

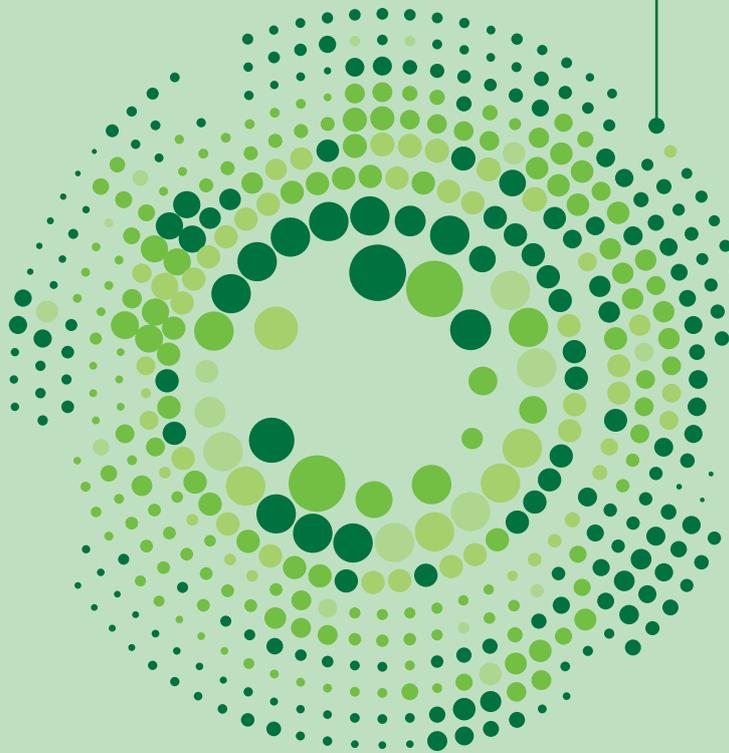


**Inquiry:** Design of a  
Sustainable Financial System



# GREEN FINANCE FOR DEVELOPING COUNTRIES

*Needs, Concerns and  
Innovations*



JULY 2016

## The Inquiry

The Inquiry into the Design of a Sustainable Financial System has been initiated by the United Nations Environment Programme to advance policy options to improve the financial system's effectiveness in mobilizing capital towards a green and inclusive economy—in other words, sustainable development. Established in January 2014, it published its final report, *The Financial System We Need*, in October 2015 and is currently focused on actions to take forward its findings.

More information on the Inquiry is at: [www.unep.org/inquiry](http://www.unep.org/inquiry) and [www.unepinquiry.org](http://www.unepinquiry.org) or from:

Ms. Mahenau Agha, Director of Outreach [mahenau.gha@unep.org](mailto:mahenau.gha@unep.org)

## About this report

The report was developed by Maya Forstater, Mark Halle and Simon Zadek from the UNEP Inquiry drawing on interviews with practitioners, regulators and experts from developing countries, including Bangladesh, Colombia, Kenya, Mongolia, Morocco, Nigeria, Peru, Viet Nam. It draws on a meeting co-hosted with the Swiss Ministry of Finance in Geneva on 6-7 April 2016 with practitioners and regulators from Egypt, Honduras, Jordan, Kenya, Mauritius, Mongolia, Morocco, Philippines, Thailand and Viet Nam, and a dialogue with G20 Members co-hosted by the IFC in Washington, D.C. on 12 April 2016.

Unless specifically referenced in the text, quotes in blue come from these interviews and meetings. However, the report does not represent the views of the participants in the dialogue, or the members of the G20 or Green Finance Study Group.

## Acknowledgements

We are particularly grateful to Rong Zhang, Global Coordinator, Sustainable Banking Network, IFC and to the interview and meeting participants including Careen Abb, UNEP FI; Saif Al-Ibrahim, Financial Stability Department, Central Bank of Jordan; Gabriele Arnoldi, External Relations Team, European Insurance and Occupational Pensions Authority; Gracia M. Barahona, Executive director, Ecobanking, INCAE Business School; Sunil Benimadhu, Chief Executive of the Stock Exchange of Mauritius; Manjeet Bucktowarsing, Financial and Research Analyst, Stock Exchange of Mauritius; Emmanuel Dooc, Insurance Commissioner, Philippines; Nomindari Enkhtur, International Relations and Partnership Manager, Mongolian Bankers Association; Mohamed Ghandour, Bank Al-Maghrib, Morocco; Geeda Haddad, Africa and Middle East Regional Coordinator, UNEP FI; Unenbat Jigjid, Executive Director and Secretary General, Mongolian Bankers Association; A'isha U Mahmood, Special Adviser to Central Bank of Nigeria Governor on Sustainable Banking; Isabel Teresa Mantilla Naranjo, Vice President of Corporate Affairs, Asobancaria, Colombia; Nuru Mugambi, Director of Communications and Public Affairs, Kenya Bankers Association; Mohammed Omran, Chairman, The Egyptian Exchange; Hoang Phu Cuong, Deputy Director of the Securities Business Management, State Securities Commission, Viet Nam; Laurence Roth, State Secretariat for International Financial Matters, Switzerland; Atiur Rahman, former Governor, Bangladesh Bank; M. Habibur Rahman, Deputy General Manager (Research), Bangladesh Bank; Nick Robins, Co-Director, UNEP Inquiry; Daniel Schydrowsky, former Superintendent of Banking, Insurance and Private Pension Fund Administrators, Peru; Peer Stein, Director, Finance and Markets Global Practice, World Bank Group; Daomanivone Vilayvieng, Director of ASEAN-EU Division, Bank of the Lao PDR; Yuki Yasui, UNEP FI; Twatchai Yongkittikul, former Secretary General, Thai Bankers Association. Fareed Alasal, International Policy Senior Advisor, Ministry of Petroleum and Mineral Resources, Saudi Arabia and Shweta, Deputy Director, Climate Change Finance Unit, Ministry of Finance, India also participated as observers at the Geneva Meeting.

UNEP would like to thank the governments of Germany, Italy, Norway, Switzerland and the United Kingdom of Great Britain and Northern Ireland, the European Commission and the MAVA Foundation for their generous support of the Inquiry into the Design of a Financial System project.

Comments are welcome and should be sent to [simon.zadek@unep.org](mailto:simon.zadek@unep.org) and [mhalle@iisd.org](mailto:mhalle@iisd.org).

---

Copyright © United Nations Environment Programme, 2016

## Disclaimer

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the United Nations Environment Programme concerning the legal status of any country, territory, city or area or of its authorities, or concerning delimitation of its frontiers or boundaries. Moreover, the views expressed do not necessarily represent the decision or the stated policy of the United Nations Environment Programme, nor does citing of trade names or commercial processes constitute endorsement.



**Inquiry:** Design of a  
Sustainable Financial System



# GREEN FINANCE FOR DEVELOPING COUNTRIES

*Needs, Concerns and  
Innovations*



# FOREWORD

*Financial markets are economies' and people lifeblood.* They provide for jobs, payment services, investments, and lending and insurance, for individuals, businesses and governments. When financial markets fail to deliver, economies falter and may eventually crash as witnessed in recent years.



*Developing countries are especially vulnerable to the highs and lows of international finance.* Their financial systems are a work-in-progress, generally dominated by smaller local banks, or offshoots of global financial institutions. International financial arrangements and changes in policies and market practices elsewhere, such as in New York, London or Singapore, have a direct impact on these countries, their economies and citizens, and yet are very often agreed upon and put into motion without considering their concerns and needs.

*Financial sustainable development is an urgent, universal imperative.* Private capital will be a major contributor in financing the achievement of the Sustainable Development Goals by 2030 and climate commitments following from the successful agreement in Paris last year. The policies, regulations, standards and norms governing the international financial system are significantly shaping the availability and terms of such finance, as the two-year Inquiry into the Design of a Sustainable Financial System has clearly shown.

*Developing countries need to have a voice in how the financial system evolves at this critical juncture.* The Inquiry is committed to help clarify and communicate this voice, as part of its ongoing work at the nexus of financial markets and sustainable development, and as a contribution in its role as secretariat to the green finance work stream established under China's G20 Presidency. At the same time however, important innovations in financial markets in several developing economies demonstrate how private finance can adapt to meet the challenges of financing sustainable development. Examples include Kenya, where the rapid growth of mobile banking has become a platform to enable renewable energy: several companies offer pay-as-you-go solar home systems that use mobile payments to unlock the use of the solar panel and battery system. And in Central America, the ECOBANKING programme has been developed to improve the Latin American financial sector's competitiveness through better environmental management and the design of innovative financial products.

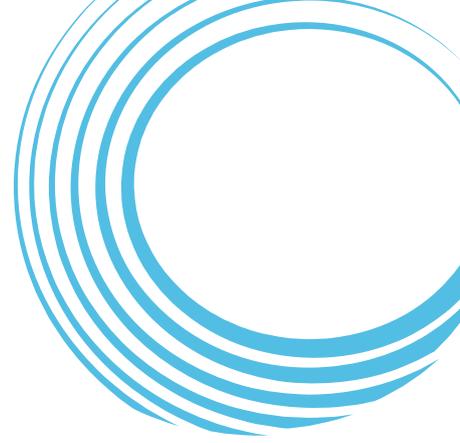
*Green Finance for Developing Countries* summarizes this work to date, and spells out developing countries' concerns, needs and innovations as momentum grows to catalyse green finance through financial system development. It maps out broad support for advancing green finance as a key aspect of sustainable development. Importantly, it highlights the leadership taken in diverse developing country contexts in advancing financial policies, regulations and fiscal measures that encourage financial market actors to take greater account of national priorities and sustainable development. Lessons from this leadership can be drawn upon from other developing and developed countries.

*We appreciate the contributions made by many private and public institutions* from developing countries in informing this report. Moreover, we acknowledge and will act on the encouragement we have received to do more in ensuring that their perspectives are visibly taken into account by other countries and international organizations in developing tomorrow's international financial system.

**Erik Solheim**

United Nations Environment Programme Executive Director  
United Nations Under-Secretary General





# CONTENTS

<b>SUMMARY AND KEY FINDINGS</b>	<b>8</b>
<b>1 INTRODUCTION</b>	<b>11</b>
<b>2 GREENING FINANCE: THE GLOBAL CONTEXT</b>	<b>13</b>
2.1 FINANCE AND THE 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT	13
2.2 ACTION ON SUSTAINABLE FINANCE	15
<b>3 DEVELOPING COUNTRY CONTEXTS</b>	<b>19</b>
3.1 SOURCES OF CAPITAL	19
3.2 FINANCIAL SYSTEMS	21
3.3 DRIVERS AND ISSUES FOR GREEN AND INCLUSIVE FINANCE	22
<b>4 EMERGING INNOVATIONS FROM DEVELOPING COUNTRIES</b>	<b>27</b>
4.1 NATIONAL PLANS AND STRATEGIES	27
4.2 GREENING THE BANKS	29
4.3 INCLUSIVE INSURANCE FOR RESILIENCE	32
4.4 SUSTAINABLE STOCK MARKETS	32
4.5 TECHNOLOGY-ENABLED FINANCIAL INNOVATION	34
4.6 MEASURING PROGRESS	37
<b>5 NEEDS IN RELATION TO INTERNATIONAL COLLABORATION</b>	<b>39</b>
5.1 MAPPING EXISTING INTERNATIONAL COOPERATION	39
5.2 RELEVANCE TO THE WORK OF THE G20 GREEN FINANCE STUDY GROUP	42
<b>6 NEXT STEPS</b>	<b>43</b>
<b>ANNEX I: UNEP INQUIRY DEVELOPING COUNTRY REPORTS</b>	<b>45</b>
<b>REFERENCES</b>	<b>47</b>



# SUMMARY AND KEY FINDINGS

## CONTEXT

**THIS BRIEFING** outlines key concerns and needs of developing countries in relation to green finance, particularly focusing on developing countries that are not members of the G20. It also highlights emerging innovations, drawing in particular from engagement with practitioners and regulators from Bangladesh, Colombia, Egypt, Honduras, Jordan, Kenya, Mauritius, Mongolia, Morocco, Nigeria, the Philippines, Thailand and Viet Nam, and the findings from the UNEP Inquiry's country studies.<sup>1</sup>

**GREEN FINANCE** is a strategy for financial sector and broader sustainable development that is relevant around the world. But the context differs considerably for different countries. Developing countries, notably those with underdeveloped financial systems, face particular challenges in financing national development priorities.

**FINANCIAL DEVELOPMENT** shapes the context for green finance. Different sources of capital and financial institutions are particularly relevant in different countries. Financial systems in developing countries tend to be characterized by a dominant banking sector, and have large areas of the economy that remain unserved by the formal financial sector. Public finance and foreign direct investment can be particularly important as sources of long-term investment.

