



BRINGING
SMART
POLICIES
TO LIFE

INCLUSIVE GREEN FINANCE: A SURVEY OF THE POLICY LANDSCAPE



CONTENTS

GREEN FINANCE: HOW SOON WILL CENTRAL BANKERS BACK INCLUSION?	3
EXECUTIVE SUMMARY	5
INTRODUCTION	6
FINANCIAL INCLUSION AND CLIMATE CHANGE: MAKING THE CONNECTIONS	7
<i>Climate Change Deepens Poverty</i>	7
<i>Financial Inclusion Builds Resilience to Climate Change</i>	8
<i>Green Technologies Help to Mitigate Climate Change and Reduce Poverty</i>	10
STRATEGIES AND POLICIES FOR INCLUSIVE GREEN FINANCE	11
<i>Linking Financial Inclusion and Climate Change in Financial Sector Strategies</i>	11
<i>The 4P Framework of Inclusive Green Finance: Provision, Promotion, Protection and Prevention</i>	13
<i>Involvement of Central Banks and Financial Sector Regulators in National Climate Policy Development</i>	22
CONCLUSION	23
APPENDIX	25
1. AFI Member Survey on Inclusive Green Finance	26
2. List of Interviewees	27

IGES

AUTHORS

This report was written by Klaus Prochaska and researchers from the Institute for Global Environmental Strategies (IGES) (Eric Zusman, Yuqing Yu, Muhammad Hazim Bin Rostli, So-Young Lee and Yi Ying Lee) with invaluable inputs by Prof. Daniel Schydrowsky.

The report was developed through consultations with the following representatives of twenty AFI member institutions coordinated by Sarah Corry:

Ani Badalyan, Armenuhi Mkrtchyan, Anna Vardikyan (Central Bank of Armenia); Asif Iqbal (Bangladesh Bank); Kamarul Hoque Maruf (Insurance Development and Regulatory Authority of Bangladesh); Enrico Dalla Riva, Stanislaw Zmitrowicz (Banco Central do Brasil); Som Kossom (National Bank of Cambodia); Cristian Vega Cespedes (Superintendencia General de Entidades Financieras de Costa Rica); Khaled Bassiouny, Walid Ali (Central Bank of Egypt); Poasa Werekoro, Christina Rokoua (Reserve Bank of Fiji); Ricardo Estrada, Jennifer Pérez (Superintendencia de Bancos de Guatemala); Amr Ahmad, Waleed Samarah (Central Bank of Jordan); El Anzaoui Ibtissam, Ghita Tahiri (Bank Al-Maghrib); Narayan Prasad Paudel (Nepal Rastra Bank); A'isha U. Mahmood (Central Bank of Nigeria); Malik Khan, Muhammad Ishfaq, Saeed Afgan (State Bank of Pakistan); Christian Tondo (Central Bank of Paraguay); Rochelle D. Tomas (Bangko Sentral ng Pilipinas); Francoise Kagoyire, James Rwagasana (National Bank of Rwanda); Nangi Massawe (Central Bank of Tanzania); and Alison N. Baniuri (Reserve Bank of Vanuatu).



GREEN FINANCE: HOW SOON WILL CENTRAL BANKERS BACK INCLUSION?

When the leaders of central banks in Europe jointly proclaimed in April this year at a global conference organized by the Network for Greening the Financial System (NGFS) in Paris that responding to climate change was within their mandates, I couldn't help but be impressed by the rapid and recent shift in the mindset of central bankers globally.

Members of the Alliance for Financial Inclusion (AFI) have been at the forefront of this trend. Inclusive Green Finance focuses on enabling mitigation and creating resilience for low income individuals and MSMEs. Given the existential threat that climate change poses to low-income populations in developing countries, these policies increasingly seem less like a choice and more of an imperative. This also brings complementarity to other global initiatives, such as the Network for Greening the Financial System, focused on scaling up green finance through capital markets and large-scale project financing.

Our new report - "Inclusive Green Finance - A Survey of the Policy Landscape" - shows that many AFI members are devising and implementing policies that include both individuals and micro, small and medium enterprises (MSMEs) in efforts to mitigate or build resilience to the impacts of climate change.

In the report, we categorize these policies into the "4Ps of Inclusive Green Finance": Provide, Promote, Protect and Prevent. The 4P Policies have been identified from existing and practical policy responses of AFI members to the effects of climate change. They generate financial services for climate action from the private sector or use financial infrastructure to deploy them.

Recognizing the need for collaborative action, the AFI Network adopted the Sharm El Sheikh Accord on Financial Inclusion, Climate Change and Green Finance already in September 2017, with further guidance outlined in the 2018 Nadi Action Agenda. By working towards common objectives, developments at the national level to advance inclusive green finance should not be separated from the global UNFCCC process, but included in national planning as well as reporting on the implementation of the Paris Agreement.

Many of the countries represented in AFI are indeed particularly vulnerable to changing climates. In Fiji, for example, Tropical Cyclone Winston wiped out a third of the country's gross domestic product (GDP) in early 2016. Three years later, Cyclone Idai became the strongest cyclone on record in the Southern Hemisphere, causing the deaths of over 1,000 people and devastating parts of Mozambique, Malawi and Zimbabwe.

