lying coastal zones or on marginal agricultural land in developing countries[18] are the most affected by short-term, immediate climate disasters, such as floods, droughts and storm surges. They are also more susceptible to longer term, gradual onset effects, such as sea level rise and coastal erosion.[19] In a range of ways, climate change is deepening poverty in countries around the world, threatening to drive an estimated 100 million people into poverty by 2030.[20] Less well understood is how these impacts combine and interact to intensify stresses on low-income populations.[21]

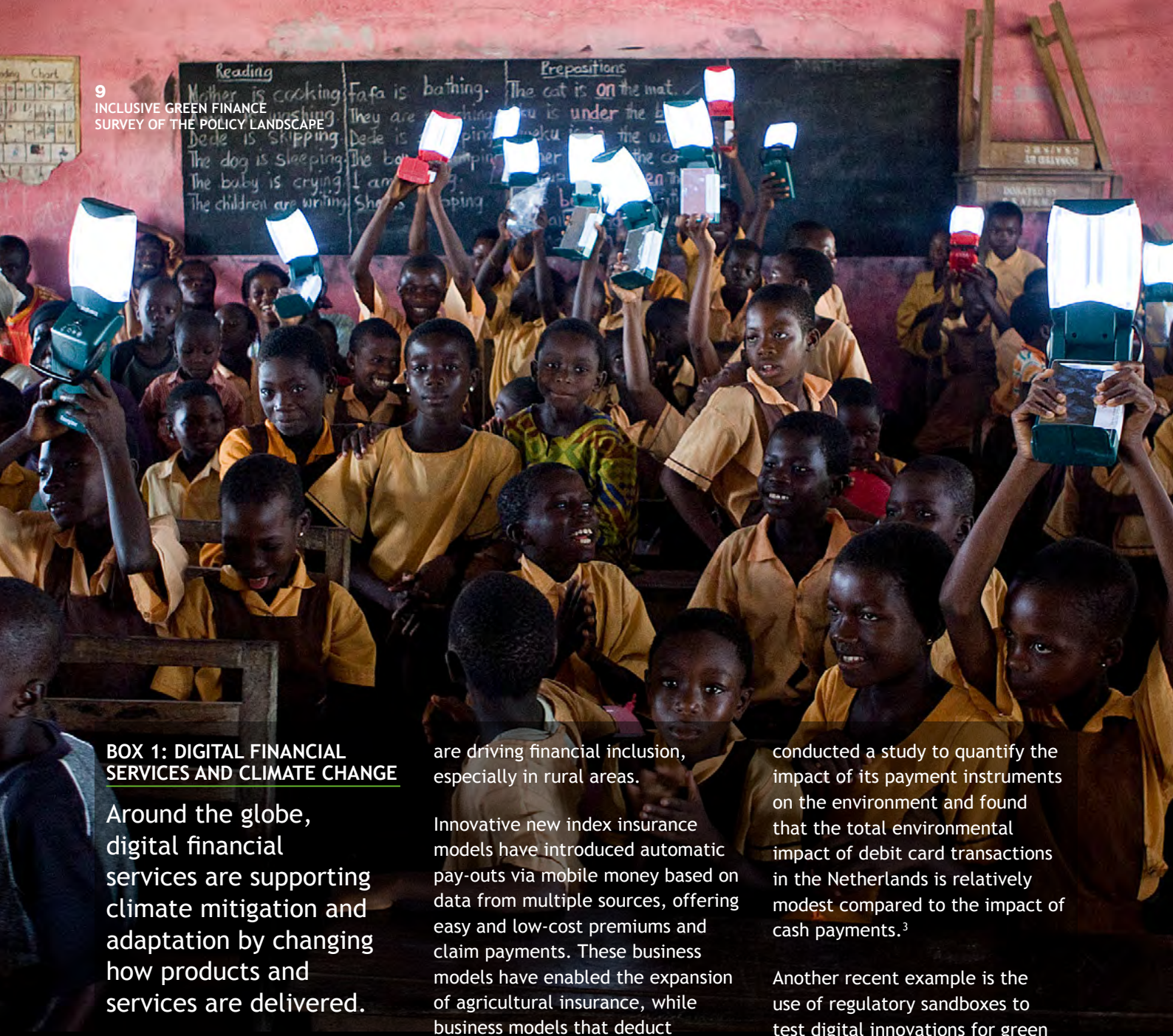
In a changing climate, people who depend on agriculture and natural resources for their livelihoods are increasingly being displaced by more frequent and serious climate-related floods, heatwaves and wildfires. The Intergovernmental Panel on Climate Change (IPCC) reported in August 2019 that the continued increase in global temperature will result in a "continued increase in global vegetation loss, coastal degradation, as well as decreased crop yields in low latitudes, decreased food stability, decreased access to food and nutrition, and medium confidence in continued permafrost degradation and water scarcity in drylands".[22] In 2017, floods affected about 41 million people in South Asia while nearly 892,000 faced drought-related internal displacements in East Africa.[23]

Those not displaced from their homes are still at risk of losing their property and livestock to climate-related disasters, and often lack access to the kinds of public services that aid recoveries. Extreme weather events can also lead to steep increases in food prices for those least able to afford them.[24]

The effects of climate change on health can further imperil low-income and vulnerable populations. Extreme weather events, as well as more gradual changes in climate, temperature and precipitation, can lead to outbreaks of vector-borne and water-borne diseases. Climate change will likely result in sharp increases in malaria—a disease that already kills 400,000 people every year.[25] Compounding these effects are hygiene issues and diarrheal disease, which become more common when climate change makes safe water scarce.[26] It has been estimated that climate change could cause 250,000 additional deaths per year between 2030 and 2050,[27] and generate direct health costs of $2 billion to $4 billion per year by 2030.[28]

Climate change and disastrous climate events can also exacerbate socioeconomic stresses,[29] such as loss of income. People in developing countries often depend heavily on MSMEs for employment, which generally have less capacity to withstand financial shocks.[30]

17 Agyeman et al., 2003; Derman, 2014; Karim and Noy, 2014.
18 Barbier and Hochard, 2018; IPCC, 2014; Hallegatte et al., 2017
19 IPCC, 2014; WBG, 2016; Barbier and Hochard, 2018
20 World Bank Group, 2016; Barbier and Hochard, 2018
21 O'Neal, 2014; Price, 2017
22 IPCC, 2019
23 World Meteorological Organization, 2018
24 Hallegatte et al., 2016
25 WHO, 2018
26 Ibid.
27 WHO, 2014
28 WHO, 2018
29 National Research Council, 2013
30 Schaer and Kuruppu, 2018




## BOX 1: DIGITAL FINANCIAL SERVICES AND CLIMATE CHANGE

**Around the globe, digital financial services are supporting climate mitigation and adaptation by changing how products and services are delivered.**

A variety of new business models are demonstrating the transformative power of digital financial inclusion to reach underserved communities for the first time, make climate action more inclusive and achieve the SDGs.

For example, mobile money-enabled pay-as-you-go (PAYG)[1] solar lighting and other utilities have prevented 28.6 million tons of greenhouse gas emissions and improved the health of off-grid solar system users.[2] The World Bank estimates that 130 million solar home systems have been sold to date, and evidence suggests that PAYG solar services are driving financial inclusion, especially in rural areas.

Innovative new index insurance models have introduced automatic pay-outs via mobile money based on data from multiple sources, offering easy and low-cost premiums and claim payments. These business models have enabled the expansion of agricultural insurance, while business models that deduct prepaid mobile airtime credit to pay premiums for basic health insurance have helped many people gain access to health insurance for the first time.

Developing faster, better and more inclusive payment systems that can process small transaction sizes (e.g. mobile money) is key for business models to address climate change. It not only helps reduce the cost of providing the service, but also makes the service more accessible.

In developed countries, central banks are interested in the use of digital payment systems for environmental purposes. For example, the Dutch central bank conducted a study to quantify the impact of its payment instruments on the environment and found that the total environmental impact of debit card transactions in the Netherlands is relatively modest compared to the impact of cash payments.[3]

Another recent example is the use of regulatory sandboxes to test digital innovations for green finance. In October 2018, the UK Financial Conduct Authority (FCA) launched the Green FinTech Challenge to support companies developing innovative products and services, including live market testing in a regulatory sandbox. In 2018, the Reserve Bank of Fiji outlined key objectives for its regulatory sandbox, which included identifying barriers to sustainable finance and introducing digital financial services solutions.

1 System in which you pay for a service before you use it and you cannot use more than you have paid for.
2 World Bank Group, 2018
3 De Nederlandsche Bank, 2017

Students hold up new LED smart lanterns provided by Empower Playgrounds. The lanterns will be charged using electricity generated when students use playground equipment each day. Near Accra, Ghana. (Photo by Taylor Weidman/LightRocket/Getty Images)

Climate-related losses can put added strain on already weakened governments to deliver public goods and services, which elevates the risk of political instability.

## FINANCIAL INCLUSION BUILDS RESILIENCE TO CLIMATE CHANGE AND DISASTERS

While climate change deepens poverty, ample research shows that financial inclusion can build the resilience of individuals,[31] whether to a sudden and extreme climate event or the gradual effects of varying rainfall patterns, sea level rise or saltwater intrusion. Savings, credit, insurance, money transfers and new digital delivery channels can all provide vital support for those managing new environmental realities. Since an increasing number of adults have access to a mobile phone, digital financial services have the potential to reach more of the unbanked—primarily the poor and those living in rural areas.[32] Mobile money accounts allow marginalized populations to receive cash transfers after disasters and provide a fast, targeted and cost-efficient channel to support affected communities.[33]

### SAVINGS

Higher savings rates can help the poor smooth consumption after unexpected shocks and withstand the strain of gradual cost increases.[34] It is estimated that in Guatemala, Mauritania, Angola, Peru, Gabon, Morocco, Zambia, Colombia, Kyrgyz Republic, Democratic Republic of Congo, Mongolia, Niger and El Salvador, improving savings alone could reduce the impacts of climate change on well-being by 4.5 to 7.6 percent.[35] Savings accounts with financial institutions provide the greatest resilience—more than informal savings in the form of livestock or housing[36] —as they enable the poor to diversify risks, access credit and accelerate recovery and reconstruction. Farmers with savings accounts in Malawi, for example, have increased investments in agricultural inputs by 13 percent and agricultural production by 21 percent.[37]

### CREDIT

While poor households find it difficult to afford the high upfront costs of low-carbon technologies, as well as other investments that protect against sudden and gradual impacts of climate change, access to credit can spread out these expenses over time. For example, extending credit to smallholder farmers enables them to invest in agricultural inputs that enhance resilience, such as improved seeds, irrigation, fertilizer and pesticides. Loan disbursements and repayment terms tailored to seasonal cash flow can enable farmers to save between harvest and planting cycles and ultimately increase crop yields and income. Together, these guard against the risks of future droughts, floods or other climate impacts.[38]

### INSURANCE

Parametric or weather index insurance for farmers, and microinsurance for those without traditional insurance, provide a buffer against extreme weather events and volatility.[39] For smallholder farmers, insurance provides the security to make the types of investments and production choices that increase agricultural productivity. This has, for example, happened in Ghana, where the provision of rainfall index insurance has prompted farmers to make bigger investments that have increased profits.[40]

31 IPA, 2017
32 Demirguc-Kunt et al., 2015
33 GSMA, 2014
34 IPA, 2017
35 Hallegatte et al., 2017
36 Hallegatte et al., 2017
37 Brune et al., 2015
38 Innovations for Poverty Action, 2017
39 The Geneva Association, 2018
40 Karlan et al., 2014

A trader checks her mobile phone at a market stall in Phnom Penh, Cambodia. November 2019. (Photo by AlanMorris/Shutterstock)

## CLIMATE CHANGE-RELATED FINANCIAL RISKS

Climate change creates risks for the financial sector. These are usually divided into physical, transition and liability risks,[41] and are being mapped and explored against a variety of scenarios.

- **Physical risks** are the direct impacts on economies from slow-onset climate change, such as changing precipitation and rising temperatures or sea levels, as well as rapid-onset climate change, such as extreme weather events and disasters.
- **Transition risks** accompany the transition to less polluting and low-carbon economies. These changes in policies and priorities can change the value of assets and increase the costs of certain types of businesses. This can also result in stranded assets.
- **Liability risks** relate to people or businesses seeking compensation from losses because of physical or transition risks.

## THE ROLE OF FINANCIAL INCLUSION IN CLIMATE CHANGE MITIGATION AND POVERTY REDUCTION

Financial inclusion not only helps low-income populations build resilience, it can also expand access to green technologies that help to mitigate climate change.

However, the cost of these technologies often puts them out of reach of the poor and MSMEs. Supportive financing can help, and central banks and regulators have been adopting a range of policies to expand access to green technologies and include the poor in the transition to a low-carbon economy.

### RENEWABLE ENERGY

High costs and limited incentives to serve remote rural areas have left communities around the world without access to reliable, large-scale energy grids. However, renewable energy systems that are generally carbon-free, either standalone solar systems or combined solar systems with mini-hydroelectric systems or battery storage, can provide relatively low-cost electricity to unconnected areas.[42] They can also enable other technologies, such as solar powered water pumps, to replace emissions-intensive diesel generators and increase incomes.[43] There are several financial barriers to the spread of microgrids, from high upfront costs to commercial bank concerns over defaults on loans. These challenges have been addressed with programs that allow users to pay for solar equipment in installments.[44] Mobile money has played an important role in enabling payments for off-grid solar utilities, commonly known as pay-as-you-go (PAYG) solar systems, which have become popular in developing countries.

### ENERGY EFFICIENCY

Financial inclusion plays an important role in the purchase and use of energy-efficient technologies and appliances for cooking, cooling and heating. For example, cleaner cookstoves are a green technology with the potential to reduce global CO2 emissions by 2.3 percent.[45] By reducing the use of biomass for energy, cookstoves can play an important role in mitigating the effects of climate change and reducing premature deaths from air pollution. Financial inclusion mechanisms that support the uptake of such technologies would ultimately expand access to cleaner technologies.[46]

### CLIMATE-SMART AGRICULTURE

In many developing countries, agriculture accounts for a large part of GDP and a large percentage of the population depends on subsistence agriculture. Since agriculture also accounts for a fifth of the world's greenhouse gas emissions,[47] more sustainable agriculture would reduce the negative impacts on the environment, benefit the people who depend on it and contribute to the SDGs. Climate-smart agriculture (CSA), as defined by the Food and Agriculture Organization (FAO) of the United Nations, is "an approach that helps to guide actions needed to transform and reorient agricultural systems to effectively support development and ensure food security in a changing climate".[48] Scaling ecosystem-based approaches and clean farming technologies not only addresses food security, but also climate action.

Financial inclusion serves smallholder farmers well, and since finance is necessary for adoption, it can also help to scale CSA through credit and savings facilities, as well as climate risk insurance to complement innovative farming technologies. Microfinance institutions have been identified by the FAO and several governments as key to providing smallholder farmers with access to credit to scale CSA. For instance, in Rwanda, the government is exploring ways microfinance can help small farmers adapt to climate-resilient farming technologies, including crop insurance. In Eswatini, the Ministry of Finance has prioritised financial services for climate-smart agriculture and provides specific financial incentives to support MSMEs and smallholder farmers that choose climate-resilient farming practices.

41 Bank of England, 2020
42 Independent Evaluation Group, 2008
43 Warren, 2018
44 Yee, 2016
45 Lacey et al., 2017; World Bank Group, 2014
46 Hewitt et al., 2018
47 FAO, 2017
48 FAO, 2013

# STRATEGIES AND POLICIES

## LINKING FINANCIAL INCLUSION AND CLIMATE CHANGE IN FINANCIAL SECTOR STRATEGIES

Regulators in the AFI network have begun responding, often with urgency, with strategies, policies and regulations to mitigate and build resilience to the impacts of climate change in their respective countries.