Broadly, concern and action to align financing to sustainable development is concentrated in three areas:

- **PREVENTING THE FINANCING OF ILLICIT PRACTICES OR PROFITING FROM WEAK ENFORCEMENT.** Weak enforcement of environmental, economic and social policies and regulations can lead to social conflicts and market impacts resulting in losses to lenders and investors, and even macroeconomic stability risks.
- **UNLOCKING OPPORTUNITIES FOR GREEN INVESTMENT.** In many countries, opportunities for green finance such as renewable energy, energy efficiency, agricultural development and Small and Medium-sized Enterprises (SMEs) productivity, as well as insurance markets, are potentially commercially viable, but inadequate owing to barriers in demand or supply.
- **EXPLORING SOLUTIONS TO DILEMMAS AND TRADE-OFFS.** Many developing countries face a tension between the need to expand the electricity supply and reduce fossil fuel intensity. Similarly, SME finance is an area where regulators must be careful that lending requirements do not result in reduced overall lending or higher rates of non-performing loans and financial instability.

## KEY FINDINGS

### KEY CONCERNS OF DEVELOPING COUNTRIES:

1. **INTEGRATED APPROACH** – It is strongly emphasized that environmental considerations in financing be addressed in conjunction with economic and social issues and priorities, in particular access to finance for SMEs.
2. **DILEMMAS, GAPS AND TRADE OFFS** – International measures to promote appropriate green financing of the transition to a green economy should not come at the cost of developing countries' competitiveness, equity, development and financial inclusion.
3. **IMPACTS OF INTERNATIONAL DEVELOPMENTS** – Developments in the international financial system, including those in major national financial centres, impact on developing countries positively and negatively. This makes G20 country deliberations and actions a key matter for all developing countries seeking to achieve sustainable development.

#### **ACTION BY DEVELOPING COUNTRIES:**

4. **NATIONAL COLLABORATION** – National strategies and road maps for aligning financial system development with the needs of sustainable development are being elaborated in a number of countries involving public and private actors, and combining market-driven approaches with policies, regulations and standards. These processes are critical to reduce reliance on pioneering individuals or institutions.
5. **DISRUPTIVE POTENTIAL** – New business models across the financial system, such as those enabled by mobile money and blockchain ledgers, offer the potential for ‘leapfrogging’ that can drive more inclusive, green financial market developments. These could be promoted while recognizing the need to ensure the integrity and robustness of financial markets.

#### **SPECIFIC NEEDS OF DEVELOPING COUNTRIES:**

6. **INWARD DIRECT INVESTMENT** – A key challenge is how to support long-term green finance effectively in advance of mature local bond markets developing. This may include blended finance approaches, drawing on public institutional investment vehicles and integrating green finance considerations into foreign direct investment, as well as pioneer issuance of green bonds.
7. **FINANCIAL SYSTEM DEVELOPMENTS** – Developing countries need to be able to contribute to international debate and practice, through the G20 and other relevant fora.
8. **INTERNATIONAL KNOWLEDGE SHARING** – Enhanced cooperation is needed to share experience between countries by leveraging, extending and connecting existing platforms and initiatives.





# 1 INTRODUCTION

The relevance of green finance has been steadily growing over the past few years, and has now emerged as a key topic underpinning both the new policy dynamic promoting sustainable development and, increasingly, financial market development. Reflecting this, under China's Presidency of the G20 in 2016, a Green Finance Study Group (GFSG) has been established, co-chaired by China and the UK, with UNEP serving as secretariat.

## BOX 1: THE GREEN FINANCE STUDY GROUP

The GFSG is mandated to identify institutional and market barriers to green finance, and, based on country experiences, to develop options on “*how to enhance the ability of the financial system to mobilize private capital for green investment*”.<sup>2</sup> It is focused on identifying institutional and market barriers within the financial system that prevent the adequate mobilization of private green investment into areas such as pollution control, clean energy, clean transportation and energy-efficient products. Accordingly, the focus is on options for action by market players, central banks and market operators such as stock exchanges and rating agencies. The GFSG is undertaking research in five areas:

### Sectoral

1. **Greening the banking system:** A number of market and institutional failures may stand in the way of banks fully incorporating environmental dimensions into decision-making. For example, lack of capacity and absence of “green” performance measurement appear to be constraints for banks in many developing countries.
2. **Greening the bond market:** The growth of green bond markets faces a number of barriers, as does the broader incorporation of environmental considerations into the working of fixed income markets. For green bonds, a lack of clear and comparable definitions could undermine confidence while uncertainty and high costs of verification could prevent a critical mass of issuance.
3. **Greening institutional investment:** A number of market and institutional failures, such as lack of disclosure requirements and weak environmental impact assessment capacity, may prevent full incorporation of material environmental factors into investment decision-making. This could result in inadequate risk management and potentially excess caution over allocations to green investments.

### Cross-cutting

4. **Risk analysis:** A range of possible market and institutional failures may prevent the effective incorporation of future environmental risks into financial decision-making by financial institutions such as banks, insurers and other institutional investors. These problems include short-termism, misaligned incentives as well as inadequate expertise and underdeveloped risk assessment methodologies.
5. **Measuring progress:** International cooperation, experience sharing and facilitation of green capital flows requires mapping of definitions and indicators for measuring progress on green finance activities, policy targets, and designing and implementing policy incentives.

Developing economies comprise a large and diverse group whose financial systems have grown in importance over the last decade. The major emerging economies of Argentina, Brazil, China, India, Indonesia and Saudi Arabia are represented in the G20, while Singapore, Egypt, Laos and Kazakhstan are also participating as Invited Countries in the G20 in 2016.

Recognizing the distinct situation of developing countries with underdeveloped or emerging financial markets, the co-chairs and members of the GFSG have supported a process of *engagement with non-G20 developing countries to identify their concerns and needs and approaches to green finance*.

To this end, UNEP co-hosted a meeting in Geneva on 6-7 April 2016, together with the Swiss Ministry of Finance, bringing together stakeholders from non-G20 developing countries. A second meeting was co-hosted with the IFC on 12 April in Washington, D.C., timed to coincide with a meeting of the GFSG.<sup>3</sup>

This paper provides an overview of experiences and perspectives of stakeholders from non-G20 developing countries on green finance and highlights from this dialogue. It has been developed through interviews with practitioners, regulators and experts from developing countries, presentations and dialogue at the meetings as well as from published research, including the global work of the UNEP Inquiry into the Design of a Sustainable Financial System.<sup>4</sup>

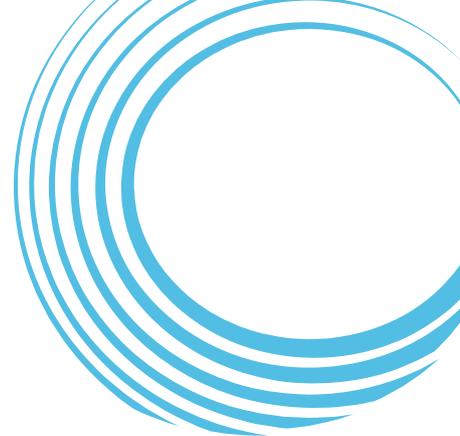
A short briefing version of this paper developed in association with the IFC was presented in Washington, D.C. on 12 April 2016 at a meeting with the GFSG co-hosted by UNEP and the IFC.

A panel of experts from Egypt, Colombia and Mongolia explored how green finance is being understood and advanced in their own countries and offered recommendations for international collaboration:

- Dalia Abdel Kadar, Director of Marketing and Communications, Arab African International Bank.
- Nancy Motta, President of the Protocolo Verde (Green Protocol) and sustainability leader (VP risks), Davivienda Bank (Colombia)
- Morgan Landy, Director of Environment, Social and Governance, IFC
- Tumurkhuu Davaakhuu, Vice President of the Mongolian Banking Association and CEO, Arig Bank of Mongolia.

Ma Jun, Chief Economist of the People's Bank of China and Co-Chair of the GFSG welcomed the input from the discussion and the briefing paper.

## 2 GREENING FINANCE: THE GLOBAL CONTEXT



*“Without necessarily naming it ‘green’, some day in the future all finance will be green. At the same time there are barriers to green finance which are more generally about attracting and allocating capital. So when we talk about green finance we are really talking about strengthening our core financial systems.”*

**Unenbat Jigjid, Mongolia Bankers Association**

*“The aim is not to convert the whole economy to ‘green’ all at once, but to accelerate the move from one side to the other. Leadership must come from the private sector, business community and NGOs, not only from the officials. We need a comprehensive and coherent framework supported by political will that enables market forces to move businesses from the traditional to the green economy.”*

**Mohammed Omran, Egyptian Stock Exchange (EGX)**

*“Green finance is burgeoning, it has reached a point of spontaneous combustion. But it needs to be aligned. It needs to go beyond the leadership of a few champions and it needs to be coordinated across regional trading blocks.”*

**Nuru Mugambi, Kenya Bankers Association**

### 2.1 FINANCE AND THE 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT

**Green finance is becoming more prominent, driven by the scale and urgency of the challenge of financing sustainable development**, and the realization that only a fraction of this can realistically come from public sources.

In 2015, governments adopted three major agreements that set out their vision for the coming decades: a new set of 17 sustainable development goals (SDGs), the Paris Agreement on climate change and the ‘financing for development’ package. Finance is central to realizing all three agreements – and these now need to be translated into practical steps suited to each country’s circumstances.

- Sustainable Energy for All estimates that annual global investments in energy will need to scale up from roughly US\$400 billion at present to US\$1-1.25 trillion. Of that, US\$40-100 billion annually is needed to achieve universal access to electricity.<sup>5</sup>
- Overall, US\$5-7 trillion a year is needed to implement the SDGs globally. Developing countries are estimated to face an annual investment gap of US\$2.5 trillion in areas such as infrastructure, clean energy, water and sanitation, and agriculture.<sup>6</sup>

Three key features of these agreements must be noted since they represent a major departure from earlier development cooperation. First, both the financing for development package and the UN 2030 Agenda and Sustainable Development Goals highlight the need for a new approach to funding. In addition



to funding from international sources, countries are asked to do the most they can with domestic policy reform and resource mobilization. Second, international cooperation is expected to work on the factors that affect resource flows from the private sector, including such matters as trade agreements, investment frameworks and subsidies. This means that development cooperation is not only concerned with direct transfers of resources, but also monitors the actions of countries and their impact on sustainable development. Finally the universality of the SDGs has been emphasised; as the Secretary General's synthesis report of December 2014 powerfully reinforces, "universality implies that all countries will need to change, each with its own approach, but each with a sense of the global common good."<sup>7</sup>

The challenge for financial systems is twofold: to *mobilize* finance for specific sustainable development priorities and to *mainstream* sustainable development factors across financial decision-making.

- **Capital needs to be mobilized for inclusion** of underserved groups (e.g. small and medium enterprises), raising capital for **sustainable infrastructure** (e.g. energy, housing, transport, urban design) and financing critical areas of **innovation** (e.g. agriculture, mobility, power).
- **Sustainability needs to become mainstream** for financial institutions. This starts with ensuring **market integrity** (e.g. tax, corruption, human rights) and extends to integrating environmental and social (E&S) factors into **risk management** (e.g. climate disruption, water stress). Sustainability also needs to be incorporated into the **responsibilities and reporting** of market actors to guide their decision-making.

**Momentum is building to align financial systems with the financing needs of an inclusive, sustainable economy.** This is complementary to 'real economy' actions such as environmental regulations, reform of perverse subsidies and changes to resource pricing. However, while these are critical, it is increasingly recognized that changes are also needed in the financial system to ensure that it is both more stable and more connected to the real economy.

A financial system consists of institutions and markets that interact to mobilize funds for investment and to provide facilities, including payment systems, for the financing of commercial activity. The role of financial institutions within the system is primarily to intermediate between those that provide funds and those that need funds, and typically involves transforming and managing risk.<sup>8</sup>

Banks play a key role in assessing risk, originating loans and underwriting the issuance of equities and debt. However, as short-term deposit-takers, they are not well suited to hold long-term assets on their balance sheets. Therefore, capital markets provide a critical channel to enable long-term debts or equity-backed securities to be sold to institutional investors such as pension funds, insurers and sovereign wealth funds that have longer-term liabilities and need to match these with long-term assets. Thus, for the financial system to work as a source of long-term investment, it depends on the effective operation of banks, capital markets and institutional investment together as a system for capital allocation.