Through its inclusive green finance program, AFI works toward implementing the United Nations Framework Convention on Climate Change's (UNFCCC) Paris Agreement by advancing the long-term goal of making finance flows consistent with a pathway toward low greenhouse gas emissions and climate-resilient development (Article 2.1c).

Policies under the 4P framework also support agreed practical efforts to enhance adaptive capacity, strengthen resilience and reduce vulnerability to climate change while also averting, minimizing and addressing loss and damage associated with its adverse effects (Articles 7 and 8).

I welcome the recent shift in the attention of central banks towards climate change. It reminds me of the early days of AFI, when financial regulators discussed to include financial inclusion in their mandates. Slowly but surely these efforts came to fruition, giving rise to a diverse global network of over 100 member institutions that are leading impactful policy change for the world's unbanked. Today, it's time for AFI to widen its focus by advocating global efforts on green finance that are inclusive by making sure they meet the needs of low-income people at the bottom of the pyramid.

By Dr. Alfred Hannig
AFI Executive Director



Dr. Alfred Hannig, AFI Executive Director

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.

This survey of the policy landscape reveals new and emerging policy practices that are guiding the transition to more inclusive and resilient low-carbon economies, and thereby contribute to the global effort to implement the Paris Agreement and achieve climate-related Sustainable Development Goals (SDGs).



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, there is ample research that shows 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, and 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 bottom of the economic pyramid in the transition to low-carbon economies.

Inclusive green finance is a new and evolving policy area in which 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 a member survey in 2018 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

More than 90 percent of AFI members interviewed for the survey indicated they are already taking or plan to take steps to address the impacts of climate change in their countries. The survey 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. More than 75 percent of the 19 countries² included in the survey have explicitly linked climate change and financial inclusion in their national financial sector 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 and Green Finance - and more recently the Nadi Action Agenda - these policies

include individuals and MSMEs in climate mitigation and resilience efforts and have one thing in common: they either catalyze financial services for climate action from the private sector or use financial infrastructure to deploy them.

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

1. PROVISION

Provision policies help to ensure financial services are provided to qualified beneficiaries, whether through targeted lending for renewable energy projects or through refinancing recovery and reconstruction efforts.

2. PROMOTION

Promotion policies create incentives for the private sector to offer financial services to qualified beneficiaries, for example, through moral suasion, awareness raising and capacity building for green lending, or data collection and dissemination on green finance.

3. PROTECTION

Protection policies reduce financial risk by “socializing” potential losses through insurance or social payments, or by giving one early access to their assets in a time of crisis, such as early withdrawals from pension funds. Policies in this category provide a much-needed safety net and help to build resilience by accelerating and facilitating recovery from extreme climate events.

4. PREVENTION

Prevention policies aim to avoid undesirable outcomes by lowering financial, social and environmental risks. As part of this effort, AFI members 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.

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

2 These AFI members represent 14 percent of the entire AFI membership.

INTRODUCTION

When the “yellow vests” first took to the streets of France in late 2018, the violent protests took the French government as much as the rest of the world by surprise. Sparking the unrest was the announcement of a fuel tax aimed at reducing carbon emissions - to many, a reasonable step by a country at the forefront of climate action.

Large parts of France’s low-income population, however, believed that the burden of this tax would fall disproportionately on their shoulders. The protests have since turned into a social movement, slowing economic growth and destabilizing the government. If one lesson can be drawn from France’s experience, it is that policies for climate action cannot ignore the interests of those at the bottom of the economic pyramid.

It is evident that climate action in developing countries will require different measures than in a developed, carbon-emitting country like France. Many of the countries represented in the AFI network are particularly vulnerable to a changing climate. For example, in Fiji, Tropical Cyclone Winston wiped out a third of the country’s GDP in 2016, and in March 2019, Cyclone Idai affected Mozambique, Malawi and Zimbabwe as the strongest cyclone on record in the Southern Hemisphere with a death toll of over 1,000.

AFI member institutions have been enacting an array of policies and regulation aimed at mitigating the impacts of climate change and building resilience. While most global efforts have focused on scaling up green finance through capital markets and large-scale project financing, some AFI member institutions have started to expand this focus.

By “scaling down” green finance to include low-income individuals and MSMEs, AFI members are beginning to actively engage those who not only feel the impacts of climate change most acutely, but also have the most to gain from climate mitigation and resilience efforts. Given the existential threat that climate change poses to developing countries, these policies increasingly seem less like a choice and more of an imperative.

Inclusive green finance for climate action is a rapidly evolving policy area. This report takes stock of the current state of practice in the AFI network and the national strategies, policies and regulations beginning to guide the transition to low-carbon economies and build resilience to climate change. From climate risk insurance to lending programs for green products and technologies, these efforts fall within four key policy pillars of inclusive green finance: Provision, Promotion, Protection and Prevention.



Yellow Vests protesters against fuel tax, government, and French President Macron with French flag at Champs-Élysées, France

FINANCIAL INCLUSION AND CLIMATE CHANGE: MAKING THE CONNECTIONS

CLIMATE CHANGE DEEPENS POVERTY

There is abundant evidence that climate change has a disproportionate impact on poor and vulnerable populations.³ Those living in low-lying coastal zones or on marginal agricultural land in developing countries⁴ 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.⁵

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 2030.⁶

Less well understood is how these impacts combine and interact to intensify stresses on low-income populations.⁷

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.