To understand the scale and scope of these efforts, AFI conducted member surveys in 2018 and 2019 that asked why financial regulators were working on climate change, how they have been integrating climate change concerns in their national financial inclusion policies and other financial sector strategies, and how they are collaborating with national agencies or institutions.[49]

The vast majority of survey respondents indicated that climate change was a problem in their country and had imposed a high cost on low-income and vulnerable populations. For most, this reflected a recognition that their institution was mandated to promote economic development, and since climate change posed a threat to this development, it was a concern of the central bank and other financial sector regulators. Some expressed concern that, in extreme cases, climate change could undermine financial stability and regulators would need to step in where disruptions could spread.

There is an emerging trend in the AFI network to link financial inclusion and climate change on a national strategic level, either in National Financial Inclusion Strategies (NFIS) or other financial sector strategies (see Table 1). Thirteen of the countries included in the AFI member survey on inclusive green finance have linked climate change and financial inclusion in national financial sector strategies. Four of those countries—Argentina, Fiji, Jordan and Rwanda—make an explicit link between climate change and financial inclusion in their NFIS.

Several countries are concluding their NFISs with the explicit inclusion of green finance:

- Sri Lanka's NFIS mentions green finance under SMEs. The strategy was developed by the **Sri Lankan Ministry of Finance** with the support of the World Bank and will be launched in 2020.
- Bangladesh, through **Bangladesh Bank**, will release its NFIS soon. The draft has several explicit references to climate change and financial inclusion.
- The **Central Bank of Egypt** is preparing an NFIS and is considering presenting sustainability, which includes climate change, a pillar of the strategy's framework.
- Fiji's National Financial Inclusion Strategic Plan, 2016–2020 highlights the importance of financial inclusion policies in mitigating and building resilience to climate change. The Plan calls for the **Reserve Bank of Fiji** to "provide support for the development of green financial services and products for individuals, households and MSMEs that reduce negative environmental impacts or provide environmental benefits."
- **Bangladesh Bank** was the first financial sector regulator in the AFI network to make a direct connection between financial inclusion and climate change, and this link has strengthened over the last decade. In its First Strategic Plan (2010–2014), the Bank drew a connection between financial inclusion and climate change by focusing on the needs of agriculture and SMEs. It released a policy guideline for green banking in 2011, mandating all banks to develop green banking policies, integrate environmental risk in their CRM and report green banking activities on a quarterly basis. In the Second Strategic Plan (2015–2019), it strengthened that link by "promoting socially responsible, inclusive and environment-friendly financing to ensure sustainable development." These additional, more concrete steps were intended to provide policy support to encourage sustainable financing in agriculture and called for

49 For more information on the AFI member survey and results, see Appendix 1.

the preparation of Environmental and Social Risk Management (ESRM) Guidelines for banks and financial institutions. Its current strategic plan (2020–2024) is aimed at mainstreaming green finance and sustainable banking in the country's financial system, including the integration of carbon footprint measurements.[50]

- The **National Bank of Rwanda** has made the impacts of climate change an explicit part of its NFIS. Specifically, it mentions how climate risk makes agricultural income more volatile and how agricultural insurance and microinsurance could help to reduce farmers' risks and enable access to credit.
- The **Central Bank of Jordan** has promulgated the Microfinance Action Plan as one of the main pillars of its National Financial Inclusion Strategy 2018–2020. The Microfinance Action Plan includes a greater focus on green finance, especially for micro and small enterprises, which represent more than 99 percent of all enterprises in the country.
- Although not under the remit of **Banco Central de la República Argentina**, Argentina's recently launched NFIS includes the promotion of funding for sustainable businesses models that minimize the impacts of climate change.

Other countries have made more indirect or implicit **connections to climate change** in their NFIS. For example:

- One goal of **Vanuatu's** NFIS is adopting regulations, products and services to help MSMEs, which the Reserve Bank of Vanuatu has indicated will involve building resilience to the impacts of climate change.
- The **Philippines'** NFIS does not specifically mention climate change, but identifies those living in certain areas, such as coastal towns, who are vulnerable to natural and human-induced disasters and, therefore, a target population. Given that vulnerable populations are also likely to be financially excluded, the NFIS will help to strengthen their resilience to potential negative impacts of climate change.

50 Bangladesh Bank, 2019

**TABLE 1:** CLIMATE CHANGE IN NFIS AND OTHER FINANCIAL SECTOR STRATEGIES

| | Country | Climate change explicitly integrated in NFIS | Climate change implicitly integrated in NFIS | Other financial sector strategies that link financial inclusion and climate change |
|---|---|---|---|---|
| 1 | Argentina | X | | |
| 2 | Armenia | | X Planned | |
| 3 | Bangladesh | X Planned | | X |
| 4 | Bhutan | | | X Planned |
| 5 | Cambodia | | | X |
| 6 | Egypt | X Planned | | |
| 7 | Eswatini | | X | |
| 8 | Fiji | X | | X Planned |
| 9 | Jordan | X | | X |
| 10 | Morocco | | | X |
| 11 | Nepal | | | X |
| 12 | Nigeria | | | X |
| 13 | Philippines | | X | X |
| 14 | Rwanda | X | | |
| 15 | Sri Lanka | X Planned | | |
| 16 | Tanzania | | X | |
| 17 | Thailand | | | X |
| 18 | Vanuatu | | X | |

- **Tanzania's** National Financial Inclusion Framework aims to address gender inequality in ways that could also address climate change, as women tend to be particularly vulnerable to the impacts of a warming climate.
- **Armenia** has implicitly included combating climate change in its policy agenda and promotes green finance products in its draft NFIS and action plan. Some projects from the draft strategy action plan, including the agricultural insurance project, which addresses losses from climate-induced weather events, are already underway.
- In the NFIS of **Eswatini**,[51] the Ministry of Finance has prioritized financial services for climate-smart technologies to build resilience into agricultural supply chains.

Some countries have **linked financial inclusion and climate change in other national financial sector strategies:**

- Under the coordination of **Bank Al-Maghrib**, Morocco developed a National Roadmap for Aligning the Financial Sector with Sustainable Development that revolves around risk-based governance for social and environmental risks, sustainable financial instruments and products, capacity building, transparency and financial inclusion as a driver of sustainable development. The Roadmap is part of a voluntary and proactive approach initiated on the sidelines of the UNFCCC COP 22, and has given rise to several initiatives by different levels of the banking sector to advance green finance. These measures include the introduction of green financing facilities to support the energy efficiency projects and green projects of SMEs involved in value chains and industrial ecosystems, as well as the issuance of green bonds and greater transparency with corporate social responsibility (CSR) goals.
- In **Nigeria**,[52] Principle 5 of the Nigeria Sustainable Banking Principles covers financial inclusion while others include environmental and social risk management, environmental and social governance and the environmental and social footprint of financial services providers.
- Likewise, **Bank of Ghana**[53] released Sustainable Banking Principles and Sector Guidance Notes in November 2019, which addressed:
  - i) ESRM;
  - ii) internal Environmental Social and Governance (ESG) in bank operations:
  - iii) corporate governance and ethical standards;
  - iv) gender equality;
  - v) financial inclusion;
  - vi) resource efficiency, sustainable production and consumption; and
  - vii) reporting.
- The **Reserve Bank of Fiji's** planned Sustainable Finance Roadmap will cover all players in the financial sector. It is intended to strengthen the resilience and competitiveness of the country's financial institutions by enabling them to grow and develop sustainably through better risk management, and by offering innovative, environmentally friendly and socially responsible products and services. A key objective of the Roadmap will be to align Fiji's national strategies for financial inclusion, climate change, environmental conservation, social inclusion and economic development.
- The **Central Bank of Sri Lanka** published its Sustainable Finance Roadmap in April 2019.[54] The Roadmap considers both financial inclusion and disaster insurance, and proposes the development of accessible and effective insurance products tailored to low-income households and MSMEs to offer protection against climate change and natural disasters.[55]
- The Thai Bankers Association, in cooperation with the **Bank of Thailand** (BoT), launched the "Sustainable Banking Guidelines" on 13 August 2019.[56] This was the result of an industry-led initiative supported by the BoT. The Guidelines define the minimum expectations for responsible lending practices for all banks based in Thailand. The BoT supports the guidelines and encourages banks to internalize ESG risks. Additionally, the BoT is promoting awareness and guiding the direction on sustainability. The scope of responsible lending in the Guidelines covers material Environmental, Social and Governance (ESG) issues, and encourages members to establish effective internal controls along with transparent disclosures in line with internationally accepted concepts of materiality.[57] Climate change is explicitly included under environmental risks, and while financial inclusion is not explicitly mentioned, it is implicitly included under social risks.[58] The Guidelines have subsequently been endorsed by the Association of International Banks.

51 Ministry of Finance of Eswatini, 2017
52 Central Bank of Nigeria, 2012
53 Bank of Ghana, 2019
54 Central Bank of Sri Lanka, 2019
55 Ibid.
56 Thai Bankers Association, 2019
57 Ibid.
58 Ibid.

- In Cambodia, **The Association of Banks of Cambodia** initiated the development of the Sustainable Finance Principles,[59] which have been endorsed by the National Bank of Cambodia. The Principles most relevant to inclusive green finance are:
  - Principle 5. We will expand our reach to those who previously had no or limited access to the formal banking sector, as well as providing more innovative solutions to improve banking access and service levels
  - Principle 6. We will finance innovations that create efficiencies and improvements of existing, traditional sectors and business activities, as well as for developing new green economy activities.
- The **Royal Monetary Authority of Bhutan** is preparing a National Green Finance Roadmap.
- In the Philippines, the **Monetary Board of the Bangko Sentral ng Pilipinas** approved the country's Sustainable Finance Framework which sets out the expectations on the integration of sustainability principles in corporate governance, risk management frameworks, strategic objectives, and banking operations.

## DEVELOPING A DEFINITION OF GREEN OR SUSTAINABLE FINANCE

Only a few of the AFI members who responded to the survey on inclusive green finance have a legal definition or typology of green finance.[60]

**Bangladesh Bank** has issued an exhaustive list of 52 products and initiatives in eight categories that are eligible for green financing. This list was supplemented with a product innovation/development methodology that enabled banks and financial institutions to assess the profitability, environmental and social feasibility and risk of green finance products and initiatives.

The **People's Bank of China** defines green finance policy as "a series of policy and institutional arrangements to attract private capital investments into green industries such as environmental protection, energy conservation and clean energy through financial services including lending, private equity funds, bonds, shares and insurance." This definition is supplemented by a green project catalogue that lists energy saving, pollution prevention and control, resource conservation and recycling, clean transportation, clean energy and ecological protection.

59 The Association of Banks in Cambodia, 2019
60 UNEP Inquiry, 2016a

A Chinese worker cleans up the empty drink bottles, they will be recycled as a renewable resource, Xining, China. May 2011. (Photo by Young777/iStock)

## BOX 2. THE MONGOLIAN GREEN TAXONOMY

In 2019, the Financial Stability Commission of Mongolia approved the Mongolian Green Taxonomy following the release of the country's Sustainable Finance Roadmap.

The taxonomy aims to provide a "nationally agreed classification framework of activities" that contributes to the country's development policies and strategies for economic growth, environmental balance and social stability. It was designed to be applied broadly to a range of financial instruments across sectors, and can be used by a variety of stakeholders, especially market players.

The taxonomy is based on six principles:

- **Principle 1:** Contribute to national policies and targets
- **Principle 2:** Address environmental challenges
- **Principle 3:** Cover high-emitting, key economic sectors
- **Principle 4:** Align with international standards and good practices
- **Principle 5:** Comply with ESG standards
- **Principle 6:** Continuous review and development

These principles ensure alignment with national goals in the areas of climate change mitigation and adaptation, pollution prevention, resource conservation and livelihood improvement in the context of green finance. Thus, activities classified as "green" directly contribute to Mongolia's commitments to the Paris Agreement as detailed in its Nationally Determined Contribution.

The taxonomy effectively defines the parameters for green finance in Mongolia, which include:

1) Renewable energy
2) Low pollution energy
3) Energy efficiency
4) Green buildings
5) Pollution prevention and control
6) Sustainable water and waste use
7) Sustainable agriculture, land use, forestry, biodiversity conservation and eco-tourism
8) Clean transport

The taxonomy recognizes the potential contributions of households and MSMEs to the SDGs, as it takes into account small technologies, such as small-scale distributed solar systems, small- to medium-scale power generation facilities, energy-efficient products (end user), climate-smart agriculture and others.[71]

1 Green Taxonomy Committee, 2019

Renewable energy with SME farmer moving the horses using a motorbike due to huge areas where they can move around, Xilinhot, Inner Mongolia. August 2017. (Photo by Christopher Moswitzer/iStock)

“We do see the direct connection between climate change and microeconomic stability, financial stability and even more broadly long-term economic sustainability.”

**Elsie Addo Awadzi**
2nd Deputy Governor, Bank of Ghana
AFI Global Policy Forum, Kigali, Rwanda
September 2019

> "As central bankers, we are conditioned to think long term. Climate change presents all players the ultimate challenge between long-term and short-termism."
>
> **Esala Masitabua**
> **Deputy Governor, Reserve Bank of Fiji**
> **AFI Global Policy Forum, Kigali, Rwanda**
> **September 2019**

## BOX 3. THE EUROPEAN UNION SUSTAINABLE FINANCE TAXONOMY

In June 2019, the European Union published a technical report on a taxonomy[1] for sustainable activities. This taxonomy will support the development of regulation for a framework that will facilitate sustainable investment.[2]

From an environmental perspective, the taxonomy focuses on sustainable activities in:

i) climate change mitigation;
ii) climate change adaptation;
iii) sustainable use and protection of water and marine resources;
iv) transition to a circular economy, waste prevention and recycling;
v) pollution prevention and control; and
vi) protection of healthy ecosystems.

For an action to meet the definition of an "environmentally sustainable economic activity" and be considered taxonomy-eligible, it must:

i) contribute substantially to one or more of the environmental objectives;
ii) do no significant harm to any other environmental objective;
iii) comply with minimum social safeguards (under the draft regulation, these are defined as ILO Core Conventions[3]); and
iv) comply with the technical screening criteria.

The taxonomy therefore does not define green finance per se, but "[t]he implication is that economic activities, even when making a substantial contribution to climate change mitigation and/or adaptation, will not be eligible for the Taxonomy if they cannot be performed in a way which avoids significant harm to other environmental objectives."

1 The EU Technical Expert Group on Sustainable Finance defines the Taxonomy as a tool to help investors, companies, issuers and project promoters navigate the transition to a low-carbon, resilient and resource-efficient economy. This sets performance thresholds (referred to as "technical screening criteria") for economic activities that make a substantive contribution to one of six environmental objectives; do no significant harm to the other five, where relevant; and meet minimum safeguards. The six environmental objectives are: i) climate change mitigation; ii) climate change adaptation; iii) sustainable use and protection of water and marine resources; iv) transition to a circular economy; v) pollution prevention and control; and vi) protection and restoration of biodiversity and ecosystems.

2 EU Technical Expert Group on Sustainable Finance, 2019

3 Refers to the eight "fundamental" Conventions identified by the International Labour Organization Governing Body, which covers subjects considered to be fundamental principles and rights at work: freedom of association and the effective recognition of the right to collective bargaining; the elimination of all forms of forced or compulsory labour; the effective abolition of child labour; and the elimination of discrimination in respect of employment and occupation.

Sea turtle entangled in a plastic bag, highlighting the problem with plastic waste in the oceans. (Photo by Jag_cz/iStock)

## INVOLVEMENT OF CENTRAL BANKS AND FINANCIAL SECTOR REGULATORS IN NATIONAL CLIMATE AND SUSTAINABLE DEVELOPMENT POLICIES

Across the AFI network, inclusive climate action is beginning to take hold in national financial inclusion or other financial sector strategies. However, the involvement of financial sector regulators in formal coordination mechanisms and the formulation of national climate strategies or strategies related to the implementation of the SDGs has been limited.


Financial regulation plays an important role in **supporting commitments to the Paris Agreement**, especially strengthening risk environments.