Insurance also plays a key role as a risk manager, risk carrier and investor. Insurers help communities understand, prevent and reduce risk through research and analysis, catastrophe risk models and loss prevention. Insurers also advocate proper land use planning, zoning and building codes, and promote disaster preparedness. As risk carriers, insurers protect households and businesses by absorbing financial shocks due to cyclones, floods, droughts and earthquakes. Insurance pricing also provides risk signals and rewards risk reduction efforts. Insurers are also major investors, with US\$29 trillion in global assets under management.<sup>9</sup>

Financial systems are critical both in enabling large-scale projects and corporate ventures to mobilize capital and transfer risk, but also for small, medium and micro enterprises and households to plan and invest for the longer term.

## BOX 2: FINANCE AND THE SDGs

The two themes of *mobilizing finance* and *mainstreaming sustainability* can be broken down into *financial inclusion*, *capital for infrastructure* and *financing innovation* on the one hand and *market integrity*, *risk & resilience* and *responsibility* on the other. Using the 17 SDGs as the reference point, the table below tracks the relevance of these themes against each SDG.

SDGs	MOBILISING FINANCE FOR SUSTAINABLE DEVELOPMENT			MAINSTREAMING SUSTAINABLE FINANCIAL PRACTICES		
	Financial Inclusion	Capital for Infrastructure	Financing Innovation	Market Integrity	Risk & Resilience	Responsibility
1 NO POVERTY						
2 ZERO HUNGER						
3 GOOD HEALTH AND WELL-BEING						
4 QUALITY EDUCATION						
5 GENDER EQUALITY						
6 CLEAN WATER AND SANITATION						
7 AFFORDABLE AND CLEAN ENERGY						
8 DECENT WORK AND ECONOMIC GROWTH						
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE						
10 REDUCED INEQUALITIES						
11 SUSTAINABLE CITIES AND COMMUNITIES						
12 RESPONSIBLE CONSUMPTION AND PRODUCTION						
13 CLIMATE ACTION						
14 LIFE BELOW WATER						
15 LIFE ON LAND						
16 PEACE, JUSTICE AND STRONG INSTITUTIONS						
17 PARTNERSHIPS FOR THE GOALS						

Source: UNEP Inquiry, 2016

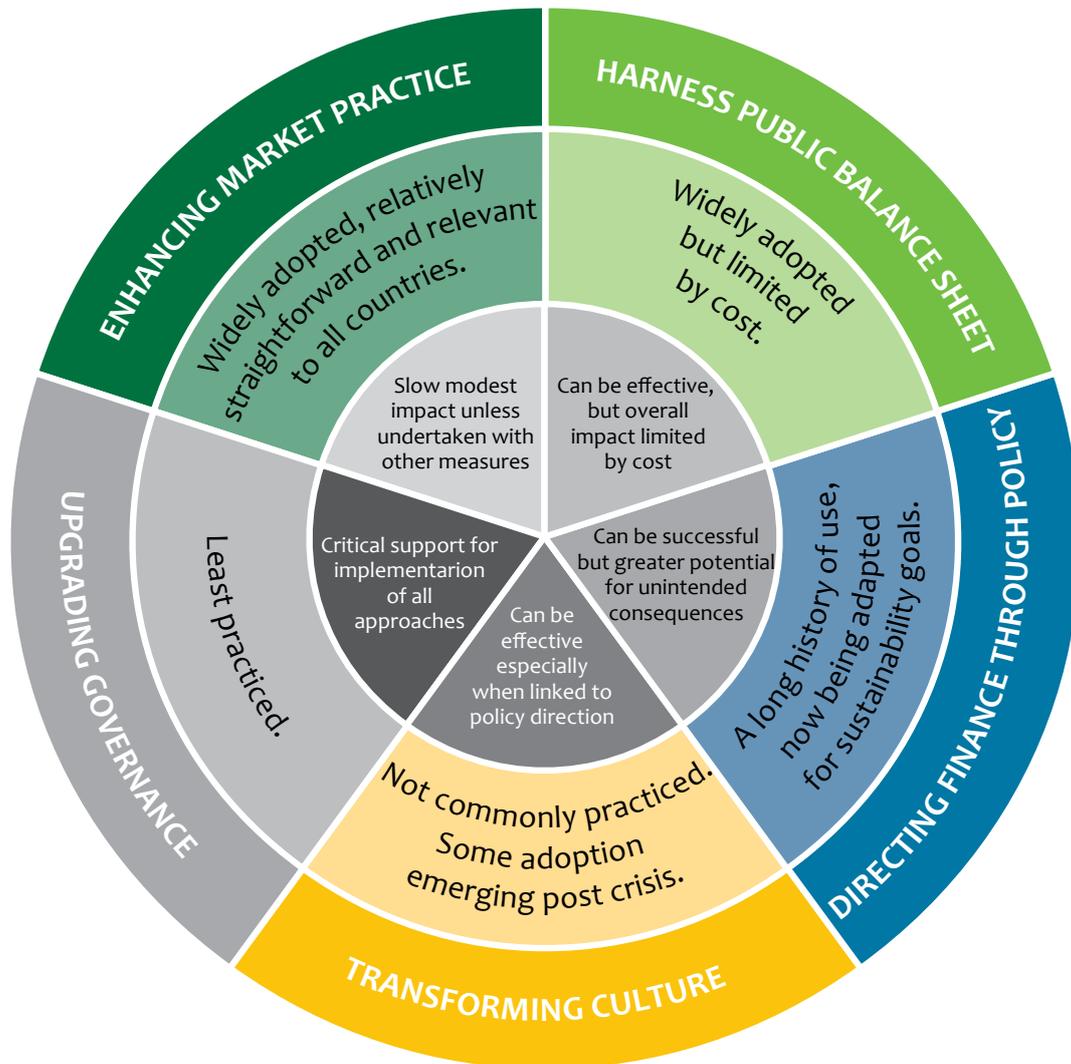
## 2.2 ACTION ON SUSTAINABLE FINANCE

A new generation of policy and market innovation is aiming to ensure that the financial system serves the needs of inclusive, environmentally sustainable, economic development. A number of countries are developing national strategies or road maps for green finance, including South Africa's Financial Charter, China's Green Finance Committee and the Swiss Sustainable Finance initiative. Internationally, the Financial

Stability Board (FSB) for example has launched a new task force on climate-related risk disclosure. China, as part of its G20 Presidency in 2016, has launched a Green Finance Study Group.

The UNEP Inquiry into the Design of a Sustainable Financial System was established in early 2014 to explore these developments and how to align the financial system with sustainable development. It published its report at the end of 2015, *The Financial System We Need*, based on thematic and country studies. It consolidated emerging measures from developed and developing countries into a toolbox of five approaches.<sup>10</sup>

**FIGURE 1: FIVE APPROACHES TO ALIGNING THE FINANCIAL SYSTEM TO SUSTAINABLE DEVELOPMENT**



Source: UNEP Inquiry, 2015

- **Enhancing market practice** – In many countries, measures are directed to improve efficiency and accountability of financial institutions and markets. For example, the Johannesburg Stock Exchange (JSE) and Brazil’s BOVESPA stock exchange were two of the earliest innovators in requiring sustainability disclosures. Regulators in Bangladesh, Brazil, China, Indonesia, Lao PDR, Mongolia, Nigeria, Peru, Thailand and Viet Nam have established green banking guidelines.<sup>11</sup>
- **Harnessing the public balance sheet** – Some countries are using the public balance sheet to improve risk-adjusted returns to investors in key areas. For example, the US provides tax benefits for investors who buy municipal bonds targeted at renewable energy investments. Many public financial institutions are combining public and private finance through blended finance instruments to close the viability gap for investors in green projects. Central banks are also making equity investments in policy-directed investment in countries such as China.

- ⦿ **Directing finance through policy** – In some countries, policies, requirements and prohibitions are being used to direct investment. Examples include India’s priority sector lending requirements and the US Community Reinvestment Act. Directed finance is often linked to incentives such as the Bangladesh Bank’s green finance lending requirements that have favourable capital adjustments. Implementation of South Africa’s Financial Charter is connected to public procurement.<sup>12</sup>
- ⦿ **Encouraging cultural transformation** – Many countries are seeking to align financial behaviour with sustainability through improved capabilities, culture, internal incentives and societal engagement. In the Netherlands, bankers pledge to balance the interests of all stakeholders. Indonesia’s Sustainable Finance Roadmap focuses on sustainability skills of professionals.
- ⦿ **Upgrading governance architecture** – Internalizing sustainable development into financial decision-making can be consistent with the existing mandates of financial regulators and central banks. The Central Bank of Brazil’s focus on socio-environmental risk management flows from its core functions as a prudential bank regulator. The Bangladesh Bank argues that its support for rural enterprises and green finance contributes to financial and monetary stability. The Bank of England’s prudential review of climate risks to the UK’s insurance sector is based on a connection between its core prudential duties and the UK Climate Change Act.

### Box 3: THE UNEP INQUIRY INTO THE DESIGN OF A SUSTAINABLE FINANCIAL SYSTEM

The UNEP Inquiry into the Design of a Sustainable Financial System was established in early 2014 to explore how to align the financial system with sustainable development. It found that:

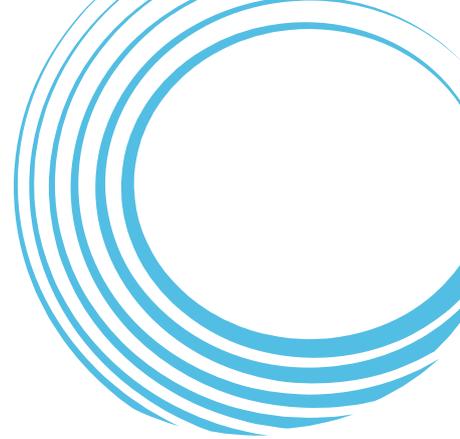
- ⦿ **Action within the financial system**, as well as the real economy can deliver financing for sustainable development
- ⦿ **Policy innovations** are emerging that demonstrate how the financial system can be better aligned with sustainable development.
- ⦿ **Systematic national action** can be taken to shape a sustainable financial system, complemented by international cooperation.

All UNEP Inquiry papers are available for download at [www.unepinquiry.org](http://www.unepinquiry.org).

While green finance has become more prominent, rising to the challenge of sustainable development, it remains a ‘cottage industry’ with green bond issuance and green infrastructure investment still accounting for less than one per cent of total bond issuance and total infrastructure investment respectively. The core challenge is therefore to ‘industrialize’ green finance to achieve scale.<sup>13</sup>



## 3 DEVELOPING COUNTRY CONTEXTS



### 3.1 SOURCES OF CAPITAL

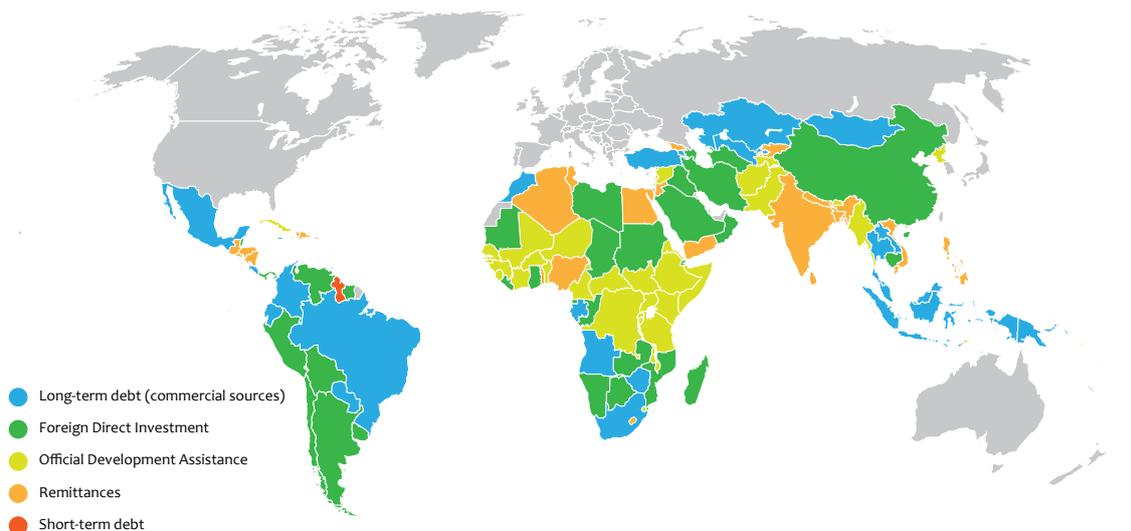
Developing countries face particular challenges in mobilizing green and sustainable finance *both in relation to:*

1. **The need for external capital flows** for investment in areas such as energy, waste, transport, water, and agricultural improvements;
2. **Underdeveloped financial systems** in areas crucial for green investment such as structuring major projects and in providing credit and insurance to enable large and small businesses and households to make investments and manage the risks they face.