In 2017, floods affected about 41 million people in South Asia, while nearly 892,000 faced drought-related internal displacements in East Africa.⁸

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.⁹

The effects of climate change on health can further imperil low-income and vulnerable populations. Extreme 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 (children in Africa under five are particularly vulnerable).¹⁰

Compounding these effects are hygiene issues and diarrheal disease, which become more common when climate change makes safe water scarce.¹¹ It has been estimated that climate change could cause 250,000 additional deaths per year between 2030 and 2050¹² and generate direct health costs of US\$2 billion to \$4 billion per year by 2030.¹³

Climate change and disastrous climate events can also exacerbate socioeconomic stresses¹⁴ on the poor, such as job losses. People in developing countries often depend heavily on MSMEs for employment, which generally have less capacity to withstand financial shocks.¹⁵ Climate-related job losses can also put added strain on already weakened governments to deliver public goods and services, elevating the risk of political instability.

INCLUSIVE GREEN FINANCE

FINANCIAL SECTOR
POLICIES AND
REGULATION



TARGETED AT
INDIVIDUALS
AND MSMEs



BUILDING RESILIENCE /
ENABLING MITIGATION



3 Agyeman et al., 2003; Derman, 2014; Karim and Noy, 2014.

4 Barbier and Hochard, 2018; IPCC 2014; Hallegatte et al., 2017.

5 IPCC, 2014; WBG, 2016; Barbier & Hochard, 2018.

6 WBG, 2016; Barbier and Hochard, 2018.

7 O'Neal, 2014; Price, 2017.

8 WMO, 2018.

9 Hallegatte et al., 2016.

10 WHO, 2018.

11 Ibid.

12 WHO, 2014.

13 WHO, 2018.

14 National Research Council, 2013.

15 Schaer and Kuruppu, 2018.

FINANCIAL INCLUSION BUILDS RESILIENCE TO CLIMATE CHANGE

While climate change deepens poverty, ample research shows that financial inclusion can build the resilience of individuals,¹⁶ 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 most adults have access to a mobile phone, digital financial services have the potential to reach more of the unbanked - primarily women, the poor and those living in rural areas.¹⁷ Mobile money accounts allow marginalized populations to receive cash transfers after disasters and provide a fast, targeted and cost-efficient channel for supporting affected communities.¹⁸

SAVINGS

Higher savings rates can help the poor smooth consumption after unexpected shocks and withstand the strain of gradual cost increases.¹⁹ 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.²⁰

Savings accounts with financial institutions provide the greatest resilience - more than informal savings in the form of livestock or housing²¹ - 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.²²

CREDIT

While poor households find it difficult to afford the high upfront costs of low-carbon technologies and 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, guarding against the risks of future droughts, floods or other climate impacts.²³

INSURANCE

Parametric insurance or weather index insurance for farmers, and microinsurance for those without traditional insurance, provide a buffer against extreme weather events and volatility.²⁴ For smallholder farmers, insurance provides the security to make the types of investments and production choices that increase agricultural productivity. This has happened in Ghana where the provision of rainfall index insurance has prompted farmers to make bigger investments that have increased profits.²⁵

16 IPA, 2017.

17 Demirguc-Kunt et al., 2015.

18 GSMA, 2014.

19 IPA, 2017.

20 Hallegatte et al., 2017.

21 Hallegatte et al., 2017.

22 Brune et al., 2015.

23 IPA, 2017.

24 The Geneva Association, 2018.

25 Karlan et al., 2014.



Female farmer planting rice, Malawi

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 Sustainable Development Goals (SDGs).

For example, mobile money-enabled pay-as-you-go (PAYG) 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.²⁶ 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.

In Fiji and the Philippines, post-disaster social payments were distributed via mobile money to those affected by cyclones and hurricanes. Using mobile money lowers the cost of distribution, reaches more people and increases transparency, which can prevent corruption.

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.

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.²⁷

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.

26 World Bank Group. January 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

27 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



SME sells airtime to paddy farmers on his solar powered mobile phone, Bangladesh

GREEN TECHNOLOGIES HELP TO MITIGATE CLIMATE CHANGE AND REDUCE POVERTY

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, either standalone solar systems or combined solar systems with mini-hydroelectric systems or battery storage, can provide relatively low-cost electricity to unconnected areas.²⁸

They can also enable other technologies, such as solar-powered water pumps, to replace emissions-intensive diesel generators and increase incomes.²⁹ There are several financial barriers to the spread of microgrids, from high upfront costs to commercial bank concerns over defaults on loans. In Bangladesh, these challenges were addressed with programs that allowed users to pay for solar equipment in installments.³⁰

Mobile money has played an important role in enabling payments for the use of off-grid solar utilities, commonly known as pay-as-you-go (PAYG) solar systems, which have become popular in developing countries.