Financial regulation plays an important role in **supporting commitments to the Paris Agreement**, especially strengthening risk environments. IGF policies contribute to the implementation of the Paris Agreement, specifically to the long-term goal in Article 2.1c to make finance flows consistent with a pathway toward low greenhouse gas emissions and climate-resilient development. Given the strong focus on building resilience, IGF policies can also be seen as a way to implement Articles 7 and 8 of the Paris Agreement, which outline agreed efforts to enhance adaptive capacity, strengthen resilience and reduce vulnerability to climate change, as well as averting, minimizing and addressing loss and damage associated with its adverse effects.

Most of the AFI members interviewed for the member survey on inclusive green finance had not contributed to national climate strategies like Nationally Determined Contributions (NDC) or National Adaptation Plans (NAP).

There were exceptions, however. **Bangladesh Bank** is an active member of several national initiatives, such as the National Climate Fiscal Framework, and supports the government in environmentally friendly industrial development, providing regular inputs on plans from the Bangladesh Ministry of Environment and Forests. Similarly, the Insurance **Regulation and Development Authority (IRDA)** in Bangladesh routinely attends relevant stakeholder consultations and contributes to climate risk and insurance-related topics.

**The Bank of Thailand** is a member of the National Committee for Sustainable Development (CSD), in charge of the implementation of the SDGs. The National Committee is chaired by the Deputy Prime Minister and aims to create a balance between the economy, society and the environment without leaving anyone behind. Four sub-committees have been established to guide efforts to meet the SDG targets holistically: i) a sub-committee on implementing the SDGs; ii) a sub-committee on promoting the SDGs in line with the Sufficiency Economy Philosophy; iii) a sub-committee on monitoring and evaluating the progress of the SDGs; and iv) a sub-committee on environmental issues.

Sometimes coordination happens on an ad hoc basis. Although the Philippine Climate Change Action Plan does not name the **Bangko Sentral ng Pilipinas** as a primary actor, the BSP has built a collegial relationship with the Climate Change Commission, which coordinates the country's climate change strategies, and with the Department of the Environment and Natural Resources. The BSP participates in forums organized by both bodies, including multi-agency discussions on how to fast-track procedures for government, banks and other private institutions to access funds from the Green Climate Fund.

Under a "whole of government" approach, coordination efforts among government agencies led by the Department of Finance and the BSP have already begun with an end goal to institutionalize and facilitate the implementation of a roadmap for sustainable finance, which includes mobilizing funds for eligible projects. This is an important opportunity to meet the objectives of the Sharm El Sheikh Accord, given that the BSP views sustainable finance as including green finance and that financial inclusion is linked to green finance.

The **Central Bank of Armenia** and **Central Bank of Jordan** have both contributed to climate policies when their advice has been sought on financing matters For example, the **Reserve Bank of Fiji** studies policies after they have been promulgated by the Department of Environment under the Ministry of Local Government, Urban Development, Housing & Environment to understand the implications for their work.

# AFIs 4P FRAMEWORK OF INCLUSIVE GREEN FINANCE

While financial regulators have taken a variety of approaches, they have found that there is often no need to reinvent the wheel. In many cases, existing policy tools and techniques for the financial inclusion of low-income populations and MSMEs can be refined and repurposed with a green focus.

This allows policymakers to act swiftly while taking the time to lay the groundwork for innovative policies that may require more preparation.

These policies are presented here in a simple framework categorized by the 4Ps of inclusive green finance:

- Promotion
- Provision
- Protection
- Prevention

All policies under the 4Ps either catalyze financial services from the private sector or use financial infrastructure to deploy finance for climate action. The purpose of the framework is to provide financial regulators with an intuitive way to consider the full range of policy actions they can take for inclusive green finance, and it is evolving with policy implementation at the national level.

The solar powered vending machines installed by a for-profit social enterprise called Piramal dispense clean drinking water via a pre-paid smartcard to residents who have no access to water on tap in their homes. New Delhi, India. (Photo by In Pictures Ltd./Corbis via Getty Images)

# SUSTAINABLE FINANCIAL INCLUSION, INCLUSIVE CLIMATE ACTION

**PROMOTION** policies and initiatives prepare the private sector to offer financial services for green projects or related climate action activities to qualified beneficiaries, for example, through awareness raising, information sharing, capacity building and data collection.

- Moral Suasion, Awareness Raising, and Capacity Building
- Reporting and Disclosures

**PREVENTION** policies aim to avoid undesirable outcomes by lowering financial, social and environmental risks. As part of this effort, financial regulators are enacting Environmental (and Social) Risk Management (ERM or ESRM) Guidelines to proactively assess and address the social and environmental externalities and risks of their institutions' activities, including the unintended consequences of financing.

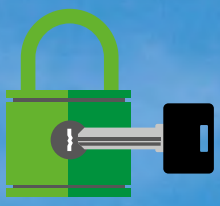
- E(S)RM Guidelines


**PROVISION** policies help ensure that financial resources for green projects or related climate action activities are provided to qualified beneficiaries, whether through lending policies, refinancing, structural adjustments or other financing schemes.

- Lending Quotas
- Refinancing Green Lending
- Refinancing Recovery and Reconstruction
- Innovation Investment Funds
- Other Financing Schemes for Green Lending
- Other Financing Schemes for Disaster Rehabilitation and Recovery
- Lowering of Base Interest Rates

**PROTECTION** policies reduce financial risk by "socializing" potential losses through insurance, credit guarantees, social payments or any other related risk-sharing mechanisms. Policies in this category provide a much-needed safety net and help to build resilience by accelerating and facilitating recovery from extreme climate events.

- Agricultural Climate Risk Insurance
- Credit Guarantees
- Mobile Money for G2P Payments
- Early Withdrawal from Pension Funds
- Post-Disaster Rehabilitation Facilities
- Other Risk-Sharing Mechanisms



# PROMOTION

Promotion policies and initiatives prepare the private sector to offer financial services for green projects or related climate action activities to qualified beneficiaries, for example, through awareness raising, information sharing, capacity building and data collection.

## MOROCCO

Sensitization and awareness raising on green finance and climate risks in the financial sector

Finalizing regulatory directive on climate change-related risks

## EGYPT

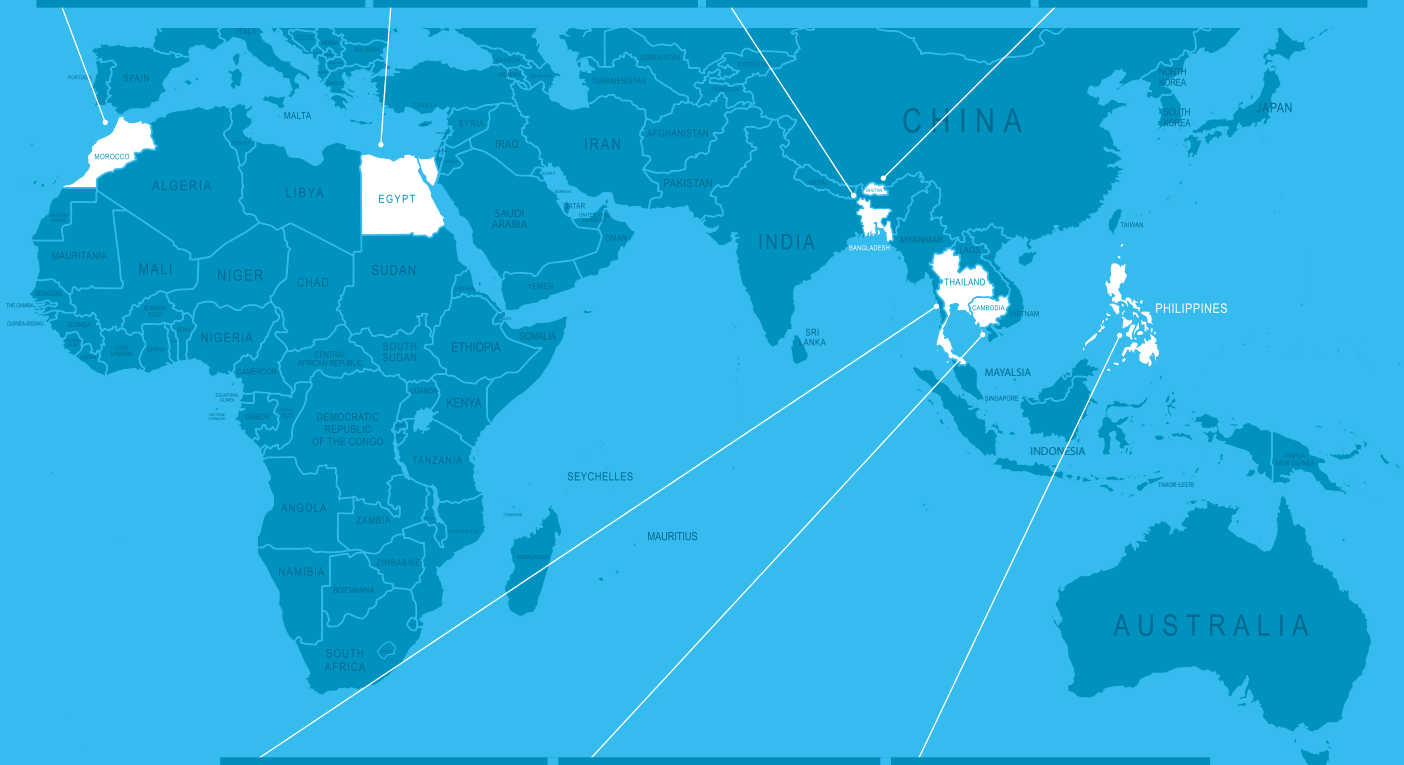
Capacity building on sustainable finance

## BANGLADESH

Publishes Quarterly Report on Green Banking Activities of Banks & Financial Institutions and Green Refinance Activities

## BHUTAN

National Stakeholder Capacity Building and Coordination Workshop for the upcoming Green Finance Roadmap




## THAILAND

Capacity building on ESG risks

Established a regulatory working group on sustainable finance comprised of the Ministry of Finance, the Securities and Exchange Commission, the Office of Insurance Commission and the Stock Exchange of Thailand

## CAMBODIA

Encouraged commercial banks to repackage loans for populations affected by disasters

## PHILIPPINES

Knowledge sharing and awareness raising on sustainable finance

Conduct of Banking Sector Outlook Survey

Research and data gathering on the impact of disasters to banking operations

Increasingly, promotion policies are becoming the first step for financial regulators working in the area of inclusive green finance. On the inclusive green finance journey, it is crucial to start with capacity building, definitions, awareness raising and dialogue before designing policies and regulation.

Rather than ensuring funds are provided directly, this set of policies and initiatives allow for operating through the market and decentralized identification of a higher number of qualified beneficiaries. An advantage of promotion policies is that innovative approaches to building resilience to climate change, or facilitating access to green technologies, can be implemented without changing the rules governing lending or resource allocation. Moreover, promotion policies focus on building understanding of the need and business case for inclusive green finance, both internally with the regulator and among financial institutions. This paves the way for a successful roll out of inclusive green finance policies and regulation.

## MORAL SUASION, AWARENESS RAISING AND CAPACITY BUILDING

Stimulating conversations and dialogue with key stakeholders is vital to steer the financial sector toward climate action. While the member survey on inclusive green finance highlighted a knowledge gap in green finance in the financial sector, financial regulators play an important role in bridging this gap.

- In the Philippines, the **Bangko Sentral ng Pilipinas (BSP)** recognizes the business case for green lending, which signals to the private sector that green finance is a public good, and that it can simultaneously benefit an institution's bottom line and society as a whole. In this respect, the BSP is providing an enabling regulatory environment by issuing guidelines that are flexible and commensurate to the size and complexity of banking operations. In partnership with various development partners, the BSP has hosted several forums and trainings targeting senior management and chief risk officers of banks, key government agencies and private companies to increase awareness and knowledge of sustainable finance, including ESRM tools and principles. For its part, the BSP is actively participating in regional and international collaborations of financial regulators and supervisors in this area.
- Parallel to this, the BSP will be issuing a series of regulations related to the promotion of sustainability principles in the banking system. The first issuance sets out broad expectations of the BSP in terms of the integration of sustainability principles, including those covering environmental and social risk areas; governance and risk management frameworks; and the strategic objectives of banks, consistent with their size, risk profile and complexity of operations. The existing BSP regulations on corporate and risk governance standards, as well as credit and operational risk management frameworks, including stress-testing guidelines, have laid the foundation for this issuance. Subsequent issuances will cover more granular expectations about managing climate and environment-related risks in relation to credit, market and operational risks, as well as potential regulatory incentives to be granted to banks that adhere to sustainability principles.
- The BSP also conducts a Banking Sectoral Outlook Survey (BSOS) that gathers the views of the heads (Presidents, Chief Executive Officers, Country Managers) of banks in the country within a two-year time horizon. Among other areas, the BSP intends to have a special section on the BSOS to determine the extent of banks' exposure to, or plans to implement, sustainable or green finance.[61]
- In Morocco, **Bank Al-Maghrib** noted that a growing number of banks were issuing loans for climate-friendly technologies to support the country's climate roadmap and meet their own corporate social responsibility (CSR) goals. Bank Al-Maghrib initially encouraged a voluntary approach by the banks and focused on sensitizing the financial sector to the benefits of sustainable development and the risks of climate change. The Sustainable Development Committee, which includes Bank Al-Maghrib and the Moroccan Banking Association, reports on sector initiatives and discusses the risks and challenges to be addressed. Sustainable development is also part of the agenda for meetings held twice a year between the Governor of Bank Al-Maghrib and the presidents of Morocco's banks.

61 The BSOS serves as a complementary tool for validating the assessments of banking supervisors, and will provide the BSP with additional perspective on the evolution of banks' business models. This will eventually help to enhance prudential regulations and ensure the banking system remains resilient. Moreover, the BSOS provides supervisory and market perspectives on emerging issues (including environmental and climate change) and trends, to allow for timely and relevant prudential reporting and related analysis. Lastly, it is expected to promote financial innovation and developments in the banking sector.

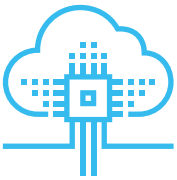
- **Bank Al-Maghrib** is currently in the process of finalizing a regulatory directive setting out principles to be implemented by credit institutions, including microcredit associations and payment institutions, to understand and manage environmental and climate change-related financial risks. It has also supported training on green finance for national and regional financial stakeholders, including major Moroccan banks and African central banks through the High-level Conference on Inclusive Green Finance co-organized with AFI, and the Third Global Green Finance Leadership program co-organized with the Research Center for the Development of Green Finance at Tsinghua University and the International Finance Corporation (IFC).
- The **Bank of Thailand** has been working with the World Wide Fund for Nature (WWF) and the Thai Bankers Association to host quarterly sustainable banking workshops to build capacity within the BoT and the banking sector. Last year's theme focused on the importance of ESG risks and how these risks can be incorporated in the banking business. Since 2018, the BoT has hosted the annual Sustainable Banking Forum where board members and senior management of banks in Thailand are invited to hear from thought leaders in the sustainability field. The Bank of Thailand has established a regulatory working group on sustainable finance comprised of the Ministry of Finance, the Securities and Exchange Commission, the Office of Insurance Commission and the Stock Exchange of Thailand. One of the focal areas of the working group is creating a national ecosystem for sustainable finance.
- The **Central Bank of Egypt** has sent several staff members on an internationally recognized course in sustainable finance in collaboration with the Frankfurt School of Business and number of Egyptian banks. The course focuses on how to embed ESG in lending activities moreover, several study tours were arranged in different regions to build capacity and capture the international best practices in the sustainable finance field.
- The **Royal Monetary Authority of Bhutan** organized, in collaboration with AFI, a national stakeholder capacity building and coordination workshop in January 2020. The aim of the workshop was to gather and build the capacity of all relevant stakeholders, including banks, the insurance sector, MFIs, Royal Securities Exchange of Bhutan, National Environment Commission, Ministry of Agriculture and Forests, Gross National Happiness Commission, Ministry of Tourism, Ministry of Finance and UNDP. This meeting was a first step in advancing green finance in Bhutan, and the meeting laid the foundation for the upcoming Inclusive Green Finance Roadmap.