In many cases, low GDP and weak fiscal positions make developing countries reliant on international financial flows, particularly for longer-term investments, including concessional lending from international financial institutions (IFIs), Foreign Direct Investment (FDI), long-term commercial debt and aid. Remittances are also an important source of international resources in a number of countries.

Given the importance of international capital flows, and regulations and policies outside of their jurisdiction, developments related to financial policies and regulations in other jurisdictions may therefore be particularly important in enabling or constraining finance.

**FIGURE 2: LARGEST INTERNATIONAL RESOURCE FLOW**



Source: Based on Development Initiatives (2015). *Investments to End Poverty*

Development finance provided as Official Development Assistance (ODA) loans and grants is a critical source of finance for many developing countries. Public development finance institutions and multinational development banks are key players in supporting green investment and the development of green financial products in many developing countries. While much of this funding is government-to-

government, development finance institutions are also increasingly seeking to leverage private investment, working with local and international banks and with private equity investors.

**More broadly, the extent to which FDI is environmentally responsible and meets green financing needs is important.**

FDI is governed by a combination of domestic policy and regulations, source country policies and regulations, bilateral investment treaties and investment provisions in preferential trade agreements. Because of the prevalence of special purpose entities (SPEs), this can extend to the legal frameworks and bilateral treaties with third countries, such as the Netherlands,

Mauritius, Singapore or the British Virgin Islands, which act as conduits for international investment. Bilateral investment treaties free foreign investors from the obligation to exhaust local legal remedies in disputes in host countries and thus also bring international arbitration into play. Disputes have sometimes arisen when a government's environmental policies aimed at conserving natural resources, combatting pollution or protecting ecosystems, are perceived to have negatively affected an investor's bottom line.

*“Influencing FDI towards environmental responsibility through financing measures can be more powerful and pragmatic than trying to make the same changes through environmental regulation.”*

*Interviewee*

*“Environmental damage leads to social conflicts, which disrupt operations and leads to political instability. Deals go bad. Loans go bad. So this is a direct risk for banks.”*

*Interviewee*

These frameworks are generally thought of as outside of the scope of financial regulation; nevertheless, it is clear that they are likely to be particularly relevant in relation to developing countries, and are also linked to financial regulation. For example in Peru, social conflict is a business risk for FDI investors in the mining sector. SBS, the banking and finance regulator realized regulations requiring bank

due diligence could provide a targeted measure that would be more effective in the short term than directly relying on legal enforcement of environmental regulations. It is therefore building the Equator Principles into regulation with an elevated status as “Equator Plus”, so that adherence to the principles must be incorporated into legal contracts for investment projects over US\$10 million.

**BOX 4: THE CONTEXT FOR GREEN FINANCE IN CENTRAL AMERICA**

The Central American region is institutionally and economically diverse. However the financial sector, which is concentrated on banking, is similar across the region. Green finance tends to be associated with capital inputs from development finance institutions (DFIs). Many private financial institutions have had long-term relationships with DFIs, for project financing as well as for subordinated debt and occasionally even equity positions. The DFIs establish requirements and expectations regarding environmental and social risk management as a condition of project financing, based on the Equator Principles or IFC Standards and more broad-based environmental and social management systems. These have been integrated by many of the major commercial banks that are actively seeking to understand and manage E&S risk in their ongoing lending operations; however, specific green investments remain dependent on DFI finance and are not part of fully commercial and sustainable lending and insurance product portfolios.

[Based on presentation by Gracia Barahona, Executive Director Ecobanking project, INCAE]

**Individual remittances are a significant factor in many national economies.** Overall, official estimates placed remittances around three quarters of the level of foreign direct investment; however, they are the largest source of international flows for some countries. Remittance transfers are only partially integrated with financial services because many senders and recipients do not have bank accounts. Over the past decade, international agencies have increased their efforts to lower the cost of remittance transfers, link remittance families to financial institutions to enable them to access loans, build credit histories,



securely save for the future, insure themselves, and support them to mobilize some part of remittances into productive investments.<sup>14</sup> However, concerns have also been raised that international anti-money-laundering and anti-terrorism measures are leading to banks pulling out of the remittance business, with negative impacts for ordinary families.<sup>15</sup>

### 3.2 FINANCIAL SYSTEMS

In general, financial systems in developing countries tend to be relatively smaller, more concentrated and less complex than systems in advanced economies, with banks playing a larger role than capital markets.

- **Banks** are the most important providers of long-term finance, particularly for households and small firms, and in developing countries tend to make up 85-90 per cent of financial assets. Banking in developing countries tends to be more short-term (only 12 per cent of bank loans in low and low-middle income countries exceed five years, compared to 33 per cent in high-income economies), more weakly supervised and more concentrated than in developed economies. State-owned banks have declined considerably, but still play a significant role. While this gives greater potential for active state involvement in the financial sector aligned to sustainable development goals, it can also lead to political intervention in the allocation of loans resulting in high levels of non-performing loans, raising the cost of capital across the board.<sup>16</sup> In addition to domestic banks, developing countries are also host to foreign banks and, particularly in recent years, those from other developing and emerging economies such as South Africa, Russia, Turkey and Brazil. Emerging market banks have expanded services into low-income countries in their regions. While foreign banks will be regulated locally in line with the terms of their banking licenses, they may also have obligations and organizational practices linked to policies and regulations in their home countries.

*“When we talk of the financial system, we are basically talking about the banking system.”*  
*Interviewee*
- **Institutional investors** have tended to play a much smaller role than banks to date, however demographic changes and the development of second-pillar pension reforms (privately managed savings accounts) have led to a rapid growth of assets under management of institutional investors in emerging and developing economies, from a small base. The Nigerian pension industry, for example, grew from US\$7 billion in December 2008 to US\$25 billion in December 2013. Ghana’s pension industry is expected to expand by up to 400 per cent from 2014 to 2018. Pension assets now equate to some 80 per cent of GDP in Namibia and 40 per cent in Botswana.<sup>17</sup> In Kenya, efforts are made to increase coverage of pension savings, including through “micro-pensions” in informal sectors. Individual membership in retirement benefits plans in Kenya has increased by 250 per cent between 2010 and 2012.<sup>18</sup>
- **Capital markets** tend to be small, although many countries have established stock markets. The bond market grew considerably in emerging markets since the Asian financial crisis in 1997; however, it remains highly concentrated in selected larger emerging economies, such as China, India and Malaysia. In other countries, the bond market is often very small, with access limited to a small range of participants. Turkey, Saudi Arabia, Kazakhstan, India, Russia and Nigeria have experienced the fastest growth in their corporate bond markets while Malaysia and China have the deepest domestic corporate bond markets. Some emerging market economies such as Bermuda, Barbados and the Bahamas are offshore financial centres and have relatively deep and important international corporate bond markets.

*“Many of the barriers to sustainable finance are basically barriers to finance: such as the ability of farmers, households and SMEs to use their collateral to get credit.”*  
*Interviewee*
- **Insurance** is critical for enabling financial inclusion and business risk taking, incentivizing risk management and facilitating resilience to shocks. Insurance markets are small but growing, with significant demand for insurance including health and life, agricultural, property and vehicle insurance,



and catastrophe cover. However less than 5 per cent of people on low incomes have access to insurance – and rarely to the products they need. Micro-insurance is an area of burgeoning development, through partnerships to provide simple insurance products to low-income groups.<sup>19</sup> In the Philippines, for example, micro-insurance for climate risk is now issued by a wide range of organized community groups – church groups, community and professional associations, clubs, and others – who use the membership to mutualize the risk. This has vastly expanded the pool of the insured, especially among the poor who are most vulnerable to climate-related disasters.

*“Banks make too many loans to politically connected people. International capital markets know this. There are basic challenges to the financial system.”*

*Interviewee*

While banks, capital markets and institutional investors are at the core of the process of credit creation and capital mobilization, they are also supported by market infrastructures such as credit rating agencies, accountants, lawyers and analysts and by the availability of records documenting economic activities and assets. These underlying market infrastructures are also constrained in many developing countries. The Peruvian economist and anti-poverty campaigner Hernando de Soto estimates that five billion people live without adequate records to document their economic activities, their assets and even their existence. This documentation failure denies them bank accounts, prevents them from borrowing against the land they may own, and from taking out insurance. It greatly weakens their bargaining position compared to those whose property and business activities are legally documented. Informal financial service providers also play an important role (see Box 5).

Discussions with interviewees and existing research on sustainable finance in developing countries such as Kenya and Colombia highlight that many of the barriers constraining sustainable investment are not specific to sustainable finance, but are more general barriers to attracting and allocating capital through the financial system. For example, the main barriers to inclusive green investment in Kenya were identified in a UNEP Inquiry study as short-term outlook in the investment chain, a fragmented institutional investor market and high returns to government bonds which tend to crowd out investments in other asset classes.<sup>20</sup> Bangladesh is recognized as a leader in establishing green and inclusive financial regulations, but at the same time suffers from poor governance at bank boards, inadequate credit information and lengthy legal procedures to resolve disputed loans, undermining the general quality of intermediation.<sup>21</sup>

### 3.3 DRIVERS AND ISSUES FOR GREEN AND INCLUSIVE FINANCE

Participants in the dialogues emphasised that in developing countries, the need for green and sustainable investment is not seen in isolation, but is linked to the critical challenge to meet infrastructure and energy needs, to improve health and to enable efficiency and access to finance. Access to energy, water and sanitation and the challenges of water stress and air pollution are often more immediate drivers of action. The World Health Organization (WHO) estimates that nearly one quarter of total global deaths is linked to environmental factors such as air, water and soil pollution, chemical exposure, climate change, and ultraviolet radiation. Low- and middle-income countries bear the greatest environmental burden in all types of diseases and injuries.<sup>22</sup> Air pollution has risen particularly in developing Asia, and more than 85 per cent of the world’s population live in areas where the WHO Air Quality Guideline is exceeded.<sup>23</sup> At the same time, 2.9 billion people, concentrated in rural areas of Africa and Asia, lack access to non-solid fuel and rely on biomass for cooking, while 1.2 billion lack access to electricity. Using biofuels for cooking results in deforestation and desertification, which undermines land productivity and creates a health hazard through indoor air pollution. Lack of electricity undermines health care and education, and prevents the growth of rural business and industry. Clean fuels and rural electrification are thus critical from a broad environmental, social and economic perspective, as well as in relation to climate change.

*“We do not really talk about green finance, we talk about sustainable finance: how can the financial system enable sustainable development.”*

*Interviewee*

## BOX 5: INFORMAL FINANCE

Informal finance encompasses the wide range of financial activities and services that take place outside of a country's formalized financial institutions and regulations. In contrast to formal finance, most informal providers focus on one service – savings, credit, money transfers or insurance – rather than offering a bundle of services. Some are mutual associations or self-help groups that share and mutualize risks, others operate commercially making a profit from clients. Examples include:

- **Revolving savings fund** – Members meet monthly and deposit a certain amount of money into a common fund. The accumulated amount is then paid out to one of the members on a rotating basis.
- **Money lenders** – Unregistered and often illegal money lenders are the mainstay of lending to the informal sector. They typically charge high interest rates, but lend to people without collateral who are unable to obtain loans from the bank.
- **Agricultural middlemen (such as Arthis in India and Pakistan)** provide credit to farmers, offering fertilizers and pesticides on credit, and taking payment at harvest time.<sup>24</sup>
- **Burial societies** are a common product of community-based informal insurance associations. Members pay in regularly and the association covers funeral expenses.
- **Hawawla/Hundi** (Middle East and South Asia) is a traditional means of transferring funds across borders and within countries, whereby funds are transferred by means of a network of brokers.<sup>25</sup>
- **Susu collectors** (West Africa and parts of the Caribbean) take deposits – usually a saver agrees to deposit a specific amount determined for an agreed period of time (usually a month). At the end of the period, the accumulated savings are returned with the collector, keeping one day's savings as commission.<sup>26</sup>

Approaches to regulating informal finance range from ignoring it to seeking to formalize or regulate informal finance, to encouraging links to the formal sector (such as special bank accounts for revolving loan funds) and to outlawing informal finance providers as exploitative and usurious.