CLEANER COOKSTOVES

Cleaner cookstoves have significant potential to ease the transition to a low-carbon economy. Replacing conventional three-stone fire cookstoves with more efficient or fan-assisted models would reduce the number of premature deaths attributed to air pollution – currently about seven million a year – and benefit ecosystems and livelihoods by reducing dependence on biomass energy. Cleaner cookstoves have the potential to mitigate climate change by reducing global CO₂ emissions by 2.3 percent.³¹

Unfortunately, low-income populations often lack access to finance to purchase improved or advanced stoves, and banks can be reluctant to offer loans to low-income individuals without credit history. Some have proposed that banks work more directly with manufacturers, distributors and other stakeholders in the cookstove value chain to increase production and liquidity, which would ultimately expand access to cleaner technologies.³²

28 IEG, 2008.

29 Warren, 2018.

30 Yee, 2016.

31 Lacey et al., 2017; WBG, 2014.

32 Hewitt et al., 2018.



A family in their adobe house next to a wind farm, Kutubdia, Bangladesh

STRATEGIES AND POLICIES FOR INCLUSIVE GREEN FINANCE

LINKING FINANCIAL INCLUSION AND CLIMATE CHANGE IN FINANCIAL SECTOR STRATEGIES

Inclusive green finance is a new and still evolving policy area, but financial regulators in the AFI network have begun responding, often with urgency, with strategies, policies and regulations that help 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 a member survey in 2018 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.³³

The vast majority of survey respondents believed that climate change was a problem in their country and had imposed a high cost on low-income and vulnerable populations. More than 90 percent indicated they were already taking or planned to take steps to address this problem. For most, this reflected a recognition that their institution was mandated to promote economic development in their country, and since climate change posed a threat to this development, it was a concern of the central bank.

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). More than 75 percent of the 19 countries³⁴ included in the AFI member survey on inclusive green finance have **explicitly linked climate change and financial inclusion** in national financial sector strategies. Three of those AFI members - the central banks of Fiji, Rwanda and Jordan - make an explicit link between climate change and financial inclusion in their NFIS, while the Central Bank of Egypt is currently preparing an NFIS and is considering making climate change a pillar of the 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."

³³ For more information on the AFI member survey and results, see Appendix 1.

³⁴ These AFI members represent 14 percent of the entire AFI membership.

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	Armenia (planned)		✓	
2	Bangladesh			✓
3	Egypt	✓ Planned		
4	Fiji	✓		✓ Planned
5	Jordan	✓		
6	Morocco		✓	✓
7	Nepal			✓
8	Nigeria			✓
9	Philippines		✓	
10	Rwanda	✓		
11	Tanzania		✓	
12	Vanuatu		✓	

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. In the Second Strategic Plan (2015-2019), it strengthened that link by “promot[ing] 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 the preparation of Environmental and Social Risk Management (ESRM) Guidelines for banks and financial institutions. The **National Bank of Rwanda** recently finalized its NFIS and made the impacts of climate change an explicit part of it. 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 under 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.

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 also does not specifically mention climate change, but identifies those living in very vulnerable areas, such as coastal towns, as a target population. Given that this population is also likely to be financially excluded, the NFIS will help to strengthen their resilience to potential negative climate impacts. **Tanzania’s** NFIS 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.

Morocco’s NFIS addresses climate change implicitly, primarily through inclusive insurance, such as microinsurance and agricultural insurance for vulnerable populations. Finally, Armenia has included agricultural insurance in its draft NFIS, which would address losses from climate-induced weather events. Again, the link between financial inclusion and climate change is clear to all stakeholders without being mentioned explicitly.

Some countries have **linked financial inclusion and climate change in other national financial sector strategies**. **Morocco’s** National Roadmap for Aligning the Financial Sector with Sustainable Development sets out a strategic vision that includes risk-based governance for social and environmental risks, sustainable financial instruments and products, and financial inclusion as a driver for sustainable development.

In **Nigeria**, 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.

The **Reserve Bank of Fiji** is currently drafting a Sustainable Finance Roadmap that 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 bring Fiji’s national strategies for financial inclusion, climate change, environmental conservation, social inclusion and economic development into alignment.

Making the link between climate change and financial inclusion in national strategies is important, and AFI member institutions have already enacted a range of policies to translate these strategies into concrete action, centred around four key pillars.



Female tea plantation worker, Kinyihira, Rwanda

4P FRAMEWORK OF INCLUSIVE GREEN FINANCE: PROVISION, PROMOTION, PROTECTION AND PREVENTION

While financial regulators have taken a variety of approaches, they have found 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 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: **Provision, Promotion, Protection and Prevention**. All policies under the 4Ps either catalyze financial services from the private sector or use financial infrastructure to deploy finance for climate action. Although the lines between these four categories are not clear cut and are sometimes blurry, the purpose of the framework is to provide financial regulators with an intuitive way to think about the full range of policy actions they can take for inclusive green finance.



PROVISION policies help a government ensure that financial services are provided to qualified beneficiaries, either directly by the government itself or by the private sector fulfilling a government mandate.

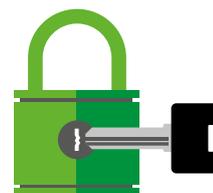


PROMOTION policies allow a government to create incentives for the private sector to offer financial services to qualified beneficiaries.



PREVENTION policies aim to avoid undesirable outcomes rather than addressing them after the fact.

PROTECTION policies reduce financial risk by “socializing” potential losses through insurance or social payments, or by giving exceptional access to one’s own assets.