Bhutanese women working on their field, most of the fieldwork is done by hand, Bhutan. March 2014. (Photo by anandoart/iStock)

- The **National Bank of Cambodia** supports customers affected by natural disasters by encouraging commercial banks and financial institutions to repackage loans for affected populations, especially those living in rural areas and those who rely on agricultural activities.

## DATA COLLECTION

Data collection and information dissemination can be powerful tools because they create benchmarks for financial service providers (FSPs) to measure their performance.



AFI member institutions are increasingly interested in developing mechanisms to collect IGF-related data from both the supply and demand side.

AFI member institutions are increasingly interested in developing mechanisms to collect IGF-related data from both the supply and demand side. This data is necessary to assess the needs of vulnerable populations and the potential economic impacts of climate events. Across the AFI network, the following two examples can be found, and other institutions are currently working on developing definitions and data collection systems for inclusive green finance.

- **Bangladesh Bank** has made a steady effort to collect and share data on green finance, beginning in 2013 with the publication of the Sustainable Finance Department's Quarterly Review Report on Green Banking Activities of Banks & Financial Institutions and Green Refinance Activities. The Bank also includes a chapter on sustainable banking in its annual report that highlights the progress of green banking activities, which has been emulated by the rest of the country's banks and financial institutions. At the beginning of 2018, Bangladesh Bank significantly revised its reporting format, which now includes reporting of sex-disaggregated data on green finance.
- The **Bangko Sentral ng Philipinas** is gathering data and conducting research on the impact of extreme natural disasters on banking operations at municipal and branch levels. The BSP has been collecting branch-level information on types of deposits, loans, loan loss provisions and net income since 2008. This data will be matched (or cross-referenced) with data from weather stations across provinces provided by the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), to determine the quantitative impact of extreme natural disasters on banking performance. The BSP also intends to improve reporting requirements to facilitate more specific data collection for the monitoring and assessment of climate and environment-related risks.

Financial regulators are promoting climate change efforts through various policies and initiatives and paving the way to mainstreaming climate action in the financial system. While some financial regulators are collecting and sharing information on green finance for specific purposes, data collection on green finance activities in general is still lacking. This policy area is still at an early stage, but data collection is something financial regulators might consider in future policy efforts, including defining data needs and identifying the gaps and challenges related to data collection with inclusive green finance.

### CHALLENGES OF PROMOTION POLICIES

Promotion policies indirectly help banks and other financial services providers to determine the best course of action based on the growing environmental risks in their countries and the potential rewards of greener investments. However, the success of this approach depends on the market, and responses to policy options can be slow or even non-existent.

Businesses may not appreciate the value of the incentives (e.g. lack of awareness of green technologies), incentives could be poorly designed or fail to elicit the desired response, or it may simply take time for the market to adjust. Coordinating initiatives might be challenging when implementing promotion policies.

# PROVISION

Provision policies help to ensure financial resources for green projects or related climate action activities are provided to qualified beneficiaries, whether through lending policies, refinancing or other financing schemes.

## PERU
Rescheduling of retail loan payments in the event of a disaster

## MOROCCO
Support to the creation of Innov Investment Fund to support start-ups including renewable energy and cleantech

## EGYPT
Required banks to allocate 20% of their portfolio to finance MSMEs including renewable energy and climate-resilient irrigation

## ARMENIA
Offered longer term financing to financial institutions to on-lend to MSMEs for products such as renewable energy

## JORDAN
Medium-Term Advances to Licensed Banks Program provides subsidized loans for critical development sectors including renewable energy and agriculture

## NEPAL
Directed all banks to dedicate 10% of their portfolio to green projects

Refinancing facilities for banks to offer subsidized loans for green technologies and to rebuild from floods and fires


## SRI LANKA
Moratoriums on loan repayments for affected borrowers by disasters

## PHILIPPINES
Value Chain Financing Framework which allows banks put disaster contingency mechanisms in place

Provision of temporary regulatory relief measures to banks affected by disasters

## VANUATU
Assists businesses affected by Tropical Cyclone Pam through concessional lending to commercial banks via the Vanuatu Disaster Reconstruction Credit Facility

Lowered the reserve requirement for commercial banks to incentivize banks to lend to affected low-income households

## ARGENTINA
Relaxed conditions for loans packaged with climate insurance

## ESWATINI
Offers financial services for climate-smart technologies to build resilience into agricultural supply chains

## SEYCHELLES
Lower interest loans to MSMEs and to households through the Seychelles Energy Efficiency and Renewable Energy Program SME loan scheme

## PAKISTAN
Financing scheme for Renewable Energy Projects from 2017 to mid-2019

## BANGLADESH
Annual green finance regulatory target equivalent to 5% of loans disbursed

Refinancing facilities to promote low carbon technologies

## FIJI
Issued a renewable energy loan ratio requirement equivalent to 2% of deposits and similar liabilities

For policymakers, the provision of financial services for climate action has several attractive features: i) it demonstrates the commitment of authorities to climate action; ii) it appears easy to implement even if a clear definition of purpose is needed; iii) it promises quick effect; and iv) it is simple to verify implementation.

## LENDING QUOTAS

Arguably, the most direct intervention is mandated lending through quotas. Lending quotas require allocating a specified percentage of a bank's loan portfolio for a particular purpose. The following are some examples of this approach.

- **Bangladesh Bank** introduced a regulatory target on the annual disbursement of green finance in 2014. Drawing on its experience implementing regulatory targets for SME and agricultural financing, the central bank set a minimum target for direct green finance of five percent of total funded loan disbursements/ investments by banks and financial institutions. Other institutions have sought directed lending for similar purposes.
- **Nepal Rastra Bank** has priority sector lending requirements and has directed all commercial banks to dedicate at least 10 percent of their portfolios to green energy, such as hydropower and other projects.
- The Reserve Bank of Fiji issued a renewable energy loan ratio in 2012 that required commercial banks to hold two percent of deposits and similar liabilities for renewable energy loans. However, it does not currently sanction banks that fail to comply.
- The **Central Bank of Egypt (CBE)** has policies in place to support the MSME sector with climate change. From 2016 to 2020, the CBE requires banks to allocate 20 percent of their total credit portfolio to finance MSMEs. This mandatory requirement is balanced by an incentive whereby banks are exempt from the loan reserve requirements against loans or credit facilities to MSMEs, provided that the interest rate on the loans does not exceed five percent. At the time of writing, this rate was approximately 10 percent lower than market rates for similar facilities. Renewable energy and climate-resilient irrigation are sectors covered by the policy.

## REFINANCING GREEN LENDING

Refinancing facilities and schemes for green lending primarily offer subsidized credit to commercial banks for loans for a specific purpose or set of products. Credit is extended at preferred terms, but commercial banks make lending decisions themselves and hold all the risk. Several countries have introduced programs that could help individuals and MSMEs finance low-carbon solutions. For instance:

- **Bangladesh Bank** has used refinancing facilities to promote low-carbon technologies, providing subsidized credit for solar energy, biogas and waste treatment projects. Over the last decade, the resources, green products and scope of the scheme have expanded, with four schemes supporting 50 products in 11 categories.[62]
- **Nepal Rastra Bank** offers refinancing facilities for banks to provide subsidized loans (from $1,700 to $2,700) for consumers to purchase a range of green technologies, from solar home systems to solar cookers, dryers and water pumps, biogas installations, clean cookstoves and electric rickshaws.
- Similarly, the **Central Bank of the Argentine Republic** relaxed the conditions for granting loans to agricultural producers who have taken out insurance against climatic events. This incentive reduces the risk of agricultural producers and allows them access to more favorable loans.

## REFINANCING RECOVERY AND RECONSTRUCTION

Refinancing facilities and schemes not only encourage green lending, they can also be used to support recovery and reconstruction following extreme climate events.

- In February 2019, the **Superintendencia de Banca, Seguros y AFP (SBS) Peru** adopted exceptional measures to avoid economic losses experienced as a result of adverse weather conditions associated with El Niño. The prudential measures require financial institutions to reschedule retail loan repayments in the event of specific natural disasters.[63,64] The measures, which were previously activated in 2017 when similar adverse conditions were experienced, have strict conditions.

62 Khan et al., 2017

63 The measures target MSMEs debtors in specific areas declared by the government as in "a state of emergency" due to extreme weather events. The measures are, uniquely, accompanied by a warning about financial institutions' clients and portfolios that may be more sensitive to the impacts of climate change in the future.

64 SBS, 2019. and SBS, 2017.

- Environment and climate-related shocks or slow-onset disaster can have adverse effects on entire sectors. In the **Bangko Sentral ng Pilipinas'** Agricultural Value Chain Financing Framework,[65] BSP-supervised financial institutions can put disaster contingency mechanisms in place to mitigate the impact of such risks, and provide timely relief to facilitate the recovery of climate-vulnerable MSMEs in the agricultural and fisheries sectors. While the Framework does not specify elements of the contingency mechanisms, BSP-supervised financial institutions have the flexibility to design and implement disaster contingency mechanisms based on their assessment of the inherent risks in these sectors.

  The BSP has also adopted a policy that provides temporary regulatory relief measures to banks affected by natural disasters. This was institutionalized with the issuance of Circular No. 1017 dated 10 October 2018.[66] The regulatory relief aims to assist banks located in areas affected by natural disasters in their recovery and allow them to resume normal operations. The relief includes extending the booking of losses that are a result of loan write-offs on affected loans, write-downs of banks' premises and acquired assets, waiving annual supervisory fees, flexibility in the relocation of branches and relaxing reporting requirements.

- Following natural disasters like the tsunami of 2004 or droughts and floods, the **Central Bank of Sri Lanka** has put moratoriums on loan repayments for affected borrowers. Banks are also required to provide or facilitate emergency credit after a climate-related disaster, including reconstruction mortgages for individuals, reconstruction mortgages for MSMEs and credit for MSMEs to re-establish businesses operations.[67] The Central Bank of Sri Lanka introduced a refinance loan scheme in 2017 for Resumption of Economic Activities affected by Disasters (READ), to mitigate the impact of natural disasters. The objective of this loan scheme is to provide concessionary financial facilities with a special focus on small-scale business and self-employed businesses to resume any economic activity affected by natural disasters. The government will provide the funding for the project and identify the disasters and areas to be covered.

Fishing village residents work to clean their town of mud after flooding brought on my El Niño rains, Cabo Blanco, Peru. February 2017. (Photo by CLJ Giordano/Shutterstock)

## INNOVATION INVESTMENT FUNDS

Investment funds help to spark innovation and provide resources for start-ups in specific sectors.

- In 2018, **Morocco** created the "Innov Invest" fund to support startups in fields ranging from fintech to renewable energy, including "cleantech".[68] With $50 million in loans and technical guidance from The World Bank, the fund will support 300 startups over five years. Forward-looking companies can acquire grants or loans on trust, which will help them overcome some of the challenges typically encountered in the early stages of development and consolidation. The fund is overseen by six participating institutions and consists of four seed capital investment funds.

## OTHER FINANCING SCHEMES FOR GREEN LENDING

Other financing mechanisms were also provided by financial regulators to support green lending activities. For example:

- The **Central Bank of Jordan's** Medium-Term Advances to Licensed Banks Program provides subsidized loans for nine sectors deemed critical to development, including renewable energy and agriculture.[69]

- The **Central Bank of Seychelles**, with the Ministry of Finance, provides lower interest loans to MSMEs and to households through the Seychelles Energy Efficiency and Renewable Energy Program (SEEREP) SME loan scheme. Businesses with a turnover of less

65 Bangko Sentral ng Pilipinas, 2016

66 Bangko Sentral ng Pilipinas, 2018

67 The terms of the emergency credit depend on the type of relief package. In the past, there have been relief packages that include a capital moratorium, capital and interest moratorium, rescheduling of loans and write-offs of interest or loans with the government paying the written-off amount to banks through a repayment scheme. Relief can also be based on concessionary interest rates and concessionary tenors ranging from three months to one year.

68 CCG

69 Central Bank of Jordan, 2016

than SCR 5 million ($350,000)[70] are eligible for the scheme, which includes renewable energy systems, energy-efficient appliances and energy-saving devices (e.g. solar water heaters).[71]

- The **State Bank of Pakistan's (SBP)** offered a financing scheme for Renewable Energy Projects from 2017 to mid-2019. Under the scheme, businesses could receive loans for solar and wind projects at a maximum rate of six percent. The refinancing rate from the SBP was two percent and there was no preferential rate for MSMEs. Compared to the usual rates, which range from 12 percent to 20 percent, the scheme offered good opportunities for MSMEs.
- In Armenia, the German-Armenia Fund (GAF) founded by the **Central Bank of Armenia**[72] provides longer term financing in local currency to financial institutions to on-lend to MSMEs for products such as renewable energy.
- The **Ministry of Finance of Eswatini** has prioritized financial services for climate-smart technologies to build resilience into agricultural supply chains. The Ministry plans to mobilize climate finance for smallholder farmers and rural MSMEs across the country, while also training smallholder farmers in climate information services.

## OTHER FINANCING SCHEMES FOR DISASTER REHABILITATION AND RECOVERY

Various financing schemes have been employed by financial regulators to support disaster rehabilitation and recovery. For example:

- **Nepal Rastra Bank** offers refinancing facilities for subsidized loans of around $9,000 to rebuild from floods and fires, modelled on a program that supported post-earthquake recovery and reconstruction.
- **Vanuatu's Natural Disaster Reconstruction Credit Facility** was designed by the Reserve Bank of Vanuatu to assist businesses affected by Tropical Cyclone Pam through concessional lending to commercial banks. Under the facility, commercial banks could access funds at interest rates of one percent that were capped at a maximum of five percent for on-lending to businesses. The fund was initially created with $4.5 million and offered individual loans of up to $270,000 that could be rolled over for five years.

The fund was to remain open for six months after Cyclone Pam with an understanding that it could be reopened following other natural disasters.

## LOWERING OF BASE INTEREST RATES

Temporary changes to base interest rates can encourage banks to lend in the aftermath of climate-related events.

- When Cyclone Pam hit Vanuatu in 2015, the **Reserve Bank of Vanuatu (RBV)** lowered the reserve requirement for commercial banks by two percentage points (from seven percent to five percent) to incentivize banks to lend to affected low-income people. The RBV also reduced its base interest rate by 0.5 basis points and tied this reduction to the RBV Notes policy rate. For 91 days, it issued securities notes based on this lower policy rate.

Financial regulators have been creating an enabling environment to mainstream inclusive green finance in the financial system. In some countries, this was the result of past disaster experiences, which necessitated efforts to increase climate and disaster resilience, for instance, by investing in financial resource facilities to support quick recovery and resumption of economic activities. Some regulators have taken a proactive stance to climate action and provided a conducive regulatory environment that encourages direct financing for low-carbon activities or resilience building.

### CHALLENGES OF PROVISION POLICIES

While provision policies signal a commitment to climate action, they can be comparatively challenging to monitor. For example, how should the beneficiaries be defined? What constitutes renewable or green products? How does one distinguish between adaptation to climate change and general economic development? How can greenwashing be avoided? Another challenge is finding the resources to finance the provision policies.

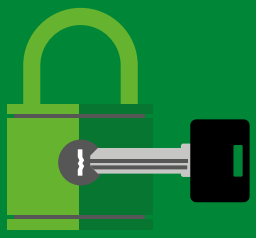
There are other questions as well: Should promotions and bonuses for lenders' staff be tied to good performance on green lending programs? How can the system avoid being gamed, distorted or misused?

70 USD 1: SCR 34.2, as of 29 December 2019 (www.xe.com).

71 Under SEEREP, beneficiary contributions were capped at 2.5 percent of the loan amount and the usual loan processing fees where waived under the scheme. Beneficiaries are also allowed a grace period of six months with a flexible repayment period. The SME loan scheme consists of a two-tier interest rate structure where the government provides an interest rate subsidy and the client is charged five percent interest on the first SCR 1 million ($29,240), seven percent on the next SCR 2 million ($50,000) and then negotiated for higher amounts.