**At the same time, environmental challenges are increasingly viewed through a financial and economic policy lens.** This was highlighted in 2015 when finance ministers from 20 low- and middle-income countries vulnerable to climate change came together to form the V20 ('vulnerable 20') group. They see rising heat and sea levels, and changes in weather variability as existential challenges to their economies and societies, and convened around the critical need not only to mobilize public and private climate finance but also to develop effective economic and financial policy responses.<sup>27</sup>

**Financial inclusion is a key priority for developing country financial regulators.** While the number of people who lack access to financial services is falling, still 2 billion adults, or nearly 40 per cent of the adult population, lack a basic bank account, and many more are not well served by markets for savings products, credit and insurance. Greater financial inclusion promises more inclusive growth and development. Enabling access to finance for SMEs

is a particular priority. 70 per cent of SMEs cite lack of access to finance as an impediment to growth and another 15 per cent report they are underfinanced. As Governor Ernesto Gove, of the Banco de Moçambique, has put it: "If SMEs prosper, they can put nations to work, create a solid base of tax revenue, and be the primary driver of future growth."

*"The key driver for sustainable finance in our country is financial inclusion – making sure that the financial system serves the population and helps to overcome poverty and economic exclusion."*

*Interviewee*

Therefore, concerns about green and sustainable finance are part of a wider agenda about the performance and development of the financial system in particular:

1. **Improving the basic performance, integrity and reach of the banking system**, particularly to SMEs.
2. **Integrating and regulating informal financial service providers** and widening access to financial products for savings and insurance.
3. **Developing markets and institutions to provide long-term finance**, in particular institutional investors and bond markets to channel domestic savings and access international lending and portfolio investment
4. **Optimizing the policy and incentive structure around FDI** such as reforming fiscal incentives and ensuring they are effective and not over-generous
5. **Using public finance effectively** to leverage private investment.

**Developing countries have consistently raised concerns that international measures to promote transition to a green economy must not come at the cost of developing countries' competitiveness, equity and development.** A particular concern is that standards developed in a “one size fits all” approach, not taking

#### **BOX 6: FINANCIAL CRIME AND ILLICIT FLOWS**

Owing to its complex and intangible nature, finance, perhaps more than any other sector, is vulnerable to difficult-to-detect crime. Consumers of financial services are vulnerable to exploitation and fraud by those to whom they entrust their resources, financial institutions are vulnerable to theft, misappropriation and exploitation of insider information, and criminals are able to use financial institutions and loopholes to embezzle public assets, and to ‘launder’ ill-gotten gains.

Developing countries face the challenge of advancing financial inclusion, while at the same time ensuring financial integrity and consumer protection. Bringing more people into the formal financial system reduces their exposure to cash-based crime risks but exposes them to new risks such as Ponzi schemes and identity fraud. At the same time, financial integrity regulations such as Know Your Customer (KYC) requirements can act as barriers to financial inclusion.<sup>28</sup> Regulators in countries such as the Philippines are increasingly recognizing that financial integrity and inclusion regulations can be complementary, and are working to ensure that KYC requirements do not prevent the private sector to develop new products that cater to the requirements of the poor.<sup>29</sup>

Policy and regulatory inconsistencies, weak institutions, limited oversight and enforcement, entrenched vested interests and the absence of transparent economic and governance processes enable ill-gotten gains from corruption, organized crime and international commercial fraud to be hidden. Such illicit financial flows (IFFs) are linked not only to loss of public revenues but also to undermining of environmental regulations, illegal exploitation of natural resources, illegal logging, fishing and mineral extraction, land grabbing, human rights abuses, counterfeiting of pharmaceutical drugs, seeds and other critical factors for development.

Efforts to stop IFFs across borders include law enforcement, anti-money-laundering measures and initiatives to return of stolen assets. Work in the anticorruption arena has also demonstrated the importance of a balanced approach that includes institutional strengthening, since increasing the power and authority of law enforcement agencies in countries with weak governance sometimes yields mixed results and does not always promote the rule of law.<sup>30</sup>

into account the levels and stages of development of countries, will act as arbitrary trade discrimination or new conditionality on aid and loans.<sup>31</sup> Developing countries are especially vulnerable to natural hazards and it is important to involve them in emerging approaches to risk assessment, including environmental factors in credit ratings.

**The administrative burden of incompatible environmental standards and monitoring requirements by international donors and IFIs has been raised as an issue.** This can deter local financial institutions from accessing and intermediating concessional green finance. Many smaller developing countries have had difficulty in demonstrating that they have the track record and institutional capacity to comply with the Green Climate Fund’s fiduciary and gender policy standards, and that they can apply the relevant environmental and social safeguards in order to access international climate finance.

*“Banks are wary of handling international concessional finance. There are too many different sources, requirements and hurdles.”*

*Interviewee*

*“What is the definition of ‘green’? Without a clear definition it is difficult to implement.”*

*Interviewee*

**A key concern relates to the definition of ‘green’.** For example, does it include nuclear energy, gas-fired power, or more efficient ‘super critical’ coal? China has included clean coal and energy efficiency improvements in fossil fuels in its list of green project categories, while many other green

finance standards exclude this. The US export credit agency OPIC has an emissions cap in its criteria that effectively prevents it from participating in almost any natural gas-fuelled power project. This, it has been argued, prevents it from contributing to projects necessary to provide access to basic electricity, while making no meaningful dent in global emissions.<sup>32</sup>





## 4 EMERGING INNOVATIONS FROM DEVELOPING COUNTRIES

**Developing countries are often leading in seeking to align financial market developments with sustainable development.** The UNEP Inquiry noted in particular the leading role played by major emerging economies, for example:

- **Brazil** launched the BOVESPA Stock Exchange's Corporate Sustainability Index (ISE) in 2005. In 2011, the Banco Central do Brasil (BACEN) was the world's first banking regulator to request banks to monitor environmental risks as part of the implementation of Basel III's Internal Review for Capital Adequacy. Building on a voluntary Green Protocol from the banking sector and considerable dialogue in 2014, BACEN introduced requirements for all banks to establish socio-environmental risk systems based on the principles of relevance and proportionately. The Brazilian Insurance Confederation and Brazilian insurers have also produced sustainability goals for their entire insurance market.
- **China's** Banking Regulatory Commission began in 2007 by developing Green Credit Guidelines that evolved from an initial principle-based approach to a standardized, metrics-driven performance assessment. The People's Bank of China established a Green Finance Task Force resulting in 14 recommendations across four broad themes: information flows, legal frameworks, fiscal incentives and institutional design
- **Indonesia's** financial regulator OJK launched its Roadmap for Sustainable Finance, the country's first attempt to map out the developments needed to advance sustainable finance through 2019. The Roadmap covers banking, capital markets and non-bank financial services sector, and includes measures to increase the supply of sustainable financing through regulatory support and incentives, targeted loans and guarantee schemes, green lending models, green bonds, and a green index.

However, there is also considerable interest and action on green finance beyond the G20, as illustrated by the examples that follow in this section.

### 4.1 NATIONAL PLANS AND STRATEGIES

A combination of domestic and international factors is driving action on green finance in developing countries. New business opportunities and market pressures (including through supply chains) play a key role, together with rising recognition that environmental risks can result in defaulting loans. At the same time, foreign financial institutions, regional leadership and peer exchange have often been important catalysts. Many DFIs have invested to support financial product innovation and uptake, and there is increasing understanding of simple and practical financial mechanisms such as guarantees, first loss capital, and green bonds which can be used to advance green investment.

**Countries are increasingly recognizing that sustainable finance needs and opportunities will not be met effectively without active engagement to promote financial system shifts,** including through market innovations but also through voluntary standards, public-private partnerships, and supportive policy, regulatory and fiscal measures.

Many countries are at an early stage, focused on 'market education' and on developing awareness and building capacity.<sup>33</sup> In some cases, public or private leadership has been driven by a strong individual

champion, and it needs to become embedded in a sustained process for public-private engagement. Some countries are developing road maps to advance green or sustainable finance through strong collaboration between public and private actors, and drawing on international experience. For example, Mongolia has developed an ambitious national strategy, which sets out specific goals for building a sustainable financial sector. Other countries such as Morocco and Viet Nam are beginning that process.

Many participants in the Geneva convening, and also at a session of the EBRD 2016 annual meeting, stressed that country-level planning is critical to advance a systematic and effective greening of the domestic financial system, and that any green finance strategy needs to take account of international developments, including related trade and investment agreements.<sup>34</sup>

#### **BOX 7: DEVELOPING A NATIONAL STRATEGY IN MONGOLIA**

The Mongolian Sustainable Finance Principles are a set of voluntary principles developed through a public-private dialogue between the Mongolian Bankers Association (MBA), the Mongolian Ministry of Environment, Green Development and Tourism and the Bank of Mongolia, with international support from the Dutch development bank FMO and the IFC, through the Sustainable Banking Network.

Environmental, economic and social concerns are clearly linked in Mongolia, where rapid economic growth has been based on mining, livestock, and real estate development – industries that contribute to pollution and water scarcity. The country faces the interlinked challenges of addressing the impact on biodiversity, air quality, soil, water and forests and at the same time ensuring that economic growth results in broad-based improvements for the majority of Mongolians.

The voluntary principles were developed with CEO engagement by Mongolia's 13 commercial banks. However they are part of a broader national Green Development Strategy with ambitious targets for sustainable consumption and energy efficiency, ecosystem and environmental protection, green jobs and poverty reduction, and urban and regional planning.

The Sustainable Finance Principles include commitments not only on environment, but also on people and communities, cultural heritage, green growth, financial inclusion, corporate governance, transparency and accountability. They have been backed by sector guidelines in areas such as mining, construction, manufacturing and agriculture. All banks have adopted the principles and sector guidelines including reporting annually on their progress in implementing the principles to the MBA.

Based on the initial success of the initiative, the MBA, in partnership with the Ministry of Environment and other key stakeholders, is planning to launch a national green financing vehicle to encourage investment in clean, green and environmentally friendly projects.

[Based on presentation by Unenbat Jigjid, Executive Director, Mongolian Bankers Association]

Participants in the dialogue highlighted three specific situations in which green finance solutions were developed:

1. **To prevent financing of illicit practices and profiting from weak enforcement.** Green finance is seen as part of good governance and integrity. Weak enforcement of environmental and social regulations can lead to social conflicts (such as around mines and dams) and market impacts (such as the threat to Thailand's fishing exports due to concerns over labour standards) resulting

in losses to lenders and investors, and even macroeconomic stability risks. This has driven the approach of the banking regulator in Peru, for example, to adopt due diligence requirements that seek to overcome weaknesses in environmental regulation and enforcement.

2. **To unlock opportunities for green investment.** In many countries, opportunities for green finance such as renewable energy, energy efficiency, agricultural development and SME productivity are potentially commercial, but inadequately financed either because of barriers in demand for investment (informality of enterprises, lack of asset registration, lack of financial literacy, corruption, policy uncertainty) or barriers in supply (unresponsive financial institutions, short-termism, lack of credit information, lack of understanding of opportunities). Alongside investment, extending insurance is seen as essential for resilience to natural hazards.
3. **To explore solutions to dilemmas and trade-offs between economic, environmental and social outcomes.** The area of carbon emissions is where many developing countries face a tension between the need to expand the electricity supply and the costs and benefits of reducing fossil fuel intensity. Similarly, SME finance is an area where heavy-handed approaches can result in reduced overall lending, higher rates of non-performing loans and financial instability.

**FIGURE 3: THREE KEY AREAS OF FOCUS**

Area of focus	Driver	Predominant approach
<b>Illicit practices and weak enforcement</b>	Risk, reputation, potential liability, access to international capital	Adoption of best-practice environmental and social risk management frameworks
<b>Upside opportunities for green finance</b>	Commercial opportunity, new markets	Blending public and private finance demonstrate commercial viability and overcome barriers
<b>Dilemmas, gaps and trade offs</b>	Social conflict, long-term development concern	Multi-sector dialogue to develop test and sequence policies and avoid unintended negative consequences

In the following sections, we highlight developments from developing countries outside of the G20, across these three areas. We have given a general indication of maturity in each area in relation to banking, insurance and stock markets.

- Emerging area of engagement and experimentation
- Increasingly common area of practice
- Mainstream area of practice in many countries with established guidelines and models

## 4.2 GREENING THE BANKS

Area of focus	Maturity	Example
<b>Illicit practices and weak enforcement</b>	■■■	Adoption of best-practice environmental and social risk management guidelines
<b>Upside opportunities for green finance</b>	■■	Green loan programmes, often with support of DFIs
<b>Dilemmas, gaps and trade offs</b>	■	Involvement of bankers associations and regulators in national policy dialogues on environmental issues, development of green finance roadmaps starting with banking

**Reflecting the importance of the banking system, many developing countries are taking action, both to mobilize finance and to mainstream sustainability through the banking system.** The Sustainable Banking Network was established in 2012 and now includes regulators from 20 countries, of which 12 have launched national policies, guidelines, principles, or road maps focused on sustainable banking. The newly formed Sustainable Insurance Policy Forum is similarly bringing together regulators, policymakers and industry associations to share learning and best practice on greening the insurance industry.