Provision policies help a government ensure that financial services are provided to qualified beneficiaries, either directly by the government itself or by the private sector fulfilling a government mandate.

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, (iii) it promises a 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. A clear example of this approach is **Bangladesh Bank**, which in 2014 introduced a regulatory target on the annual disbursement of green finance.

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. Finally, 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.

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 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. **Bangladesh Bank** has also used refinancing facilities to promote low-carbon technologies, providing subsidized credit for solar energy, biogas and waste treatment projects.



Small water reservoir for Hydroelectric Power, Nepal

Over the last decade, the resources, green products and scope of the scheme have expanded to the point where four separate schemes now support 50 products in 11 categories. The **State Bank of Pakistan** has also introduced a refinancing scheme that provides funds to commercial banks to offer subsidized loans for renewable energy projects generating up to 50 megawatts. **Nepal Rastra Bank** offers refinancing facilities for banks to provide subsidized loans (from US\$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. Finally, in Armenia, the German-Armenia Fund (GAF) founded by the **Central Bank of Armenia**³⁵ provides longer term financing in local currency to financial institutions to on-lend to key sectors, such as energy efficiency and renewable energy.

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. For example, **Nepal Rastra Bank** offers refinancing facilities for subsidized loans of around US\$9,000 to rebuild from floods and fires, modelled on a program that supported post-earthquake recovery and reconstruction.

Vanuatu's 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 US\$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.

Another example is **Fiji's Natural Disaster Rehabilitation Facility**, a climate resilience and adaptation program to which affected businesses and homeowners could 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 could apply for funding up to the equivalent of US\$235,000 at a maximum interest rate of five percent per annum, while homeowners could apply for up to the equivalent of US\$2,350 at a maximum interest rate of 4.5 percent per annum. This facility was available from all commercial banks, the Fiji Development Bank and licensed credit institutions.

CHALLENGES WITH PROVISION POLICIES

While provision policies signal a commitment to climate action and are comparatively easy to monitor, they can fall short of public expectations and implementation is likely to present challenges.

For example:

- > How are beneficiaries defined? What constitutes “renewable” or “green” products and how can policymakers ensure that the rules include innovative new products?
- > How does one distinguish between adaptation to climate change and general economic development?
- > 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?

Given these drawbacks and challenges, policymakers could begin with provision policies and gradually transition to the second “P”.

³⁵ 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.



Tsunami Warning Tower, Pacific Islands

DEFINING GREEN FINANCE

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

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 Brazilian Bankers Federation (FEBRABAN) has developed a methodology for assessing green finance that looks at investments subject to general policies and voluntary commitments, those for which there is evidence that Environmental, Social and Governance (ESG) analysis has been actively applied and those subject to the environmental criteria of particular sectors.

The People's Bank of China defines green finance policy as

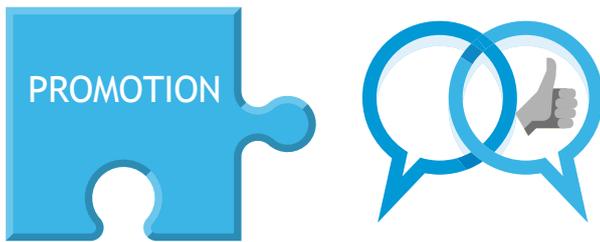
“a series of policy and institutional arrangements to attract private capital investments into green industries such as environmental protection, energy conservation and clean energy through financial services including lending, private equity funds, bonds, shares and insurance.”

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.³⁶

³⁶ UNEP Inquiry, 2016. “Definitions and Concepts: Background Note”. Available at: http://unepinquiry.org/wp-content/uploads/2016/09/1_Definitions_and_Concepts.pdf



Aerial view wind turbines, China



Promotion policies allow a government to create incentives for the private sector to offer financial services to qualified beneficiaries.

In contrast to ensuring the direct provision of funds, this set of policy options allows 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, for most promotion policies, the lender bears the risk and is therefore highly motivated to select projects carefully. With mandated lending, this motivation is diluted by the need to satisfy the quantitative directive of the authorities.

MORAL SUASION

One way central banks can promote policies without direct legal intervention is moral suasion. Moral suasion employs the strategic use of persuasion and advocacy to encourage financial institutions to facilitate financing for climate-smart technologies. In the Philippines, **Bangko Sentral ng Pilipinas (BSP)** has appealed to

commercial banks to recognize the business case for green lending, signaling to the private sector that green finance is a public good and that it can benefit both an institution's bottom line and society overall.

AWARENESS RAISING AND CAPACITY BUILDING

BSP has also sought to fill knowledge gaps on green lending and investment for commercial banks and other financial institutions, primarily through a series of capacity building activities. **BSP** has organized training for senior management and chief risk officers of banks to increase their awareness and knowledge of ESRM tools and principles. For **BSP**, the ability of financial services providers to design and offer relevant products and services is the first and most important step in building a more sustainable financial sector.

In Morocco, **Bank Al-Maghrib** noted that a growing number of banks were lending 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. It has also supported training on green finance with the Moroccan Banking Association. Specifically, the Sustainable Development Committee including **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 the twice-yearly meetings held between the **BAM** Governor and the presidents of Morocco's banks.

The **Bank of Thailand** has recently begun to host meetings with the financial sector to raise awareness of the importance of green lending.