72 GAF's loan programs are funded by the Government of the Republic of Armenia, KfW Bankengruppe, The World Bank, Asian Development Bank and the European Investment Bank.

# PROTECTION



Protection policies reduce financial risk by "socializing" potential losses through insurance, credit guarantees, social payments or other related risk-sharing mechanisms.

## PERU

Peru's public-private partnerships has in the recent years enabled the development of climate risk transfer mechanisms, such as the agricultural insurance.

## MOROCCO

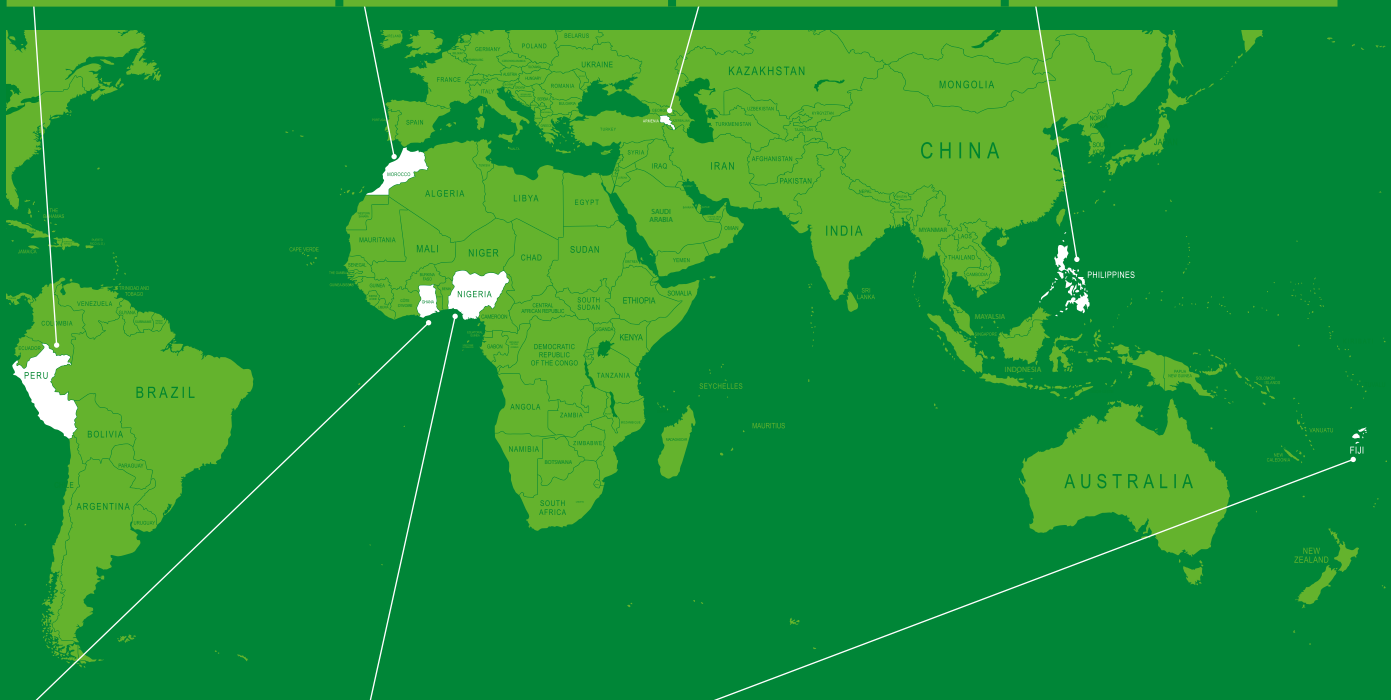
Introduced climate multi-risk insurance products to protect investments in major cereal crops from climate-related damages, including drought, excess moisture, hail, frost, wind and sandstorms

## ARMENIA

Establishment and supervision of the Agricultural Insurers' National Agency, a public-private partnership for agriculture insurance market development

## PHILIPPINES

Launched the Countryside Financial Institutions-Calamity Assistance Program in 2007 to help fund early recovery and reconstruction activities in areas affected by typhoons, disasters and other natural calamities




## GHANA

Supported the development and initial implementation of the Ghana Incentive-Based Risk-Sharing System for Agricultural Lending to increase the total amount of credit available to the agriculture and agribusiness sectors

## NIGERIA

Established the Anchor Borrower's Program to link smallholder farmers with large-scale processors to alleviate the impact of climate change including revenue index insurance

Provides subsidies to incentivize bank lending to smallholder farmers facing climate risks

## FIJI

Use of mobile payments to disburse funds from its "Help for Homes Initiative" to people affected by Tropical Cyclone Winston

Allowed people to withdraw 20 percent from their retirement accounts to rebuild their homes

Fiji National Provident Fund provided relief assistance to members through its retirement fund

Established Fiji's Natural Disaster Rehabilitation Facility, a climate resilience and adaptation program to replace damaged inventory;

Policies in this category provide a much-needed safety net that can be opened in times of crisis, and they help to build resilience by accelerating and facilitating recovery from extreme climate events.

## AGRICULTURAL CLIMATE RISK INSURANCE

Climate risk insurance can protect vulnerable populations against climate-related threats, for example, by providing assurance to farmers that a sudden weather event will not wipe out their investments. While insurance is not normally within the regulatory scope of most AFI members, some financial regulators are creating risk-sharing mechanisms for financial institutions to continue, and increase, lending to the agricultural sector.

- In **Armenia**, where agriculture is a mainstay of the economy, the sector is experiencing acute impacts of climate change. Smallholder farmers are especially vulnerable as they have limited capacity to cope with the financial losses that come from sudden and extreme weather events like hail and frost. Armenia's banking sector is also affected when farmers default on loans. Since traditional risk-sharing mechanisms and social safety nets have failed to address these challenges, the **Central Bank of Armenia** intervened, establishing and supervising a system of agricultural climate insurance. The Agricultural Insurers' National Agency (AINA) is a public-private partnership responsible for coordination and development of agricultural insurance to enhance the efficiency of the agriculture sector of Armenia. The program is subsidizing insurance premiums, and for 2020 the subsidy rate is 50 to 60 percent depending on the product. This rate will be reviewed annually.
- In 2011, **Morocco** introduced a "climate multi-risk" insurance product to protect investments in major cereal crops against a variety of climate-related damage, including drought, excess moisture, hail, frost, wind and sandstorms. In March 2019, a disaster consequence coverage scheme was adopted that provides a dual compensation system: insurance for victims with existing insurance contracts and a solidarity scheme for individuals who do not have insurance coverage. Morocco's **Supervisory Authority of Insurance and Social Welfare (ACAPS)** encourages the insurance sector to subscribe to sustainability standards through its membership in the Sustainable Insurance Forum. ACAPS has also worked to expand the assets accepted as cover for technical provisions. Green assets are now included to promote investment in sustainable development and the environment.
- In 2015, the **Central Bank of Nigeria** established the Anchor Borrower's Program, which had a broad aim to link smallholder farmers with large-scale processors and increase financial inclusion. To alleviate the impact of climate change on farmers, the program includes revenue index insurance, which provides automatic payouts to farmers based on predicted crop yields using satellite data on precipitation. The Central Bank also provides subsidies to incentivize bank lending to smallholders facing climate risks.

Small scale green house vegetable farming in Africa, Karshi, Nigeria. December 2018. (Photo by Tayvay/Shutterstock)

› Peru's public-private partnerships has in the recent years enabled the development of climate risk transfer mechanisms, such as the agricultural insurance. For instance, a catastrophic agricultural insurance (SAC) was implemented in 2008 by the Ministry of Agriculture as an insurance product completely subsidized by the Government. This product seeks to reduce the climate change impacts for farmers in the poorest areas of the country, by giving them insurance coverage against climate events that affect their livelihood. This initiative has had a substantial financial inclusion impact by facilitating the access of thousands of farmers to the financial system, through the opening of bank accounts for insurance payments. Banks actively promote the agricultural insurance products by packaging it with their loans.

  As part of the Peruvian government strategy to mitigate the impacts of climate change, round table discussions between public and private sectors have been implemented since 2015. These meetings about climate risk transfer mechanisms has resulted in many improvements for the SAC. For example, a higher amount of indemnification for each farmer and more regions being covered by the insurance (14 out of 25 regions around the country). In fact, more than 1 million hectares were covered by the SAC during the 2019-2020 campaign and this represents more than 460,000 farmers. Furthermore, the Ministry of Agriculture launched a partially subsidized agricultural insurance in 2020, in order to give access to insurance to low-income farmers who can afford to pay a percentage of premium, which means the beginning of a second stage on its national insurance strategy against natural hazards.

## CREDIT GUARANTEES

Through a credit guarantee, central banks or any third-party guarantor can cover loan losses, either entirely or in part, to encourage lending to priority high-risk sectors.

› Under the Nigeria Incentive-Based Risk Sharing System for Agricultural Lending (NIRSAL), the **Central Bank of Nigeria** guarantees 50 percent of the loss if a smallholder farmer cannot repay a loan. NIRSAL includes a $300 million risk-sharing facility through which 30 to 75 percent of a commercial bank's risk on agricultural loans is shared with the Central Bank. Bundling climate risk insurance with subsidized lending and credit guarantees amplifies the impact.

› The **Bank of Ghana** supported the development and initial implementation of the Ghana Incentive-Based Risk-Sharing System for Agricultural Lending (GIRSAL). GIRSAL was set up to increase the total amount of credit available to the agricultural and agribusiness sectors by de-risking agricultural financing through the issuance of agricultural credit guarantee instruments. GIRSAL is managed as a company with the Ministry of Finance as the principal shareholder. GIRSAL's credit guarantee covers financing for the entire value chain (horticulture, cereals, tree crops, roots and tubers, legumes and poultry) and includes insurance products for smallholder farmers.[73]

## MOBILE MONEY FOR G2P PAYMENTS

Government social welfare payments through savings-linked systems can help bring the unbanked into the mainstream financial system.[74] Mobile money-enabled

73 GIRSAL
74 UNCDF, 2012

Fijian people run to get shelter during a Tropical Cyclone Winston, Yasawa Islands, Fiji. December 2016. (Photo by chameleonseye/iStock)

government-to-person (G2P) payments are a quick and efficient way to distribute social payments, and have been used to reach vulnerable populations in the aftermath of extreme climate events.

- The **Government of Fiji** used mobile payments to disburse funds from its "Help for Homes Initiative" to people affected by Tropical Cyclone Winston. Vodafone Fiji's M-PAiSA platform proved to be an effective channel for distributing aid payments, with financial assistance provided to 32,800 households through M-PAiSA's mobile wallet.

## EARLY WITHDRAWAL FROM PENSION FUNDS

Early withdrawal from pension funds is one way to ensure that people have access to resources immediately after a disaster to rebuild or keep their businesses afloat.

- In the wake of Cyclone Pam, the Government of Vanuatu allowed people to withdraw 20 percent from their retirement accounts to rebuild their homes. The **Reserve Bank of Vanuatu** is now looking at ways to ensure that more frequent climate events do not lead to significant withdrawals from pension funds, including facilitating access to liquidity for the financial sector.
- Similarly, in the aftermath of Tropical Cyclone Winston, the **Fiji National Provident Fund** provided relief assistance to members through its retirement fund. Members directly affected by the cyclone could apply to the fund for urgent relief, and benefits between $500 and $2,500 were paid out depending on eligibility. A total of 182,571 applications, representing approximately 45 percent of all members and 80 percent of active members, were processed and approximately $130 million was ultimately paid out.

## POST-DISASTER REHABILITATION FACILITIES

Post-disaster facilities are important parts of climate and disaster resilience. They aid in the quick recovery of financial institutions and their clients and ensure that economic activities can resume immediately after a disaster.

The Countryside Financial Institutions-Calamity Assistance Program was launched in 2007 in the Philippines as a program for countryside thrift banks, rural banks, and cooperative banks to help fund early recovery and reconstruction activities in areas affected by typhoons, disasters and other natural calamities. The program is a joint initiative of the Countryside Financial Institutions Enhancement Program Task Force whose members are the Bangko Sentral ng Pilipinas, the Philippine Deposit Insurance Corporation and the Land Bank of the Philippines.

- **Fiji's Natural Disaster Rehabilitation Facility** is a climate resilience and adaptation program to which affected businesses and homeowners can apply to replace damaged inventory; cover the loss of sales, including working capital; repair or replace damaged plants, equipment and machinery; restore damaged buildings, including resorts and hotels; and replace business vehicles. Businesses can apply for funding up to the equivalent of $235,000 at a maximum interest rate of five percent per annum, while homeowners can apply for up to the equivalent of $2,350 at a maximum interest rate of 4.5 percent per annum. This facility is available from all commercial banks, the Fiji Development Bank and licensed credit institutions.

In countries that have struggled with the impacts of climate change, financial regulators have taken policy measures to support the climate-sensitive sectors especially agriculture to ensure continued finance flows by putting risk-sharing mechanisms in place. While social welfare is usually not within the ambit of financial regulation, financial regulators have taken initiatives to expedite the distribution of social payments especially in post-disaster events through enabling regulatory environments such as mobile payments and cash transfer mechanisms. These policy actions notably helped in spreading financial risks and enabled financial institutions to support climate actions.

### CHALLENGES OF PROTECTION POLICIES

As in any situation where risk is only partially borne by a decision maker, risk sharing has consequences. Some of these are welcome; for example, having insurance gives farmers more incentive to make productive agricultural investments than receiving cash grants.[75] Other effects may not be so desirable, such as beneficiaries engaging in more risk-prone behavior.

With protection policies like insurance, access and outreach can be challenging. National coordination between relevant stakeholders is vital to ensure insurance initiatives are properly designed and implemented. With new climate risk insurance products, access to the appropriate data might also be a challenge.

75 Innovations for Poverty Action, 2017

# PREVENTION

Prevention policies aim to avoid undesirable outcomes by lowering financial, social and environmental risks.

## PARAGUAY

Flexible Guide for the Management of Environmental and Social Risks that encourages including non-financial risk in credit decisions

## BRAZIL

Issued detailed guidelines to support the adoption of a Social-Environmental Responsibility Policy (Política de Responsabilidade Socioambiental) and made the application of these guidelines a condition for commercial banks to operate

## PAKISTAN

Issued Green Banking Guidelines with a sizable section on ERM that offers guidance to banks on developing their own green financing products and services

## NEPAL

Adopted Guidelines on Environmental and Social Risk Management for Banks and Financial Institutions, which apply to bank lending for SME finance, commercial leasing, term finance and project finance

## BANGLADESH

Introduced Environmental Risk Management Guideline and Environmental Due Diligence Checklists to regulated financial institutions

AFI members are increasingly enacting Environmental and Social Risk Management (ESRM) Guidelines, which assess and address the social and environmental externalities and risks of a financial institution's activities. By requiring that attention be paid to the byproducts, secondary effects and unintended consequences of financing, an ESRM policy not only creates an environment for more holistic finance, but also lowers financial, societal and environmental risk.

## E(S)RM GUIDELINES

- **Bangladesh Bank** was one of the first AFI member institutions to introduce Environmental Risk Management (ERM) Guideline[76] and Environmental Due Diligence Checklists. These were originally drafted in line with Bangladesh's commitments to the UN Millennium Development Goals (MDGs) and were intended to enable commercial banks to assess risk more accurately and finance environmentally sensitive projects. Bangladesh Bank has since held a series of multi-stakeholder consultations to update its ERM as Guidance on Environmental and Social Risk Management for Banks and Financial Institutions.
- Meanwhile, **Banco Central do Brasil** has issued detailed guidelines to support the adoption of a Social-Environmental Responsibility Policy (Política de Responsabilidade Socioambiental, or PRSA) and made the application of these guidelines a condition for commercial banks to operate. The central bank has also made other efforts to integrate ESRM into commercial bank management and operations, such as requiring banks to take environmental and social stress tests, collect data on financial losses due to environmental damages and submit an annual report on these issues to the central bank.

Pakistan, Nepal and Paraguay introduced E(S)RM more recently and their approaches have been more flexible.