In addition to the efforts by the Mongolian Bankers Association, many other countries are also developing sustainable banking standards, initiatives, policies or regulations:

- The **Bangladesh** Bank (BB) has led a sustained initiative to ingrain socially responsible, inclusive and environmentally sustainable financing in the institutional ethos of the country's financial sector. It uses incentives and moral suasion to motivate banks and FIs to increase financing for agriculture, micro, small and medium enterprises and especially women-run enterprises, green businesses and industries. In 2011, it established mandatory environmental risk management requiring banks to train their staff on E&S issues, formulate their own E&S risk management framework, introduce sector-specific policies and start reporting on E&S issues. BB also offered a BDT2 billion (US\$25.5 million) low-cost refinancing window to provide liquidity support to lenders for green financing in 11 specified categories. Macroprudential support measures, such as lower equity margin requirements, are employed to favour socially and environmentally beneficial initiatives and options. Good performers in green finance earn better BB supervisory ratings, with attendant preferential considerations, such as permits for business expansion.<sup>35</sup>
- The **Colombian** government and the representative association of Colombian banks (Asobancaria) signed in 2012 the voluntary framework and guidelines (Green Protocol – Protocolo Verde). The protocol provides a voluntary framework endorsed by the government. It sets out strategies and guidelines for banks to offer credit lines and investments that will contribute to quality of life and sustainable use of renewable natural resources. The protocol also considers the impact and environmental costs in asset management, risk analysis and project financing. Although exercising the Protocol is voluntary, signatories have agreed to make their greatest efforts to implement its commitments to consider, in the analysis of credit risk and investments, impacts and environmental and social costs that are generated in the activities and projects to be funded, based on compliance with environmental regulations of Colombia. 55 per cent of member banks have reported establishing internal training on the Green Protocol strategies; however, public information about the specific advances in the three Green Protocol strategies is limited.
- The **Kenya** Bankers Association and the commercial banks in Kenya have developed a set of universal principles to guide banks in balancing their immediate business goals with the economy's future priorities and socio-environmental concerns. The Central Bank of Kenya and the Kenya Bankers Association are forming a partnership to promote the effective implementation of the market-led Sustainable Finance Principles, and have also recently joined the global Sustainable Banking Network supported by the IFC. The process envisaged will begin with capacity building and internalizing the principles, followed by implementation and direct regulation (on credit policy, risk assessment and directed lending) over time. This will allow the banks to build the required capacity for effective and meaningful implementation. It will also give the regulator time to build the internal capacity of its supervision arm.
- **Morocco's** Central Bank has committed to sustainable development as part of its formal strategy and is taking its first steps in the field of green finance. It has convened workshops with commercial banks to explore regulatory and voluntary standards options towards developing a road map for finance reform for a green economy. Some banks have already introduced Environment, Social and Governance (ESG) initiatives. The Bank has also set up a working group on green finance.
- The **Nigeria** Sustainable Banking Principles were developed by the country's bankers committee, made up of the Central Bank of Nigeria (CBN) and leading commercial banks. Throughout the process, the CBN was actively involved in shaping the agenda, appointing the advisory body to oversee implementation of the Principles, and taking on the supervision of implementation. In effect, this makes the principles quasi-mandatory, with a three-year compliance and implementation process starting in 2013. Banks are required to provide preliminary once-off reports on policies and systems, as well as baseline data collection, followed by biannual reporting on indicators organized according to the 9 principles. As of the end of 2015, Nigerian banks completed the submission of a first batch of reports, which CBN will assess to determine industry baselines and set benchmarks.

- Peru’s Superintendency of Banking, Insurance and Private Pension Fund Administrators (SBS) launched the Regulation for Social and Environmental Risk Management in March 2015 as a form of ‘Equator Principles Plus’. SBS also released guidance on the *Role of Enhanced Due Diligence in the Regulation of Socio-environmental Risk Management for Financial Firms* to explain key features of the Regulation. These efforts have been particularly influenced by the high cost of delayed and cancelled projects in the real sector, such as mining, due to social and distributive factors.

*“At first we had a recommendation for green investment, but there has not been much take-up. Now we are looking at what incentives could be put in place.”*

*Interviewee*

**FIGURE 4: GUIDELINES ON GREEN BANKING**

Country	Name of Policy	Developed by	Launched in	Sector Specific (If Applicable)	Voluntary/mandatory
<b>Bangladesh</b>	Environmental Risk Management (ERM) Guideline	Bangladesh Bank (central bank)	2011	The policy includes the classification of investments into high-, medium- and low-risk categories and division	Voluntary – with moral suasion and mandatory reporting
<b>Colombia</b>	Green Protocol (Protocolo Verde)	Colombia Bankers Association	2012	No	Voluntary
<b>Mongolia</b>	Mongolian Sustainable Finance Principles and Sector Guidelines	Mongolian Bankers Association	2015	Yes - Agriculture, Construction, Manufacturing, Mining	Voluntary
<b>Nigeria</b>	The Nigerian Sustainable Banking Principles	Nigerian Central Bank	2014	Yes - Power, Agriculture, Oil and Gas	Mandatory
<b>Viet Nam</b>	Environmental and Social Risk Management circular	State Bank of Viet Nam	2014		
<b>Peru</b>	Regulation for Social and Environmental Risk Management	Superintendency of Banking, Insurance and Private Pension Fund Administrators	2015		Mandatory

*“Our experience of green finance has been local banks developing loans for SMEs to take up energy efficiency and solar power, with support from international development banks.”*

*Interviewee*

While it is early in the development of many of these efforts towards green banking, emerging experience is that while voluntary approaches can be effective in encouraging risk-based environmental due diligence, incentives, public support or mandatory requirements tend to be needed to mobilize funding into specific green investment areas. Many countries are, therefore, combining risk management guidelines with public financing initiatives that seek to provide a demonstration effect for the financing of green projects and technologies, lowering their perceived risk. The Bangladesh Bank, for example, offers targeted refinancing lines to banks, refunding at reduced interest rates for loans given to priority areas such as renewable energy. Launched in 2009 with an initial focus on solar energy, biogas and effluent treatment projects, its scope has been continuously expanded and now covers 47 items. Bank loans for projects in the included fields can be refinanced by the Bangladesh Bank at 5% provided that the interest charged to bank customers does not exceed 9%. Similar schemes



with a focus on the country’s sustainability priorities are also available to provide collateral-free credit to sharecroppers, for loans to increase the energy efficiency of brick kilns, as well as to expand funding possibilities for small and medium sized enterprises.<sup>36</sup>

### 4.3 INCLUSIVE INSURANCE FOR RESILIENCE

Area of focus	Maturity	Example
<b>Illicit practices and weak enforcement</b>	■ ■	Strategies to formalize informal insurance
<b>Upside opportunities for green finance</b>	■	Development of microfinance for disaster resilience
<b>Dilemmas, gaps and trade offs</b>		

Insurance is important both in its function in enabling the mutualization of risk and as an institutional investor. By reducing uncertainty and the impact of large losses, the sector can encourage new investments and innovation, incentivize risk reduction and enable economic recovery after disaster. As financial intermediaries with long investment horizons, insurance companies can contribute to the provision of long-term instruments to finance investments in businesses and housing. Insurance markets are generally underdeveloped in developing countries, leaving many risks uninsured, which in turn encourages precautionary saving, which leads to underutilization of capital and underinvestment, and failed, reduced or delayed recovery from disaster. In recent years, focus has been increasing on inclusive insurance or micro-insurance, particularly geared to offering access to insurance to low-income people through public, private or mutual-cooperative mechanisms. In some cases, commercial insurers are driven by requirements of regulation or by the desire to enter new markets. There are approximately half a billion micro-insurance customers worldwide: 85 per cent in Asia, 10 per cent in Latin America and 5 per cent in Africa.<sup>37</sup>

There has been significant experimentation with insurance focused on environmental risks. For example, in Ghana, the German technical development cooperation agency GIZ is supporting a project seeking to develop and create a market for Insurance Products for Adaptation to Climate Change (IIPACC). The aim is to facilitate the development of commercial insurance solutions to protect farmers, agro-processors, rural and financial institutions, input dealers and others in the event of crop failure due to extreme weather events. As well as farmers, rural financial institutions and input suppliers can buy the insurance product to cover their financial portfolios and cover defaults by farmers affected by drought. The improved risk protection is expected to increase agricultural lending, increase productivity and strengthen adaptive capacities. The V20 countries are studying the creation of a sovereign V20 Climate Risk Pooling Mechanism to distribute economic and financial risks, improve recovery after climate-induced extreme weather events and disasters, and enhance security of jobs, livelihoods, businesses and investors. This would be a trans-regional public-private mechanism modelled on similar pre-existing regional facilities, featuring index-based insurance tools, and aiming to provide highly accessible, dependable and cost-efficient insurance while incentivizing adaptation measures through risk-determined pricing.

### 4.4 SUSTAINABLE STOCK MARKETS

Area of focus	Maturity	Example
<b>Illicit practices and weak enforcement</b>	■ ■	Development of ESG risk management-based indices
<b>Upside opportunities for green finance</b>	■	Market education efforts
<b>Dilemmas, gaps and trade offs</b>		

Many developing country stock exchanges are developing sustainability strategies and requirements and have joined the Sustainable Stock Exchanges Initiative. Many, such as Nigeria and Mauritius, are

### BOX 8: INCLUSIVE INSURANCE IN THE PHILIPPINES

The Philippines is one of the most vulnerable countries to environmental disasters. It has become an acknowledged international leader in its legal recognition and regulation of micro-insurance.

Mutual Benefit Associations (MBAs) such as associations of farmers, teachers, drivers, market vendors and other occupations are key local institutions that have provided informal insurance such as death benefits to members. However, unregulated insurance markets are constrained in their coverage and leave policyholders unprotected by prudential supervision, customer protection and contract law. Therefore, the Insurance Commission has taken leadership to encourage formalization and regulation of these insurance providers, tailoring the regulations so that mutual associations are not locked out by high capital requirements, but can build up their capital over time. A shared resource centre was developed to provide actuarial and back-office support, and contracts are required to be short and clear, with simple documentation. At the same time, regulations have been tightened, requiring all providers of informal insurance or insurance-like schemes to register themselves, or to partner with a registered mutual or commercial insurer.

MBAs use a model that combines elements of a commitment savings scheme and mutual risk pooling, and return dividends to their participating members. The main product is credit-life insurance to underpin microloans and provide death benefits to families. More recently, MBAs such as CARD MBA have created non-life micro-insurance specifically to address climate risks and natural hazards, covering residential property, SMEs and crops against flood, typhoon, fire and earthquake.

Following typhoon Haiyan (Yolanda) in 2013, micro-insurance was effective in providing relief to over 120,000 affected families. In some cases, MBAs were able to begin to distribute cash within hours, providing more rapid and reliable resources to recover and rebuild rather than waiting for government or foreign aid.

Since Typhoon Haiyan, the Philippines has sought to strengthen catastrophe insurance through sovereign-level protections working with donors, multilateral institutions and the international markets. The Insurance Commission is hopeful that a proposal to develop the first mandatory national catastrophe insurance pool for owners of private dwellings as well as small and medium enterprises will be implemented. The compulsory insurance scheme, an initiative of the Philippine Insurance and Reinsurers Association with the cooperation of the World Bank and the IFC, aims to develop a sustainable pilot catastrophe insurance pool covering mid-sized property owners.

[Based on Presentation by Commissioner Emmanuel Dooc]

introducing sustainability reporting guidelines on a voluntary basis initially, using an approach of market education and engagement. The key driver that they highlight relates to the demands and concerns of international institutional investors, and the desire to demonstrate international best practice in corporate governance. They report anecdotally that encouragement towards sustainability reporting has led to companies adopting environmental and ethical management standards and practices, and that overall it helps them to gain credibility in the marketplace. However, as with sustainability reporting in developed countries, there is not yet a system delivering market-relevant information about material risks that are routinely incorporated into financial decision-making.<sup>38</sup>

Sustainability indices are also a popular type of sustainability initiative among stock exchanges, with many developing indices that integrate social and environmental issues. For example, the Mauritius Stock Exchange and the Egyptian Stock Exchange have both developed sustainability indexes that identify companies based on strong sustainability practices, using a set of internationally aligned and locally

relevant economic, environmental, social and governance criteria. However, they tend to operate as a public recognition of good practice, rather than as the basis for a financial mechanism such as exchange-traded funds. Nevertheless, the development of such sustainability indices has driven the development of locally relevant sustainability criteria and the capacity to assess investee companies on this basis.