Fisherman catching fish in the pond, Asia

INNOVATION INVESTMENT FUNDS

In 2018, **Morocco** created the “Innov Invest” fund to support startups in fields ranging from fintech to renewable energy, including “cleantech”. With US\$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.

DATA COLLECTION

Data collection and dissemination tend to be powerful tools because they create benchmarks for financial services providers to measure their performance.

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 the reporting of sex-disaggregated data on green finance.

LOWERING OF BASE INTEREST RATE AND RESERVE REQUIREMENTS

Temporary changes to reserve requirements and 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.

CHALLENGES OF PROMOTION POLICIES

In contrast to provision policies, which are driven by direct public sector involvement, promotion policies indirectly help banks and other financial services providers to determine the best course given 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.



The clean up after Cyclone Pam, Vanuatu



Protection policies reduce financial risk by “socializing” potential losses through insurance or social payments, or by giving exceptional access to one’s own assets.

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.

CLIMATE RISK INSURANCE

Climate risk insurance can protect vulnerable populations against climate-related threats, for example, by providing assurance to farmers that a sudden climate-related weather event will not wipe out their investments. Several types of insurance products have been adopted by AFI member institutions to address these concerns. In **Armenia**, where agriculture is a mainstay of the Armenian economy and the sector is experiencing acute impacts of climate change, the central bank has established a system of agricultural climate insurance.

Smallholder farmers are especially sensitive as they have limited capacity to cope with the financial losses that come from sudden and extreme weather shocks like hail and frost, and Armenia’s banking sector is 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 the Agricultural Insurers’ National Agency (AINA),³⁷ a public-private partnership responsible for agriculture insurance market development.

The program subsidizes 50 to 60 percent of the cost of insurance policies for agricultural insurance products, depending on the risk and the crop. Armenian banks have incentivized uptake by reducing loan interest rates for farmers who purchase climate risk insurance. Reducing reliance on banks and insurance companies for public emergency assistance has simultaneously strengthened financial stability and made farmers and financial institutions less vulnerable to the impacts of climate change. 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 sand storms.

37 Previously called the National Agricultural Risk Management Agency.



Grape harvest, Yerevan, Armenia

In March 2019 a disaster consequence coverage scheme was adopted, which sets up a dual compensation system: Insurance for victims with existing insurance contracts and a solidarity scheme for individuals who do not have insurance coverage. Moreover, the 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 towards expanding the assets accepted as cover for technical provisions to include green assets in order 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 subsidized funds to incentivize bank lending to smallholders facing climate risks.

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.



Young farmers using mobile phone, Nigeria

NIRSAL includes a US\$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.

MOBILE MONEY FOR G2P

Mobile money-enabled 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. Several countries in the AFI network have used variations of G2P mobile money programs for this purpose. The **Government of Fiji** used mobile payments for disbursement of 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. In the **Philippines**, Mercy Corps has used mobile money for post-disaster recovery, transferring donations to beneficiaries in locations heavily affected by natural disasters.

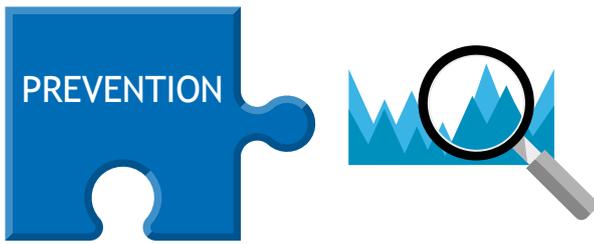
EARLY WITHDRAWAL FROM PENSION FUNDS

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 US\$500 and US\$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 US\$130 million was ultimately paid out.

CHALLENGES OF PROTECTION POLICIES

As in any situation where risk is only partially borne by a decision maker, risk sharing will have consequences. Some of these are welcome, for example, having insurance is a greater incentive for farmers to make productive agricultural investments than receiving cash grants.³⁸ Other effects may not be so desirable, such as beneficiaries engaging in more risk-prone behavior.

38 IPA study.



Prevention policies aim to avoid undesirable outcomes rather than addressing them after the fact.

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) Guidelines 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 (PRSA) and made the application of those guidelines a condition for commercial bank operation. The 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 environmental risk management 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 making non-financial risk part of the decisions governing credit provision.

ESRM regulations can be either 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.



People cross a flooded street, Dhaka, Bangladesh

INVOLVEMENT OF CENTRAL BANKS AND FINANCIAL SECTOR REGULATORS IN NATIONAL CLIMATE POLICY DEVELOPMENT

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 has been limited. Half of the AFI members interviewed for the member survey on inclusive green finance had not contributed in any way to national climate strategies like Nationally Determined Contributions or National Adaptation Program of Actions (see Table 2).

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.

Sometimes coordination happens on an ad hoc basis. Although the Philippine Climate Change Action Plan does not name **Bangko Sentral ng Pilipinas** as a primary actor, BSP has built a close relationship with the Climate Change Commission and the Department of the Environment and Natural Resources. BSP participates in forums organized by both these 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.

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, while other countries have been more reactive. 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.



Solar powered irrigation equipment used by Bangladesh's agriculture work force, which represents 45% of the country's economy.

CONCLUSION

AFI members consider climate change a threat to inclusive development in their countries and recognize the disproportionate impact it has on those living at the bottom of the economic pyramid.