- In 2017, the **State Bank of Pakistan** issued Green Banking Guidelines with a sizable section on ERM that offers guidance to banks on developing their own green financing products and services. The Guidelines also call for banks to reduce their environmental impact in branches and head offices. Social risks are not covered in the Guidelines.
- In 2018, **Nepal Rastra Bank** adopted Guidelines on Environmental and Social Risk Management for Banks and Financial Institutions, which apply to bank lending for SME finance, commercial leasing, term finance and project finance. Banks or financial institutions engaged in these activities are required to create an environmental and social management system, and the Guidelines include a series of tools and templates to assist with this effort.
- **Banco Central de Paraguay** has modeled its ESRM approach on Nepal's, which is reflected in a rather flexible Guide for the Management of Environmental and Social Risks (2018) that encourages including non-financial risk in credit decisions.

ESRM regulations can be voluntary or compulsory and may be implemented at the initiative of the financial sector or the regulator.

To create a level playing field for financial institutions, ESRM rules should strive to cover the broadest possible spectrum of financial institutions and become mandatory rather than voluntary once the financial sector has had time to adapt. This will prevent regulatory arbitrage and willful evasion of the rules. Enactment of regulations and supervision practice are still evolving as regulators and the industry learn how to move forward.

### CHALLENGES OF PREVENTION POLICIES

ESRM guidelines require both training for FSP staff and supervision resources from the regulator. With voluntary guidelines, there is a risk that not many FSPs will apply them. Another challenge is ensuring that conducting more thorough credit checks does not lead to financial exclusion. In addition, the current scope of ESRM guidelines could be expanded to include greenhouse gas emissions and take climate change adaptation needs into account. Wider use of ESRM guidelines would necessitate capacity building for supervisory institutions as well as increased compliance monitoring.

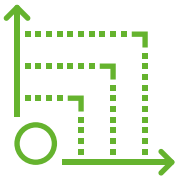
76 Bangladesh Bank, 2017

# TRENDS AND CONSIDERATIONS

This section of the report highlights a few emerging trends related to inclusive green finance. The list of trends is not exhaustive and draws out a few issues to consider. While some of the information in this section was provided by AFI members, the opinions expressed do not necessarily reflect the opinions of those members.

## INTER-REGULATORY COOPERATION WITHIN COUNTRIES

Inter-regulatory cooperation is becoming increasingly common in AFI members' spheres of operation, particularly around the promotion and provision of inclusive green finance. This is likely in recognition that clients need multiple financial products to address climate change vulnerability or mitigation, such as insurance, credit and capacity building, and this will require a multipronged response from policymakers and regulators. It is also likely the result of the increasingly urgent need for financial support to address climate change adaptation among the most vulnerable. Furthermore, financial regulators can play a critical role in steering financial resources to support Nationally Determined Contributions and broader climate goals.



Financial regulators can play a critical role in steering financial resources to support Nationally Determined Contributions and broader climate goals.

**Armenia, Fiji, Bangladesh, Jordan, the Philippines** and **Sri Lanka** have all established forums for inter-regulatory cooperation on financial policy. These include inclusive green finance and bring together various government departments and the private sector. Such cooperation and collaboration hold promise for catalyzing effective inclusive green finance.

## THE FINANCIAL STABILITY-CLIMATE CHANGE-FINANCIAL INCLUSION NEXUS

Given the structure of the world's financial systems, the pervasive economic impacts of climate change are a growing concern for financial sector policymakers, especially those with an implicit mandate to protect financial stability. As stated by the former Governor of the Bank of England and the United Nations Special Envoy for Climate Action and Finance, Mark Carney, "Climate change and related mitigation policies will have substantial repercussions on the functioning of economies and financial systems"[77] and "over time, the adverse effects of climate change could threaten economic resilience and financial stability [and] insurers are currently at the forefront."[78]

One of the channels through which climate change affects financial systems is transition risk, or the transition to green options. For the banking industry, this would mean being exposed to stranded assets on banks' balance sheets. Another channel is physical risk—the direct effects of climate change-related events, such as flooding, droughts and storms, on the economy. These events can adversely affect agricultural production which could, in turn, affect food prices—an important component of the consumer price index that could, in turn, affect the value of financial assets.

The impact of these events does not stop there. Climate change will have other widespread effects, such as the ability of people to continue living and working in certain areas, the physical destruction of assets and loss of livelihoods, as well as forced migration.

As mentioned in the introduction of this report, these risks have an impact on financial inclusion, yet resilience, recovery and reconstruction can be improved significantly through financial inclusion.

77 Carney, M., 2015

78 University of Cambridge Institute for Sustainability Leadership (CISL), 2016

**Bangko Sentral ng Pilipinas**, the **Reserve Bank of Fiji and Bangladesh Bank** all have policies in place that address the links between financial stability, climate change and financial inclusion. This report describes such policies as the "financial stability-climate change-financial inclusion nexus". These policymakers have responded with a mixture of 4P strategies, which include data collection on the impact of disasters at the bank branch level and on the clients of cooperative societies, and incentivize financial institutions to provide climate-related financing to MSMEs and low-income individuals. This nexus approach should enable the development of inclusive green finance policies that are more effective and established more quickly, given that the imperative to develop them is part of the core mandate of these financial institutions. Banks and MFIs are also key distribution channels for climate funding for small green projects, so policy interventions are necessary to ensure financial institutions remain stable and make the appropriate adjustments.

## MSMEs IN THE GREEN ECONOMY

Micro, small, and medium enterprises (MSMEs) play a vital role in the development of a green economy, especially in developing countries where they account for an average of 90 percent of private enterprises.[79] Given the innovative nature of the sector, it is also important to consider how MSMEs could drive climate action, both mitigation and adaptation efforts. As a key sector for economic development, MSMEs must become more resilient to economic shocks from climate-induced disasters, but face a number of challenges, one of which is access to climate finance due to weak policies, limited knowledge and awareness, and economic other barriers.[80] Given the relatively small size of these businesses, financing is difficult to obtain. Green bonds for MSMEs have garnered interest as a way to mobilize resources for climate action, but since small green projects do not require the substantial funding that bonds can generate, aggregation of these projects by financial intermediaries is vital.

Financial regulators can weigh in on the discourse and provide enabling policies to make finance available to the sector. ensure that green financing is accessible across the specter, not only for large-scale mitigation and adaptation efforts, but also for MSMEs. This can happen through a set of policies outlined in AFI's recent report, *Inclusive Green Finance Policies for MSMEs*,[81] but would ideally be packaged in appropriate national frameworks and strategies. Mobilizing resources through green equity investments from small investors, crowdfunding and other sources may also be explored to support green MSMEs. The collective impact of small green projects may be enormous and play a vital role in the development of low-carbon economies.

## LEVERAGING DIGITAL FINANCE TO ACCELERATE CLIMATE ACTION

Most AFI members have provided an enabling environment to accelerate financial inclusion through digital financial services. Considering that those most in need of greater financial inclusion are also the most vulnerable to the impacts of climate change, it is imperative to bring financial inclusion into the climate action discourse. Integrating emerging technologies in the financial system to drive financial inclusion is a radical development in itself. Adding climate action to the equation will further change the landscape of the global financial system.

The UNEP Inquiry on Fintech and Sustainable Development assessed the potential and risks of fintech, and one of the unintended consequences it identified was that the entire financial system being reshaped to align with the SDGs.[82] In the search for innovative solutions to mobilize financial resources for climate action, big data and ecosystems is a policy area that financial regulators must weigh in on.

In the search for innovative solutions to mobilize financial resources for climate action, big data and ecosystems is a policy area that financial regulators must weigh in on.

This will be particularly important as more financial institutions experiment with emerging technologies to expand their market and improve operational efficiencies, including blockchain, the Internet of Things (IoT) and artificial intelligence. Issues such as the ethical use of data, transparency, data privacy, consumer protection and many more still need to be discussed, but these technologies could contribute enormously to climate action without leaving anyone behind.

79 Dalberg, 2015
80 Ibid.
81 Alliance for Financial Inclusion, 2020
82 UNEP Inquiry, 2016b

CONCLUSION

# TOWARDS MEETING THE SUSTAINABLE DEVELOPMENT GOALS

Bangladeshi women cross a flooded street at Shampur in Dhaka, Bangladesh, Dhaka, Bangladesh. May 2018. (Photo by Sk Hasan Ali/Shutterstock)

In line with the Sharm El Sheikh Accord on Financial Inclusion, Climate Change & Green Finance, inclusive green finance policy is emerging as an important tool to meet Sustainable Development Goals aimed at reducing poverty, addressing climate change, increasing financial inclusion, strengthening resilience and maintaining financial stability. AFI members are leading the way in the development of inclusive green finance policies.

Members interviewed for this report emphasized that the main beneficiaries of financial inclusion policies are also often those most vulnerable to the impacts of climate change. The beneficiaries of inclusive green finance policies include MSMEs in sectors that are particularly vulnerable to changing weather patterns, such as agriculture and tourism. Beneficiaries also include individuals and households that are dependent on climate-sensitive sectors for their livelihoods, or who live in relative poverty in regions affected by climate change-induced events. Since many of these individuals and MSMEs can make a significant contribution to climate change mitigation, it is logical that financial inclusion policies take climate change into account, and vice versa.

AFI members recognize that financial institutions may also be exposed to climate change risk and that this would affect their ability to meet their financial inclusion goals.[83] This, in turn, could lead to systemic risk, creating the so-called climate change-financial inclusion-financial stability nexus. These concerns are not unique to AFI members, as evidenced by initiatives such as the Network for Greening the Financial System (NGFS), a group of central banks and supervisors willing to "share best practices and contribute to the development of environment and climate risk management in the financial sector and to mobilize mainstream finance to support the transition towards a sustainable economy."[84]

Policies that rely on a combination of incentives and clear regulation could be an important future direction for IGF policymakers. Collaboration between financial sector regulators, government organizations and the private sector is another important consideration and is becoming increasingly common. Several countries in the AFI network are seeing financial sector policymakers contribute to climate policy alongside the private sector and other government bodies.

Based on the 4P framework developed by AFI, there is clearly momentum among AFI members to implement financial inclusion policies that support effective climate change mitigation and adaptation.

These policies may have challenges, but they are important building blocks in achieving global financial inclusion and climate change goals, particularly in relation to MSMEs, the poor and the vulnerable — all clients of financial institutions that AFI members regulate.

While it is important to celebrate progress, the extent of financial exclusion and poverty in many countries, the disproportionate impact of climate change on poorer countries and communities, and the time-bound imperatives contained within the Paris Agreement and the SDGs, all mean that AFI members have an important window of opportunity to develop robust IGF policies.

It is hoped that this report and AFI's peer-to-peer learning approach, combined with regulatory guidance and policy leadership from the AFI Inclusive Green Finance Working Group, will be important resources for AFI members to advance these opportunities and strengthen the sustainability of the financial system.


83 Alliance for Financial Inclusion, 2011
84 Network for Greening the Financial System

# ABBREVIATIONS AND ACRONYMS

| | |
|---|---|
| ACAPS | L'Autorité de Contrôle des Assurances et de la Prévoyance Social, Morocco (Morocco's Supervisory Authority of Insurance and Social Welfare) |
| AFI | Alliance for Financial Inclusion |
| AINA | Agricultural Insurers' National Agency |
| BAM | Bank Al-Maghrib |
| BCRA | Banco Central de la República Argentina |
| BOE | Bank of Egypt |
| BoG | Bank of Ghana |
| BoT | Bank of Thailand |
| BSOS | Banking Sectoral Outlook Survey |
| BSP | Bangko Sentral ng Pilipinas |
| CBE | Central Bank of Egypt |
| CBSL | Central Bank of Sri Lanka |
| CCC | Climate Change Commission, Philippines |
| CSA | Climate-Smart Agriculture |
| CSR | Corporate Social Responsibility |
| ENSO | El Nino-Southern Oscillation |
| ERM | Environmental Risk Management |
| ESG | Environmental Social and Governance |
| ESRM | Environmental and Social Risk Management |
| FAO | Food and Agriculture Organization |
| FCA | Financial Conduct Authority |
| FEBRABAN | Federação Brasileira de Bancos |
| G2P | Government-to-Person |
| GAF | German-Armenia Fund |
| GIRSAL | Ghana Incentive-Based Risk-Sharing System for Agricultural Lending |
| IACSF | Inter-Agency on Sustainable Finance, Philippines |
| IGF | Inclusive Green Finance |
| IPCC | Intergovernmental Panel on Climate Change |
| IRDA | Insurance Regulation and Development Authority, Bangladesh |
| MDG | Millennium Development Goals |
| MSME | Micro Small and Medium Enterprises |
| NDC | Nationally Determined Contributions |
| NFIS | National Financial Inclusion Strategy |
| NGFS | Network for Greening the Financial System |
| NIRSAL | Nigeria Incentive-Based Risk- Sharing System for Agricultural Lending |
| NOAA | National Oceanic and Atmospheric Administration |
| ODA | Official Development Assistance |
| PAGASA | Philippine Atmospheric, Geophysical and Astronomical Services Administration |
| PAYG | Pay As You Go |
| PRSA | Política de Responsabilidade Socioambienta, Brazil |
| RBV | Reserve Bank of Vanuatu |
| SASB | Sustainability Standards Accounting Board |
| SBP | State Bank of Pakistan |
| SBS | Superintendencia de Banca, Seguros y AFP |
| SDG | Sustainable Development Goals |
| SEEREP | Seychelles Energy Efficiency and Renewable Energy Program |
| SEPS | Superintendencia de Economía Popular y Solidaria of Ecuador |
| SEPS | Superintendencia de Economía Popular y Solidaria, Ecuador |
| SME | Small and Medium Enterprises |
| UN | United Nations |
| UNEP | United Nations Environment Programme |
| WWF | World Wide Fund for Nature |

# GLOSSARY OF TERMS

| TERM | EXPLANATION |
|---|---|
| Adaptation (to climate change) | The process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate harm or exploit beneficial opportunities. In natural systems, human intervention may facilitate adjustment to expected climate and its effects.[85]<br>"Climate adaptation" and "adaptation" are used interchangeably throughout this report. |
| Adaptation capacity | The ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities or to respond to consequences.[86] |
| Concessionary finance | Financing mechanisms that offer certain benefits to borrowers that are not available in the market. Typical benefits include longer payback periods, lower or zero interest rates or funding of high-risk aspects of a project. |
| El Niño | El Niño is a climate pattern that describes the unusual warming of surface waters in the eastern tropical Pacific Ocean. El Niño is the "warm phase" of a larger phenomenon called the El Niño-Southern Oscillation (ENSO). La Niña, the "cool phase" of ENSO, is a pattern that describes the unusual cooling of the region's surface waters. El Niño and La Niña are considered the ocean part of ENSO, while the Southern Oscillation is atmospheric changes.[87] |
| Financial inclusion | There is no single definition of financial inclusion, and AFI encourages countries to adopt national definitions suitable to their own circumstances and to highlight key elements for consideration, for example, access, usage and quality.[88] |
| Financially excluded | Adults who do not use financial products, either formal or informal, to manage their financial lives. |
| Grant | Funding that does not produce a financial return. Most grants are not repayable and can therefore be considered a type of donation. Repayable grants exist, but are typically classified as interest-free loans. |
| Infrastructure | The built environment, including roads, energy, transport and water reticulation systems, buildings and housing. |
| Mitigation (of climate change) | A human intervention to reduce the sources or enhance the sinks of greenhouse gases (GHGs). The IPCC Fifth Assessment Report[89] assesses human interventions to reduce the sources of other substances that may contribute directly or indirectly to limiting climate change, including, for example, the reduction of particulate matter (PM) emissions that can directly alter the radiation balance (e.g. black carbon) or measures that control emissions of carbon monoxide, nitrogen oxides (NOx), volatile organic compounds (VOCs) and other pollutants that can alter the concentration of tropospheric ozone (O3), which has an indirect effect on the climate.[90] |
| Non-concessionary finance | Financing structures that offer a financial return and reflect what is typically offered in the market. |
| Reserve requirement | The total amount of funds a bank holds in reserve to ensure it is able to meet liabilities in case of sudden withdrawals. It is a percentage of the bank's deposits. The central bank of a country sets the percentage rate.[91] |
| Vulnerability | The propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts, including sensitivity or susceptibility to harm and lack of capacity to cope and adapt.[92] |
| Write-downs | A write-down is an accounting entry that is made when the fair value (market determined value) of an asset is lower than the accounting book value. An asset that has been 'written down' is called an impaired asset.[93, 94] |

85 IPCC, Glossary of acronyms and specialised terms.
86 Ibid.
87 National Geographic Society, El Niño encyclopaedic entry.
88 Alliance for Financial Inclusion, 2017
89 IPCC, 2014b
90 IPCC, Glossary of acronyms and specialised terms.
91 Amadeo, 2020
92 IPCC, Glossary of acronyms and specialised terms.
93 Investopedia, definition of "write-down"
94 International Accounting Standards Board, 2011

# APPENDIX 1: AFI MEMBER SURVEY ON INCLUSIVE GREEN FINANCE

## METHODOLOGY

AFI developed a survey to understand the current state of practice in inclusive green finance among AFI member institutions. The survey concentrated on five themes:

i) institutional mandates and reasons for financial sector regulators to work on climate change;
ii) relevant national financial sector strategies;
iii) policies targeting individuals and MSMEs for climate change adaptation and mitigation;
iv) definitions and criteria for green lending; and
v) institutional coordination between financial regulators and agencies responsible for climate change.