*“Developing the sustainability index has been an important market education process, we had to engage with companies, explaining the criteria and the business case.”*

*Interviewee*

#### **BOX 9: LEADERSHIP ON SUSTAINABILITY AT THE EGYPTIAN STOCK EXCHANGE**

The Alexandria Stock Exchange was officially established in 1883, followed by Cairo in 1903. They have been combined into the Egyptian Stock Exchange (EGX), which is the trading venue where member firms or brokers can buy and sell securities. EGX is owned by the government, but managed independently.

EGX has been a pioneer stock exchange working on sustainability. Key challenges it sees are the low level of awareness among major stakeholders in the financial sector, how finance relates to the development priorities of the country and the potential for green and inclusive finance.

EGX’s main goal in relation to sustainability is therefore raising the awareness of Corporate Social Responsibility between listed companies, investors and other stakeholders.

In March 2010, EGX became the first stock market in the MENA region and second worldwide to launch an ESG index (S&P/EGX). Together with the regulator, it hosts an annual event to promote the top-rated companies according to the ESG index criteria. It is working to develop ESG information reporting guidance for listed companies by the end of 2016. However, awareness and use of the index remain low, with 87.5 per cent of investment managers, brokers and analysts telling a recent survey that they were unaware of it.<sup>39</sup>

EGX is seeking to develop a national conversation on sustainable investment. It has established a Sustainability Advisory Committee (EGX-SAC) consisting of listed companies, member companies, non-listed companies and NGOs, and promoted dialogue to raise awareness about the role and importance of sustainability in the financial sector under the banner of the Sustainability Year for the Egyptian Exchange in 2015. Internationally, it is currently vice-chairing the Sustainability Working Group of the World Federation of Exchanges. EGX is committed to the Global Investor Statement on Climate Change. It has joined the UN Global Compact and signed the UN Women Empowerment Principles to encourage listed companies, to participate in both initiatives.

[Based on presentation by Mohammed Omran, Chairman EGX]

## **4.5 TECHNOLOGY-ENABLED FINANCIAL INNOVATION**

**Technology is driving financial inclusion and innovation in financial services by enabling populations who have traditionally been excluded from formal financial services to gain access.** Mobile banking, which first took off in Kenya, led to a third of the Kenyan adult population going from unbanked to banked in three years. Mobile accounts are also a major factor in the large increases in Uganda, Tanzania, and the Democratic Republic of Congo, and are rapidly growing in Bangladesh.

Area of focus	Maturity	Example
Illicit practices and weak enforcement	■	Leapfrogging to new systems for credit rating and asset registration
Upside opportunities for green finance	■	Emerging synergies between green finance and fintech (e.g. pay-as-you-go solar financing).
Dilemmas, gaps and trade offs	■■	Tension between conservative and more permissive approaches to regulation of fintech innovations as a means to enable financial inclusion

While the initial focus on mobile financial services has been on storing and transfer money, it is rapidly becoming a platform for further innovation.

**Mobile money systems such as M-Pesa (Kenya), bKash (Bangladesh), GCash and Smart Money (Philippines) bring together public and impact investors, banks, telecoms companies and purpose-built companies to provide mobile financial services. A common factor where these services**

*“Financial inclusion is boosting access to energy, and vice-versa.”*

*Interviewee*

have taken off has been a supportive and flexible approach in creating a regulatory environment. In the Philippines, regulators state expressly that their approach is to “follow the market”, approving operations on an ad hoc basis rather than starting by trying to develop a comprehensive framework. In 2009, four years after initially approving the services, the Bangko Sentral ng Pilipinas issued e-money regulations based on their observation of the Filipino market. The regulation tackles e-money as a service and not by the legal character of the e-money issuer. Similarly in Kenya, M-Pesa began its operations on the basis of a letter from the Central Bank that set out basic requirements to mitigate perceived risk. E-money regulations have been developed based on how the Kenyan market has developed and with a clearer understanding of the risks involved.<sup>40</sup>

*“It is really early days in understanding how financial technology may enable sustainable investment. It is an important area to understand and experiment.”*

*Interviewee*

**Another example of the potential for technology-enabled innovation is in solving the problem of proving people’s property and identity, which is a critical foundation for finance,** for example allowing creditors to attach liens to property deeds. Traditionally, formalizing identity and assets has involved door-to-door surveying and paper records. Digitization can make these records safer and easier to search. However, they are often stored in fragmented or proprietary databases with formats that typically cannot interact with one another. The blockchain, which is used for cyber currencies such as Bitcoin, offers a potential alternative. It uses a decentralized network of computers to maintain a public ledger of transactions. Information on new transactions is integrated in a precise, time-stamped, interlinked manner, which secures integrity and makes fraud easy to detect. Blockchain technology can allow people to make direct asset exchanges without relying on third-party intermediaries such as banks, lawyers, or notaries.

The government of Honduras is working with a start-up called Factom to understand how it might use blockchain technology for land registration. Approximately 80 per cent of privately held land in Honduras is said to be untitled or improperly titled, and the country has struggled with land title fraud. Land title disputes can lead to violence, environmental abuse, and the displacement of indigenous people. It is hoped that by building blockchain title records with appropriate safeguards, Honduras will be able to develop a system that would allow for more secure mortgages, contracts, mineral rights, and cheaper and more efficient financial services, with lower lending rates for people borrowing against their land.<sup>41</sup>

**Such examples demonstrate the potential for disruptive innovation on financial technology to create leapfrogging opportunities for developing countries.** Significant commercial interest exists in combining mobile money and mobile phone-based data to overcome the credit rating challenge for people working in the informal sector and for SMEs. As more and more business is carried out through mobile money and



e-commerce platforms, companies are able to build up the basis for a credit score based on information on their income and expenses. For example, ‘Sesame Credit’ developed by China’s Alibaba e-commerce platform compiles individual ‘social credit’ scores based on spending patterns and social networks. Uber is launching in East Africa and plans to offer drivers credit to purchase new vehicles, based on the scale of their earnings and the customer ratings they receive. Kenya Commercial Bank has also developed M-Shwami, a full bank account accessed through mobile phone interface – this also builds up a customer’s credit score based on data from account and mobile phone use. There is great international interest in such innovations, which could have the potential to turn loan origination for microcredit from a high cost ‘artisan’ business to a low-cost service. As with the M-Kopa example, this raises the potential for using these flows of micropayments as collateral for loans and securitizing them into tradable investments.

#### **BOX 10: SYNERGY BETWEEN MOBILE MONEY AND ENERGY ACCESS IN KENYA**

Kenya’s extensive deployment of mobile payments opened the way to an increased uptake of distributed renewable energy. Several mobile money-enabled pay-as-you-go (PAYG) home solar systems have been developed, such as M-Kopa, Mobisol and Off-Grid:Electric. They provide asset financing based on using mobile phone payments towards the costs for household appliances – solar panels, lights, radio and chargers. The payment unlocks the use of the solar panel and battery system on an hourly or daily basis.

Lessons emerging from PAYG solar systems are that critical synergies exist between energy access and financial inclusion. While mobile money is seen as a platform enabling energy access, the relationship is also working the other way, with solar home systems being the motivating factor that leads customers to sign up for and use e-wallets. The business of decentralized energy systems also supports the liquidity of mobile money agents – since consumers in remote locations make cash payments for using their solar system that can then be recycled for paying out as remittances from city-based workers.

The direct technology-enabled link between the payment system and unlocking the energy supply provides the key means to enable credit to be provided at a low cost, without a costly structure for assessing credit history, collecting micropayments or chasing loans. This, in turn, enables customers to build up a credit history that can be used to access additional loans for capital assets such as bicycles and home improvements.

Most PAYG solar companies have funded product development and initial sales through grants capital and equity from impact investors. Only a handful has accessed debt and fewer have leveraged local sources of finance. However, M-Kopa successfully used the flow of micropayments as collateral for raising debt through a syndicated debt facility fronted by the Commercial Bank of Africa with investment from Generation Investment Management, demonstrating that delivering energy access through PAYG solar is becoming bankable.

The company Maji Mashinani is also developing a similar model for water connections, giving consumers PAYG credit to pay for the high upfront cost of connection to the water system.

[Drawing on presentation by Nuru Mugambi, Kenya Bankers Association]

**Financial inclusion expands the pool of savings that can be mobilized for sustainable development projects.** Egypt financed the expansion of the Suez Canal through a popular local bond issuance. The Kenyan government also plans to launch the M-Akiba bond targeted at ordinary Kenyans and bought through a mobile phone platform. Other countries have used ‘diaspora bonds’ to raise finance through remittances. While these are examples of government bonds reaching popular markets, crowdfunding also

creates opportunities to mobilize domestic savings for businesses and local infrastructure. Crowdfunding combines the traditional practice of raising funds from friends, family and community with internet and mobile technology, and social network. It is currently concentrated in Europe and North America. However, a study by the World Bank in 2013 estimated that developing countries could attract US\$95 billion through crowdfunding by 2025 – 1.8 times today’s global venture capital industry. Pilots are carried out to mentor and train start-ups on crowdfunding, and lessons are also learned from the experience of individual funding campaigns.<sup>42</sup>

While such ‘fintech’ innovations hold out the possibility for improving the effectiveness and efficiency of financial intermediation between savers and investors, they also make a larger pool of investors vulnerable to investment scams and pyramid schemes. Such Ponzi schemes in countries including Albania, Benin, Jamaica, Colombia, and Lesotho have led to massive losses, in some cases leading to unrest, riots, deaths, states of emergency in countries and even the fall of a government.<sup>43</sup> As the potential and stakes for fintech to shape economies grows, establishing clear rules and safeguards will be crucial. Regulations and financial literacy are both key to enabling greater utilization and normalization of debt, equity and invoice lending platforms to link entrepreneurs and investors, while protecting savers from exploitation and imprudence.<sup>44</sup>

## 4.6 MEASURING PROGRESS

A few countries, such as Bangladesh and Nigeria have developed a framework of metrics for measuring progress on green finance.

### BOX 11: MEASURING PROGRESS ON GREEN FINANCE IN BANGLADESH

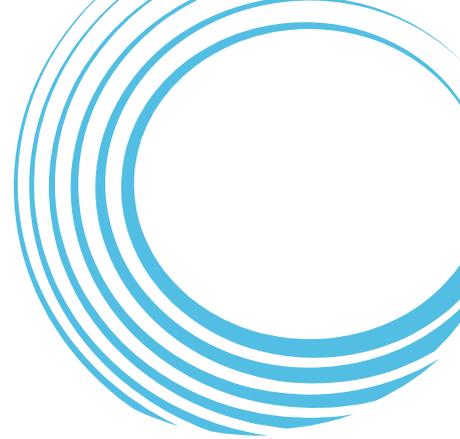
In 2012, the Bangladesh Bank issued guidance to banks on the reporting of green banking activities. It collates this data into quarterly reports, and in 2014 included a chapter on sustainable banking in its annual report. The metrics used include a combination of:

- **The number of banks establishing green banking units and policies** – It has steadily increased and is approaching 100 per cent. The policies tend to be a direct replication of the Bangladesh Bank guidance.
- **Environmental risk rating** – Banks are asked to report on environmental due diligence carried out in relation to loan applications from environmentally sensitive areas (agribusiness, cement, chemicals, housing, engineering, metals, pulp and paper, tannery, sugar and distilleries, garment and textiles and ship-breaking). During FY2014, banks disbursed a total amount of BDT1.6 trillion (US\$20 billion) to 30,540 rated projects, up from BDT270 billion in 2011 and BDT703 billion in 2012.
- **Green finance mobilized** – Banks report on their exposure to ‘direct green finance’, which includes financing for key green technologies including renewable energy and biogas, water supply, wastewater treatment, solid and hazardous waste disposal, green buildings, green products and materials, clean transportation, land remediation, and sustainable land management. They also report on ‘indirect green finance’, which includes overall financing to projects with end-of-pipe effluent treatment.
- **Publicly supported green refinancing** – The green refinancing scheme is a BDT2 billion (US\$25 million) revolving loan fund. Overall BDT1.1 billion (US\$13 million) has been disbursed from this fund during FY10-FY14. The main uses were for biogas, solar assembly plant and energy-efficient brick kilns.