In line with the Sharm El Sheikh Accord on Financial Inclusion, Climate Change and Green Finance - and more recently the Nadi Action Agenda - financial sector regulators have begun to devise and implement policies that include individuals and MSMEs in efforts to mitigate or build resilience to the impacts of climate change.

This is part of a broader recent trend of central banks rising to the challenge of climate change across the globe. A prominent example is the Network for Greening the Financial System (NGFS), a network of central banks and supervisory authorities in mostly developed countries, which is committed to the development of environment and climate risk management in the financial sector and mobilizing mainstream finance to support the transition to sustainable economies. While the main motivation of existing initiatives might range from promoting economic development to concerns over financial sector stability, it cannot be denied that the significant momentum in this area reflects a fundamental change in mindset of financial sector regulators toward the climate crisis.

Policy responses are increasingly embedded in national strategies, and AFI members are beginning to make Maya Declaration commitments to focus and catalyze their national efforts on inclusive green finance. Linking financial inclusion and climate change in national financial sector strategies is slowly becoming a trend in the AFI network, and AFI members have already enacted a broad range of policies to turn their strategic objectives into reality. These policies - presented in this report as the 4P framework of inclusive green finance - all share one thing in common: they either catalyze financial services for climate action from the private sector or use financial infrastructure to deploy them.

Inclusive green finance is also a step toward the implementation of the Paris Agreement, which was ratified by 185 parties to the UN Framework Convention on Climate Change (UNFCCC). Policies under AFI's 4P framework on inclusive green finance are an important advancement of 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.

This part of the Paris Agreement highlights the need to look at all finance flows - public, private, domestic and international - in ensuring the transition to a carbon-neutral and climate-resilient world.

Policies to advance inclusive green finance are also part of implementing 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. Efforts made at the national level to advance inclusive green finance should not be separated from the global UNFCCC process, but included in national reporting on the implementation of the Paris Agreement, as well as the 2023 Global Stocktake. Policies under the 4P framework could also be strong elements of the long-term, mid-century strategies that parties to the Convention are expected to submit by 2020.

Inclusive green finance should also be considered in close relation to the implementation of the Agenda 2030 for Sustainable Development and the Sustainable Development Goals (SDGs) - specifically SDG 13, which aims for urgent action to combat climate change and its impacts, including strengthening resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.

As inclusive green finance evolves as a policy area, AFI will continue to catalogue new and emerging policy practices, which over time will build a body of knowledge to support peer learning in the AFI network and provide guidance on policy implementation.

There is fast-growing demand among financial regulators for peer learning and knowledge exchange, but major knowledge gaps remain. Establishing a taxonomy and agreement on a common language for green and sustainable finance would provide greater clarity for financial services providers and allow for standardization. It would also mark a step forward in a shared project to measure impact, which will eventually underpin evidence-based policymaking.

Finally, there appears to be scope for AFI members to contribute more systematically to national climate strategies. Although typically led by environment ministries, the financial sector can play an important complementary role in catalyzing inclusive climate mitigation and resilience efforts. Closer involvement of financial regulators could further align national efforts and extend financial services to those most in need.



These policies - presented in this report as the 4Ps of inclusive green finance - all share one thing in common:

They either catalyze financial services for climate action from the private sector or use financial infrastructure to deploy them.



APPENDIX

1. AFI MEMBER SURVEY ON INCLUSIVE GREEN FINANCE

METHODOLOGY

AFI devised a survey to understand the current state of practice on inclusive green finance among its members. The survey concentrated on five themes:

- 1) institutional mandates and reasons for financial sector regulators to work on climate change;
- 2) relevant national financial sector strategies;
- 3) policies targeting individuals and MSMEs for climate change adaptation and mitigation;
- 4) definitions and criteria for green lending; and
- 5) institutional coordination between financial regulators and agencies responsible for climate change.

The survey was discussed with policymakers in 19 countries from the AFI network: Armenia, Bangladesh, Brazil, Cambodia, Costa Rica, Egypt, Fiji, Guatemala, Jordan, Morocco, Nepal, Nigeria, Pakistan, Paraguay, Philippines, Rwanda, Sri Lanka, Tanzania and Vanuatu. Most of the interviews were conducted over the phone, although in a few instances written responses were submitted.