The survey was conducted with policymakers in 25 countries from the AFI network: Argentina, Armenia, Bangladesh, Brazil, Cambodia, Costa Rica, Ecuador, Egypt, Fiji, Ghana, Guatemala, Jordan, Mongolia, Morocco, Nepal, Nigeria, Pakistan, Paraguay, Philippines, Rwanda, Sri Lanka, Tanzania, Thailand, Vanuatu and Zimbabwe.

Most of the interviews were conducted over the phone or in person, although in a few instances written responses were submitted.

The report also featured five policy examples from five countries, taken from AFI's 2020 report, *Inclusive Green Finance for MSMEs*. AFI member representatives from Peru, Philippines, Pakistan, Seychelles and Eswatini were interviewed for the MSME study. Three countries, Eswatini, Peru and Seychelles were interviewed for the MSME study but not for the IGF landscape study.


IGFWG members at the 2019 Global Policy Forum in Kigali, Rwanda.

# APPENDIX 2: LIST OF INTERVIEWEES

| NO. | INTERVIEWEE | ORGANIZATION | COUNTRY |
|---|---|---|---|
| 1 | German San Lorenzo | Banco Central de la República Argentina | Argentina |
| 2 | Ani Badalyan | Central Bank of Armenia | Armenia |
| 3 | Anna Vardikyan | Central Bank of Armenia | Armenia |
| 4. | Armenuhi Mkrtchyan | Central Bank of Armenia | Armenia |
| 5 | Asif Iqbal | Bangladesh Bank | Bangladesh |
| 6 | Kamarul Hoque Maruf | Insurance Development and Regulatory Authority | Bangladesh |
| 7 | Pinaki Sarker | Bangladesh Bank | Bangladesh |
| 8 | Enrico Dalla Riva | Banco Central do Brasil | Brazil |
| 9 | Stanislaw Zmitrowicz | Banco Central do Brasil | Brazil |
| 10 | Som Kossom | National Bank of Cambodia | Cambodia |
| 11 | Reaksmy Mak | National Bank of Cambodia | Cambodia |
| 12 | Seng Youraden | National Bank of Cambodia | Cambodia |
| 13 | Sok Sopheaktra | National Bank of Cambodia | Cambodia |
| 14 | Cristian Vega Cespedes | Superintendencia General de Entidades Financieras (SUGEF) de Costa Rica | Costa Rica |
| 15 | Guillermo Vilac | Superintendencia de Economía Popular y Solidaria | Ecuador |
| 16 | Khaled Bassiouny | Central Bank of Egypt | Egypt |
| 17 | Walid Ali | Central Bank of Egypt | Egypt |
| 18 | David Mfanimpela Myeni | Ministry of Finance | Eswatini |
| 19 | Christina Rokoua | Reserve Bank of Fiji | Fiji |
| 20 | Poasa Werekoro | Reserve Bank of Fiji | Fiji |
| 21 | Gladys Awuku | Bank of Ghana | Ghana |
| 22 | Stephen Armah | Bank of Ghana | Ghana |
| 23 | Jennifer Pérez | Superintendencia de Bancos de Guatemala | Guatemala |
| 24 | Ricardo Estrada | Superintendencia de Bancos de Guatemala | Guatemala |
| 25 | Amr Ahmad | Central Bank of Jordan | Jordan |
| 26 | Waleed Samarah | Central Bank of Jordan | Jordan |
| 27 | Baljmaa Naranjargal | Financial Regulatory Commission Mongolia | Mongolia |
| 28 | Naran Bajmaal | Financial Regulatory Commission Mongolia | Mongolia |
| 29 | El Anzaoui Ibtissam | Bank Al-Maghrib | Morocco |
| 30 | Ghita Tahiri | Bank Al-Maghrib | Morocco |

| NO. | INTERVIEWEE | ORGANIZATION | COUNTRY |
|---|---|---|---|
| 31 | Najwa Mouhaouri | Bank Al-Maghrib | Morocco |
| 32 | Narayan Prasad Paudel | Nepal Rastra Bank | Nepal |
| 33 | A'isha U. Mahmood | Central Bank of Nigeria | Nigeria |
| 34 | Malik Khan | State Bank of Pakistan | Pakistan |
| 35 | Muhammad Ishfaq | State Bank of Pakistan | Pakistan |
| 36 | Saeed Afgan | State Bank of Pakistan | Pakistan |
| 37 | Christian Tondo | Central Bank of Paraguay | Paraguay |
| 38 | Juan Carlos Chong | Superintendencia de Banca, Seguros y AFP | Peru |
| 39 | Rochelle D. Tomas | Bangko Sentral ng Pilipinas | Philippines |
| 40 | Veronica Bayangos | Bangko Sentral ng Pilipinas | Philippines |
| 41 | Francoise Kagoyire | National Bank of Rwanda | Rwanda |
| 42 | James Rwagasana | National Bank of Rwanda | Rwanda |
| 43 | Audrey Chetty | Central Bank of Seychelles | Seychelles |
| 44 | W Ranaweera | Central Bank of Sri Lanka | Sri Lanka |
| 45 | Chatura Ariyadasa | Central Bank of Sri Lanka | Sri Lanka |
| 46 | Mohamed Sarjoon | Central Bank of Sri Lanka | Sri Lanka |
| 47 | Nangi Massawe | Central Bank of Tanzania | Tanzania |
| 48 | Wichapon Suthasineenont | Bank of Thailand | Thailand |
| 49 | Swisa Ariyapruchya | Bank of Thailand | Thailand |
| 50 | Alison N. Baniuri | Reserve Bank of Vanuatu | Vanuatu |
| 51 | Audrey Hove | Reserve Bank of Zimbabwe | Zimbabwe |
| 52 | Marvellous Kuzeya | Reserve Bank of Zimbabwe | Zimbabwe |

# REFERENCES

**Agyeman, J., Bullard, R. and Evans, B. (eds.). 2003.** Just Sustainabilities: Development in an Unequal World. MIT Press: Massachusetts. Available at: https://mitpress.mit.edu/books/just-sustainabilities.

**Alliance for Financial Inclusion. 2011.** The Maya Declaration. Available at: https://www.afi-global.org/maya-declaration.

**Alliance for Financial Inclusion, 2017a.** Defining Financial Inclusion. Guideline Note No. 28. Available at: https://www.afi-global.org/publications/2523/Guideline-Note-28-Defining-Financial-Inclusion.

**Alliance for Financial Inclusion. 2017b.** The Sharm El Sheikh Accord on Financial Inclusion, Climate Change and Green Finance. Available at: https://www.afi-global.org/publications/2638/Sharm-El-Sheikh-Accord-Financial-Inclusion-Climate-Change-Green-Finance.

**Alliance for Financial Inclusion. 2018.** The Nadi Action Agenda on Green Financial Inclusion. Available at: https://www.afi-global.org/sites/default/files/news/Nadi%20Action%20Agenda%202018.pdf.

**Alliance for Financial Inclusion. 2020.** Inclusive Green Finance for MSMEs. Available at: https://www.afi-global.org/publications/3289/Inclusive-Green-Finance-Policies-for-MSMEs.

**Amadeo, K. March 16, 2020.** The Reserve Requirement and How It Affects Interest Rates. The Balance. Available at: https://www.thebalance.com/reserve-requirement-3305883.

**Argentina Ministerio de Haciena Presidencia de la Nación. 2019.** Estrategia Nacional de Inclusión Financiera. Available at: https://www.argentina.gob.ar/sites/default/files/estrategia-nacional-inclusion-financiera.pdf.

**Banco Central de la República Argentina.** Communication A6489. Available at: http://www.bcra.gob.ar/Pdfs/comytexord/A6489.pdf.

**Bangko Sentral ng Pilipinas. 2016.** Agricultural Value Chain Financing Framework. Office of the Governor. Circular No. 908. Series of 2016 dated March 14, 2016. Available at: http://www.bsp.gov.ph/regulations/regulations.asp?type=1&id=3589.

**Bangko Sentral ng Pilipinas. 2018.** Adoption of Policy Framework on the Grant of Regulatory Relief to Banks/Quasi-Banks Affected by Calamities. Office of the Governor. Circular No. 1017. Series of 2018 dated October 10, 2018. Available at: http://www.bsp.gov.ph/regulations/regulations.asp?id=4044.

**Bangladesh Bank. 2017.** Guidelines on Environmental and Social Risk Management (ESRM) for Banks and Financial Institutions in Bangladesh. Available at: https://www.bb.org.bd/aboutus/regulationguideline/esrm_guideline_feb2017.pdf.

**Bangladesh Bank. 2019.** Strategic Plan 2020–2024. Available at: https://www.bb.org.bd/aboutus/strategic_plan.php.

**Bank of England. 2020.** Climate change: what are the risks to financial stability? Available at: https://www.bankofengland.co.uk/knowledgebank/climate-change-what-are-the-risks-to-financial-stability.

**Bank of Ghana. 2019.** Sustainable Banking Principles and Sector Guidance Notes. Available at: https://www.bog.gov.gh/wp-content/uploads/2019/12/Ghana-Sustainable-Banking-Principles-and-Guidelines-Book-1.pdf.

**Barbier, E. and Hochard, J. 2018.** The Impacts of Climate Change on the Poor in Disadvantaged Regions. Review of Environmental Economics and Policy 12 (1): 26–47. Available at: https://doi.org/10.1093/reep/rex023.

**Brasil Ministério Público do Trabalho.** Banco da Amazônia S/A is ordered to pay R$10 million. Available at: https://mpt.jusbrasil.com.br/noticias/101414/banco-da-amazonia-s-a-e-condenado-a-pagar-r-10-milhoes-pela-pratica-de-assedio-moral and https://bncnoticias.com/banco-da-amazonia-e-condenado-no-maranhao-por-conceder-credito-a-cliente-com-nome-na-lista-suja-do-trabalho-escravo/.

**Brune, L. et al. 2016.** Facilitating savings for agriculture: Field experimental evidence from Malawi. Economic Development and Cultural Change 64 (2): 187–220. Available at: https://doi.org/10.1086/684014.

**Carney, M. 2015.** "Breaking the tragedy of the horizon-climate change and financial stability". Speech delivered at Lloyd's of London, London on September 29, 2015. Available at: https://www.bis.org/review/r151009a.pdf.

**Castillo-Rubio, J.C. et al. 2016.** Fintech and Sustainable Development: Assessing the Impacts, UNEP. Available at: http://unepinquiry.org/wp-content/uploads/2016/12/Fintech_and_Sustainable_Development_Assessing_the_Implications_Summary.pdf.

**CCG.** Présentation. Available at: http://www.ccg.ma/innovation/presentation.php.

**Central Bank of Jordan. 2016.** Fifty Third Annual Report. Available at: http://www.cbj.gov.jo/EchoBusV3.0/SystemAssets/1f339c1c-8792-4828-9121-a23353bbe1c3.pdf.

**Central Bank of Nigeria. 2012.** Circular: Implementation of Sustainable Banking Principles by Banks, Discount Houses and Development Finance Institutions in Nigeria. Available at: https://www.cbn.gov.ng/out/2012/ccd/circular-nsbp.pdf.

**Central Bank of Sri Lanka. 2019.** Roadmap for Sustainable Finance in Sri Lanka. Available at: https://www.cbsl.gov.lk/sites/default/files/Sri%20Lanka%20Sustainable%20Finance%20Roadmap%20FINAL%2008.04.19.pdf.

**CGAP. 2011.** Global Standard-Setting Bodies and Financial Inclusion for the Poor: Toward Proportionate Standards and Guidance. White paper prepared by CGAP on behalf of the G20 Global Partnership for Financial Inclusion. Available at: https://www.cgap.org/sites/default/files/researches/documents/CGAP-White-Paper-Global-Standard-Setting-Bodies-Oct-2011.pdf.

**Dalberg. 2015. Increasing MSME access to climate finance.** Available at: https://cdkn.org/wp-content/uploads/2015/10/CDKN-Dalberg-Access-to-Finance-for-MSMEs_-final-1.pdf.

**De Nederlandsche Bank. October 2017.** Evaluating the environmental impact of debit card payments". DNB Working Paper No. 574. Available at: https://www.dnb.nl/binaries/Working Paper No. 574_tcm46-364326.pdf.

**Derman, B. 2014.** "Climate Governance, Justice and Transnational Civil Society", Climate Policy 14(1): 23–41. Available at: https://doi.org/10.1080/14693062.2014.849492.

**Demirguc-Kunt, A. et al. 2015.** The Global Findex Database 2014: Measuring Financial Inclusion around the World. Washington, DC: World Bank Group. Available at: http://documents.worldbank.org/curated/en/187761468179367706/The-Global-Findex-Database-2014-measuring-financial-inclusion-around-the-world.

**EU Technical Expert Group on Sustainable Finance. 2019.** Taxonomy Technical Report. Available at: https://ec.europa.eu/info/sites/info/files/business_economy_euro/banking_and_finance/documents/190618-sustainable-finance-teg-report-taxonomy_en.pdf.

**FinMark Trust. 2012a.** FinScope MSME Survey Malawi 2012. Available at: http://www.finmark.org.za/wp-content/uploads/2016/01/FSMalawiMSME_Rep2012FNL1.pdf.

**FinMark Trust. 2012b.** FinScope MSME Survey Mozambique 2012. Available at: http://www.finmark.org.za/wp-content/uploads/2016/01/Rep_FS_Mozambique_MSME_20121.pdf.

**FinMark Trust. 2012c.** FinScope MSME Survey Zimbabwe 2012. Available at: http://www.finmark.org.za/wp-content/uploads/2016/02/FinScope_Zimbabwe_Broch13FNL.pdf.

**FinMark Trust. 2014.** FinScope Malawi 2014 Survey Results Brochure. Available at: http://www.finmark.org.za/wp-content/uploads/2014/08/Broch_Consumer_Malawi_2014-1.pdf.

**FinMark Trust. 2015.** FinScope Consumer Survey Mozambique 2014. Available at: http://www.finmark.org.za/wp-content/uploads/2015/09/Broch_FSMoz_Consumer_2014.pdf.

**FinMark Trust. 2019.** Measuring Progress: Financial Inclusion in SADC — 2019 Report. Available at: http://finmark.org.za/measuring-progress-financial-inclusion-in-sadc-2019/.

**Food and Agriculture Organization of the United Nations (FAO). 2017.** Climate Smart Agriculture Sourcebook, Second Edition. Available at: http://www.fao.org/3/a-i7994e.pdf.