2. LIST OF INTERVIEWEES

NO	INTERVIEWEE	ORGANIZATION	COUNTRY
1	Poasa Werekoro	Reserve Bank of Fiji	Fiji
2	Christina Rokoua	Reserve Bank of Fiji	Fiji
3	Asif Iqbal	Bangladesh Bank	Bangladesh
4.	Ani Badalyan	Central Bank of Armenia	Armenia
5	Armenuhi Mkrtchyan	Central Bank of Armenia	Armenia
6	Anna Vardikyan	Central Bank of Armenia	Armenia
7	Rochelle D. Tomas	Bangko Sentral ng Pilipinas	Philippines
8	Cristian Vega Cespedes	Superintendencia General de Entidades Financieras de Costa Rica	Costa Rica
9	Amr Ahmad	Central Bank of Jordan	Jordan
10	Waleed Samarah	Central Bank of Jordan	Jordan
11	Kamarul Hoque Maruf	Insurance Development and Regulatory Authority	Bangladesh
12	Alison N. Baniuri	Reserve Bank of Vanuatu	Vanuatu
13	Malik Khan	State Bank of Pakistan	Pakistan
14	Muhammad Ishfaq	State Bank of Pakistan	Pakistan
15	Saeed Afgan	State Bank of Pakistan	Pakistan
16	Ricardo Estrada	Superintendencia de Bancos de Guatemala	Guatemala
17	Jennifer Pérez	Superintendencia de Bancos de Guatemala	Guatemala
18	El Anzaoui Ibtissam	Bank Al-Maghrib	Morocco
19	Ghita Tahiri	Bank Al-Maghrib	Morocco
20	Som Kossom	National Bank of Cambodia	Cambodia
21	Francoise Kagoyire	National Bank of Rwanda	Rwanda
22	James Rwagasana	National Bank of Rwanda	Rwanda
23	Christian Tondo	Central Bank of Paraguay	Paraguay
24	Enrico Dalla Riva	Banco Central do Brasil	Brazil
25	Stanislaw Zmitrowicz	Banco Central do Brasil	Brazil
26	A'isha U. Mahmood	Central Bank of Nigeria	Nigeria
27	Khaled Bassiouny	Central Bank of Egypt	Egypt
28	Walid Ali	Central Bank of Egypt	Egypt
28	Narayan Prasad Paudel	Nepal Rastra Bank	Nepal
30	Nangi Massawe	Central Bank of Tanzania	Tanzania

BIBLIOGRAPHY

- Agyeman, J., Bullard, R. and Evans, B. (Eds.). 2003. *Just Sustainabilities: Development in an Unequal World*. MIT Press: Massachusetts.
- 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.
- Brune, L., Gine, X., Goldberg, J. and Yang, D. 2016. Facilitating savings for agriculture: Field experimental evidence from Malawi. *Economic Development and Cultural Change* 64 (2). 187-220.
- Derman, B. 2014. Climate governance, justice, and transnational civil society, *Climate Policy* 14(1): 23-41.
- Demircuc-Kunt, A., Klapper, L., Singer, D. and van Oudheusden, P. 2015. *The Global Findex Database 2014: Measuring Financial Inclusion around the World*. Washington, DC: World Bank Group.
- 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>.
- 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.
- Intergovernmental Panel on Climate Change (IPCC). 2014. *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., V.R. Barros, D.J. Dokken, K.J. March, M.D. Mastrandrea, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea and L.L. White (Eds.). Cambridge: Cambridge University Press.
- Hallegatte, S., Bangalore, M., Bonzanigo, L., Fay, M., Kane, T., Narloch, U., Rozenberg, J., Treguer, D. and Vogt-Schilb, A. 2016. *Shock Waves: Managing the Impacts of Climate Change on Poverty*. Washington, DC: World Bank Group.
- Hallegatte, S., Vogt-Schilb, A., Bangalore, M. and Rozenberg, J. 2017. *Unbreakable: Building the Resilience of the Poor in the Face of Natural Disasters*. Washington, DC: World Bank Group.
- Hewitt, J., Ray, C., Jewitt, S. and Clifford, M. 2018. Finance and the improved cookstove sector in East Africa: Barriers and opportunities for value-chain actors. *Energy Policy*, 117, 127-135.
- Karim, A. and Noy, I. 2014. "Poverty and Natural Disasters: A Meta-analysis", *Review of Economics and Institutions* 7(2) Article 2.
- Karlan, D., Kutsoati, E., McMillan, M. and Udry, C. 2011. Crop price indemnified loans for farmers: A pilot experiment in rural Ghana. *Journal of Risk and Insurance* 78 (1), 37-55.
- Lacey, F., Henze, D., Lee, C., van Donkelaar, A. and Martin, R. 2017. *Transient climate and ambient health impacts due to national solid fuel cookstove emissions*. PNAS 114 (6), 1269-1274.
- 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>
- 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=thesesdissertations>
- Price, R. 2017. *Climate change and stability in North Africa*. Available at: https://assets.publishing.service.gov.uk/media/5a7052bde915d266017b8aa/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.
- 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
- Warren, C. 2018. *Water From the Sun: Solar-Powered Water Pumps Offer African Farmers a Way Out of Poverty*. Greentech Media: A Wood Mackenzie Business. Available at: <https://www.greentechmedia.com/articles/read/water-from-the-sun#gs.3labtx> [Accessed on 3 April, 2019]
- World Bank Group. 2014. *Understanding the Differences between Cookstoves*. Open Knowledge Repository.
- World Bank Group. 2016. *Climate Change Action Plan*. Washington, DC: World Bank Group.
- World Health Organization. 2014a. *Quantitative Risk Assessment of the Effects of Climate Change on Selected Causes of Death, 2030s and 2050s*. WHO: Geneva.
- World Health Organization. 2018. *Fact sheets on Climate Change and Health*. Available at 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. 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>

Alliance for Financial Inclusion

AFI, Sasana Kijang, 2, Jalan Dato' Onn, 50480 Kuala Lumpur, Malaysia
t +60 3 2776 9000 e info@afi-global.org www.afi-global.org

 Alliance for Financial Inclusion  AFI.History  @NewsAFI  @afinetwork