**GIRSAL. 2020.** About us. Available at: https://www.girsal.com/about_us.php.

**Government of the Kingdom of Swaziland. 2017.** National Financial Inclusion Strategy for Swaziland 2017–2022. Available at: https://www.afi-global.org/sites/default/files/inline-files/National%20Financial%20Inclusion%20Strategy%20Swaziland%20Final.pdf

**Green Taxonomy Committee. 2019.** Mongolian Green Taxonomy. Available at: http://toc.mn/ufiles/uploaded/files/1584076042163.pdf.

**GSMA. 2014.** Disaster Response: Mobile Money for the Displaced. Available at: https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2015/01/Disaster-Response-Mobile-Money-for-the-Displaced.pdf.

**Hallegatte, S. et al. 2016.** Shock Waves: Managing the Impacts of Climate Change on Poverty. Washington, DC: World Bank Group. Available at: http://documents.worldbank.org/curated/en/260011486755946625/Shock-waves-managing-the-impacts-of-climate-change-on-poverty.

**Hallegatte, S. et al. 2017.** "Unbreakable: Building the Resilience of the Poor in the Face of Natural Disasters". In Climate Change and Development. Washington, DC: World Bank. Available at: https://openknowledge.worldbank.org/handle/10986/25335.

**Helen Suzman Foundation. 2013.** "Accountability". Quarterly Roundtable Series (26). Available at: https://hsf.org.za/publications/roundtable-series/qrs-accountability.pdf.

**Hewitt, J. et al. 2018.** "Finance and the Improved Cookstove Sector in East Africa: Barriers and Opportunities for Value-Chain Actors", Energy Policy, 117: 127–135. Available at: https://doi.org/10.1016/j.enpol.2018.02.044.

**Independent Evaluation Group (IEG). 2008.** The Welfare Impacts of Rural Electrification: A Reassessment of the Costs and Benefits. Washington, DC: World Bank Group. Available at: http://siteresources.worldbank.org/EXTRURELECT/Resources/full_doc.pdf.

**Innovations for Poverty Action (IPA). 2017.** Climate Change and Financial Inclusion. Available at: https://www.poverty-action.org/sites/default/files/publications/Climate-Change-Financial-Inclusion_Final.pdf.

**International Accounting Standards Board. 2011.** Snapshot: Supplement to the Exposure Draft Financial Instruments: Amortised Cost and Impairment. Available at: https://www.ifrs.org/issued-standards/list-of-standards/ifrs-9-financial-instruments/.

**Intergovernmental Panel on Climate Change (IPCC). 2012.** Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation. A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change. Field, C.B. et al. (eds.). Cambridge: Cambridge University Press. Available at: https://www.ipcc.ch/report/managing-the-risks-of-extreme-events-and-disasters-to-advance-climate-change-adaptation/.

**Intergovernmental Panel on Climate Change (IPCC). 2014a.** Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Field, C.B. et al. (eds.). Cambridge: Cambridge University Press. Available at: http://www.ipcc.ch/report/ar5/wg2/.

**Intergovernmental Panel on Climate Change (IPCC). 2014b.** AR5 Climate Change 2014: Mitigation of Climate Change. Available at: https://www.ipcc.ch/report/ar5/wg3/.

**Intergovernmental Panel on Climate Change (IPCC). 2019.** Climate Change and Land. An IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems. Shukla, P.R. et al. (eds.). In press.

**Intergovernmental Panel on Climate Change (IPCC).** Glossary of Acronyms and Specialised Terms. Available at: https://ipcc-data.org/guidelines/pages/glossary/glossary_lm.html.

**International Accounting Standards Board. 2011.** Snapshot: Supplement to the Exposure Draft Financial Instruments: Amortised Cost and Impairment. Available at: https://www.ifrs.org/issued-standards/list-of-standards/ifrs-9-financial-instruments/.

**Investopedia.** "Write-Down" definition. Available at: https://www.investopedia.com/terms/w/writedown.asp.

**Karim, A. and Noy, I. 2014.** Poverty and Natural Disasters: A Regression Meta-Analysis. Review of Economics and Institutions 7(2). Available at: https://www.rei.unipg.it/rei/article/view/222.

**Karlan, D. et al. 2011.** Crop Price Indemnified Loans for Farmers: A Pilot Experiment in Rural Ghana. Journal of Risk and Insurance 78 (1): 37–55. Available at: https://doi.org/10.1111/j.1539-6975.2010.01406.x

**Khan, Arastoo et al. 2017.** Financing Green Growth in Bangladesh: Challenges & Opportunities. Economic Dialogue on Green Growth (EDGG) and UK aid. Available at: https://www.greengrowthknowledge.org/resource/financing-green-growth-bangladesh-challenges-opportunities.

**Lacey, F. et al. 2017.** "Transient Climate and Ambient Health Impacts due to National Solid Fuel Cookstove Emissions", PNAS 114 (6): 1269–1274.

**Microinsurance Network. 2019.** "2019: The Year that Inclusive Insurance can really build resilience to climate change", Microinsurance Network Blog. Available at: https://microinsurancenetwork.org/community/blog/insights-and-perspectives/2019-year-inclusive-insurance-can-really-build-resilience.

**Ministry of Finance of Eswatini. 2017.** National Financial Inclusion Strategy for Swaziland. Available at: https://www.afi-global.org/sites/default/files/publications/2018-01/Swaziland%20National%20Financial%20Inclusion%20Strategy%202017%20-2022.pdf

**National Geographic Society.** El Niño encyclopaedic entry. Available at: https://www.nationalgeographic.org/encyclopedia/el-nino/.

**National Research Council. 2013.** Climate and Social Stress: Implications for Security Analysis. Washington, DC: The National Academies Press. Available at: https://doi.org/10.17226/14682.

**Network for Greening the Financial Sector.** Available at: https://www.ngfs.net/en.

**OECD. 2016.** Financial Management of Flood Risk. Paris: OECD Publishing. Available at: https://www.oecd-ilibrary.org/finance-and-investment/financial-management-of-flood-risk/managing-the-fiscal-cost-of-floods_9789264257689-8-en.

**O'Neal, E. 2014.** Global Climate Change: The Political Impact of Global Warming on Developing Countries. The Case Studies of Egypt and Oman. UNLV Libraries. Available at: https://digitalscholarship.unlv.edu/cgi/viewcontent.cgi?article=3286&context=thesesdissert.

**Price, R. 2017.** Climate Change and Stability in North Africa. Available at: https://assets.publishing.service.gov.uk/media/5a7052bded915d266017b8aa/242_Climate_change_and_stability_in_Northern_Africa.pdf.

**Schaer, C. and Kuruppu, N. 2018.** Private-Sector Action in Adaptation: Perspectives on the Role of Micro, Small and Medium Size Enterprises. UNEP DTU Partnership. Available at: https://unepdtu.org/publications/private-sector-action-in-adaptation-perspectives-on-the-role-of-micro-small-and-medium-size-enterprises/.

**Senate of the Philippines. March 2012.** The MSME Sector at a Glance. AG-12-03. Available at: https://www.senate.gov.ph/publications/AG%202012-03%20-%20MSME.pdf.

**Superintendencia de Banca, Seguros y AFP (SBS) Peru. 2017.** Oficio Múltiple N°10250-2017. Available at: HYPERLINK "http://www.sbs.gob.pe" www.sbs.gob.pe

**Superintendencia de Banca, Seguros y AFP (SBS) Peru. 2019.** Oficio Múltiple N°7480-2019. Available at: http://www.sbs.gob.pe" www.sbs.gob.pe

**Tetangco, A.M. Jr. Speech by the Governor of Bangko Sentral ng Philipina on August 14, 2007.** Available at: http://www.bsp.gov.ph/publications/speeches.asp?id=299&yr=2007.

**Thai Bankers Association. 2019.** Sustainable Banking Guidelines for Responsible Lending. Available at: https://www.tba.or.th/wp-content/uploads/2019/08/Guidelines-ResponsibleLending.pdf.

**The Association of Banks in Cambodia. 2019.** Cambodian Sustainable Finance Principles Implementation Guidelines. Available at: https://www.ifc.org/wps/wcm/connect/8ce9ddc0-2422-4e69-aa8b-e4f3c8cc3eec/Cambodia+SF+Principles+-+Implementation+Guidelines.pdf?MOD=AJPERES&CVID=mGdMKuz.

**The Geneva Association. 2018.** Climate Change and the Insurance Industry: Taking Action as Risk Managers and Investors – Perspectives from C-level executives in the insurance industry. Available at: https://www.genevaassociation.org/sites/default/files/research-topics-document-type/pdf_public/climate_change_and_the_insurance_industry_-_taking_action_as_risk_managers_and_investors.pdf.

**The UNEP Inquiry. 2016a.** "Definitions and Concepts: Background Note". Inquiry Working Paper 16/13. Available at: http://unepinquiry.org/wp-content/uploads/2016/09/1_Definitions_and_Concepts.pdf

**The UNEP Inquiry. 2016b.** "Green Finance for Developing Countries. Needs, Concerns and Innovations." Available at: http://unepinquiry.org/wp-content/uploads/2016/08/Green_Finance_for_Developing_Countries.pdf

**UNCDF. January 10, 2012.** Government to Persons (G2P) Payments can Promote Financial Inclusion and Poverty Reduction. Available at: https://www.uncdf.org/article/1012/government-to-persons-g2p-payments-can-promote-financial-inclusion-and-poverty-reduction-migration.

**UNECA. 2019.** Malawi, Mozambique and Zimbabwe need $4 bn to recover from devastating cyclones. Available at: https://www.uneca.org/stories/malawi-mozambique-and-zimbabwe-need-4-bn-recover-devastating-cyclones.

**UNEP. 2018.** Emissions Gap Report. Available at: https://www.unenvironment.org/resources/emissions-gap-report-2018.

**United Nations. 2016.** World Economic and Social Survey 2016: Climate Change Resilience – An Opportunity for Reducing Inequalities. Available at: https://www.un.org/development/desa/dpad/publication/world-economic-and-social-survey-2016-climate-change-resilience-an-opportunity-for-reducing-inequalities/.

**University of Cambridge Institute for Sustainability Leadership (CISL). 2016.** Closing the Protection Gap: ClimateWise Principles Independent Review 2016, 10. Cambridge: Cambridge Institute for Sustainability Leadership. Available at: https://www.cisl.cam.ac.uk/resources/publication-pdfs/Closing-the-protection-gap-ClimateWise-Principles-Independent-Review-2016.pdf.

**Warren, C. 2018.** Water From the Sun: Solar-Powered Water Pumps Offer African Framers a Way Out of Poverty. Available at: https://www.greentechmedia.com/articles/read/water-from-the-sun - gs.3labtx.

**World Bank Group. 2014.** Understanding the Differences between Cookstoves. Available at: https://openknowledge.worldbank.org/handle/10986/18411.

**World Bank. 2014.** Global Findex, Japan Country Book. Available at: https://globalfindex.worldbank.org/sites/globalfindex/files/countrybook/Japan.pdf.

**World Bank Group. 2016.** Climate Change Action Plan 2016–2020. Washington, DC: World Bank Group. Available at: http://documents.worldbank.org/curated/en/755721468011421594/World-Bank-Group-Climate-Change-Action-Plan-2016-2020.

**World Bank Group. 2018.** Off-Grid Solar Market Trends Report 2018. Available at: https://www.lightingglobal.org/wp-content/uploads/2018/02/2018_Off_Grid_Solar_Market_Trends_Report_Summary.pdf.

**World Bank. 2019.** Disaster Risk Management: Overview. Available at: https://www.worldbank.org/en/topic/disasterriskmanagement/overview.

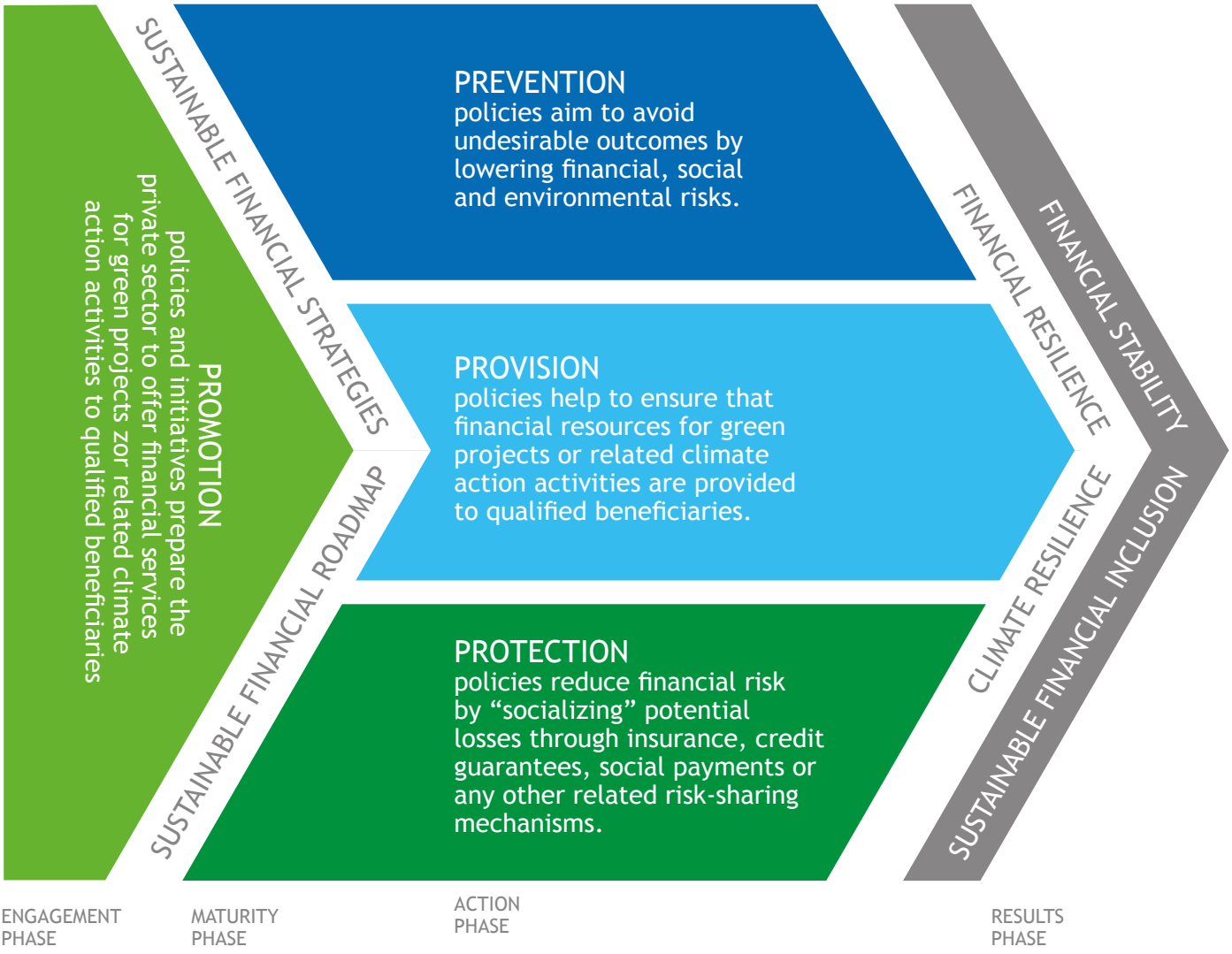
**World Health Organization. 2014a.** Quantitative Risk Assessment of the Effects of Climate Change on Selected Causes of Death, 2030s and 2050s. Available at: https://www.who.int/globalchange/publications/quantitative-risk-assessment/en/.

**World Health Organization. 2018.** Fact Sheets on Climate Change and Health. Available at: http://www.who.int/news-room/fact-sheets/detail/climate-change-and-health.

**World Meteorological Organization. 2018.** WMO Statement on the State of the Global Climate in 2017. Available at: https://library.wmo.int/doc_num.php?explnum_id=4453.

**Yee, A. October 4, 2016.** In Rural Bangladesh, Solar Power Dents Poverty. The New York Times. Available at: https://www.nytimes.com/2016/10/04/opinion/in-rural-bangladesh-solar-power-dents-poverty.html.

# CONCEPTUAL FRAMEWORK (4Ps)



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