[Based on UNEP Inquiry Bangladesh Country report]



## 5 NEEDS IN RELATION TO INTERNATIONAL COLLABORATION



*“In many cases donor countries or international investors have a larger say in investment decisions than domestic financial institutions or policies. Sometimes what we want is not their priority.”*

*Emmanuel Dooc, Insurance Commissioner, Philippines*

*“It is difficult to talk about green finance in Central America without talking about development finance. The critical question with limited supplies of development finance is not whether it can successfully fund some green projects, but whether it contributes to a shift in lending by local banks to finance these kinds of projects.”*

*Gracia Barahona, INCAE, Honduras*

### 5.1 MAPPING EXISTING INTERNATIONAL COOPERATION

The increasing internationalization of national financial systems makes international cooperation a critical support in embedding sustainable development into financial decision-making. There are already many venues for such cooperation and initiatives under way.

A number of initiatives have been set up as platforms for extending commitments and learning in relation to particular types of financial institution and sustainability issues.

#### **BOX 12: INTERNATIONAL INITIATIVES ON SUSTAINABLE FINANCE (ILLUSTRATIVE LIST)**

- The **Alliance for Financial Inclusion (AFI)** is a global network of financial policymakers from developing and emerging countries working together to increase access to appropriate financial services for the poor. The network includes members and partners from more than 90 countries representing central banks and other financial regulatory institutions from developing countries. [www.afi-global.org](http://www.afi-global.org)
- The **Green Infrastructure Investment Coalition (GIIC)** was launched in 2015 with the aim of bringing together government agencies, international asset managers, owners and development agencies to work more closely on promoting large-scale development and financing of green infrastructure. It works through investor-government global and regional dialogues to promote green infrastructure investment opportunities. [www.giicoalition.org](http://www.giicoalition.org)
- The **Principles for Responsible Investment (PRI)** were developed in 2005 by a group of the world’s largest institutional investors. Institutions responsible for US\$69 trillion of assets have committed to implement the principles and working to understand the implications of sustainability for investors.<sup>45</sup> [www.unpri.org](http://www.unpri.org)
- The **Principles for Sustainable Insurance (PSI)** were launched in 2012 as a global framework for the insurance industry to address environmental, social and governance



risks and opportunities. 83 organizations have adopted the Principles, including insurers representing approximately 20 per cent of world premium volume and US\$14 trillion in assets under management. The UNEP Inquiry and UNEP FI are now developing a Sustainable Insurance Policy Forum. [www.unepfi.org/psi](http://www.unepfi.org/psi)

- The **Sustainable Banking Network (SBN)** is convened by the International Finance Corporation and brings together banking regulators from a number of developing countries concerned with sustainable development. Members include regulators and bankers' associations from Bangladesh, Brazil, China, Colombia, Indonesia, Kenya, Mongolia, Nigeria, Peru and Viet Nam. [www.ifc.org](http://www.ifc.org)
- The **Sustainable Stock Exchanges Initiative (SSE)** is a learning platform for exploring how exchanges, in collaboration with investors, regulators and companies, can enhance transparency, performance and investment. To date, 48 exchanges have joined by making a public commitment to sustainability in their markets.<sup>46</sup> [www.sseinitiative.org](http://www.sseinitiative.org)
- The **Task Force on Climate Disclosure (TCFD)** has been convened by the FSB to develop recommendations on disclosure of the physical, liability and transition risks associated with climate change. By the end of 2016, the task force is expected to publish for consultation its recommendations for voluntary disclosure principles and leading practices. [www.fsb-tcfd.org](http://www.fsb-tcfd.org)
- The **UNEP Finance Initiative (UNEP FI)** is a global partnership between UNEP and the financial sector. Over 200 institutions, including banks, insurers and fund managers, work with UNEP to understand the impacts of environmental and social considerations on financial performance. [www.unepfi.org](http://www.unepfi.org)
- The **Vulnerable 20 (V20)** was established in 2015 when Finance Ministers from climate-vulnerable states came together to steer a high-level policy dialogue on economic and financial issues in relation to enabling climate-resilient and low-emission development. [www.v-20.org](http://www.v-20.org)

In particular, the Sustainable Banking Network (SBN), which has been led by developing countries, demonstrates the power of peer networks to share learning and good practice among regulators, and to support domestic education for market actors.

**Key areas with potential for enhancing international cooperation to support green finance for developing countries include:**

- **Enabling capacity building and market education.** Learning networks are important and should be supported and optimized. International networks such as SBN, UNEP Finance Initiative, and the Alliance for Financial Inclusion, have played a key role in accelerating sustainable finance developments. New networks, such as the Sustainable Insurance Policy Forum, are being developed to meet real needs at the country level. It may be useful to map the broad set of international initiatives and assess what is working and where there are gaps, overlaps and opportunities for more efficient knowledge sharing. Initiatives such as the SBN could be built out to other countries, and potentially other areas of the financial system.
- Many developing countries experience that initial moves into the green finance space are slowed by the general lack of familiarity among finance sector actors with the concepts, definitions, purposes and advantages of the new approach, and by a lack of easy availability of services in this area. Much could be done, particularly using some of the networks mentioned above, to build basic awareness and capacity development tools around the green finance agenda, especially drawing on case material from other developing countries, including those highlighted in this report.
- **Mobilizing green finance through international capital markets.** Brazil and India are both using the Green Infrastructure Investment Coalition as a means for engaging with foreign institutional

### BOX 13: THE SUSTAINABLE BANKING NETWORK

The SBN is a knowledge and capacity building platform that brings together financial sector regulators and banking associations interested in establishing enabling frameworks for environmentally and socially sustainable finance. The IFC is the Secretariat and technical advisor.

The SBN combines intensive country-level technical assistance and peer networks. Since its creation in 2012 by IFC and 10 countries, the SBN has more than doubled its size and effectively assisted 12 countries to develop and implement regulatory policies or voluntary principles. Members currently include Bangladesh, Brazil, Cambodia, China, Colombia, Honduras, Indonesia, Jordan, Kenya, Lao PDR, Mexico, Mongolia, Morocco, Nepal, Nigeria, Pakistan, Paraguay, Peru, the Philippines, Thailand, Turkey and Viet Nam.

Commonalities in different country experiences have emerged that offer lessons and success factors that others can apply. These include a flexible approach with policy support and industry-led initiatives at different stages of sustainable banking development in each country.

In many countries, multi-stakeholder consultation and awareness raising have been critical first steps, followed by capacity building and guidance for regulators and financial institutions, inter-agency collaboration and development of incentives and systems for monitoring and assessing implementation, including key performance indicators.

investors. However, this platform may also be used by other smaller economies. Given the importance of banking to developing countries' financial systems, a key challenge is how effectively to support green lending to enable securitization of those lending portfolios in advance of mature local bond markets developing. One possibility for smaller economies may be green bond issuance that securitizes green lending across different countries.

These two approaches are complementary: many countries have identified the need for targeted technical assistance in the development and issuance of a first green bond, which would both mobilize capital and develop regulatory capacity.

**While green finance within the G20 is concentrated on *banking, bonds and institutional investment*, the situation of many smaller and poorer developing countries highlights other areas of potential:**

- **Drawing on public institutional investment vehicles.** While private institutional investment mostly comes from OECD savers, many developing countries have significant investment vehicles that are policy-influenced or state-owned, such as sovereign wealth funds and pension funds linked to state-owned enterprises. These institutions could be included in considering how to encourage green investment.
- **Learning from blended finance approaches.** While recognizing the importance of private finance, the nature of green investment in most developing countries involves a combination of public and private finance. It is critical to learn lessons on how to mobilize such blended finance in the most efficient way, drawing from, but not restricted to the area of climate finance.
- **Integrating green finance considerations into foreign direct investment.** Recognizing that foreign direct investment enables green finance significantly in many developing countries through frameworks outside of domestic financial regulation, it is important to consider how best to support the greening of in-bound investment.

**Finally, in recognition of the importance of international frameworks to smaller developing financial markets, it is important to monitor the development of international standards and consider unintended negative impacts on developing economies.**

## 5.2 RELEVANCE TO THE WORK OF THE G20 GREEN FINANCE STUDY GROUP

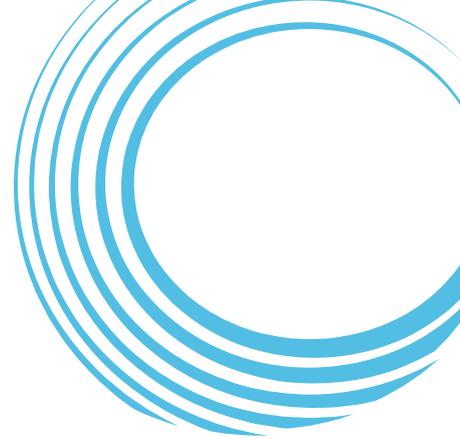
The work of the G20 GFSG is relevant to non-G20 developing countries. For many developing countries, banking is dominant and is the focus of green finance efforts; however, the role of capital markets, insurance and pension funds, the development of green bonds and adoption of enhanced risk analysis tools are also being considered.

The concerns of non-G20 developing countries raise additional issues that the GFSG might consider in future work. As the table below summarizes, some of the additional issues are particularly relevant to non-G20 developing countries and some are globally relevant.

**FIGURE 5: SUMMARY OF AREAS RAISED IN NON-G20 GREEN FINANCE MEETING**

Already covered by GFSG	Particularly relevant to non G20 developing countries	Globally relevant
<ul style="list-style-type: none"> <li>⦿ Measures to green banking</li> <li>⦿ Potential for green bonds</li> <li>⦿ Disclosure related to securities</li> <li>⦿ Risk assessment (in relation to banks, insurance, credit rating agencies)</li> <li>⦿ Definitions/measuring progress</li> </ul>	<ul style="list-style-type: none"> <li>⦿ Green finance when environmental enforcement is weak</li> <li>⦿ Financial inclusion</li> <li>⦿ The role of the informal financial sector</li> <li>⦿ Insurance for resilience</li> </ul>	<ul style="list-style-type: none"> <li>⦿ Development of national strategies</li> <li>⦿ Disruption enabled by financial technology</li> <li>⦿ Effectiveness of public finance</li> <li>⦿ Role of FDI as an investment channel</li> <li>⦿ The role of the insurance sector</li> <li>⦿ Access to green finance by SMEs</li> <li>⦿ Integrating environmental factors into public procurement of financial services</li> <li>⦿ Illicit financial flows</li> </ul>

## 6 NEXT STEPS



While it is clear that many developing countries are taking their first steps in the green finance transition, it is equally clear that the potential to harness finance to the development priorities of these countries is great. Experience from across the globe attests to the interest and creativity of developing countries in seeking to ensure that investment and finance serve optimally to advance sustainable forms of development.

UNEP and many other international organizations are committed to speeding this transition. The Geneva meeting in April was a first step in this direction in that it focused exclusively on the threats and opportunities specific to the developing countries and, in particular, the poorest among them. Other steps will follow as a work stream aimed specifically at developing countries is developed.

A useful starting point for developing countries is to draw up a green finance strategy or road map that seeks to identify and articulate the policy, regulatory or institutional developments that would best serve to align finance to the country's sustainable development priorities. UNEP has worked with several developing countries on such strategies and road maps, and is keen to extend this to other developing countries.

Such road maps might address the following questions:

1. What is the development objective – economic, social or environmental – that financial sector reform and innovation is intended to achieve and how to measure it?
2. How to build a constituency for the reform or innovation at the domestic level?
3. What are the professional and institutional capacity needs and how will they be addressed?
4. Who from the public and private sectors needs to participate in drawing up the road map?
5. What is the potential for “smart process” – approaches based not on regulation but on public-private cooperation?

Particular emphasis should go into understanding both the upside and downside risks associated with:

1. Innovation: understanding the role of possibly disruptive business models?
2. Public finance: what is the best role for public finance to catalyse and leverage change?
3. Investor responsibility: how to favour “productive” or “quality” investment in an environment where development finance is on the decline? What regulations are possible to screen out predatory investment that generates little development benefit, and how to insure that investment agreements allow and indeed favour this?

UNEP is keen, also, to work with developing countries to take full advantage of key domestic or international initiatives to introduce the perspective of green finance and the potential of green finance reform to align investment with sustainable development. The Conference of the Parties to the Climate Change Convention – meeting in Morocco in November 2016 – is a good example, offering the opportunity not only to highlight how green finance reform can advance climate targets, but to highlight the work being done in Morocco and other developing countries in this direction.



The potential for introducing green finance reform to regional economic integration processes is also great. Steps are being made to extend some of Kenya's more successful experiences to the other members of the East African Community, and UNEP is exploring similar ideas with the Gulf Cooperation Council and with the economic integration process in Central America.

The potential to federate the many different networks bringing together financial sector actors – insurance, banks and banking associations, central banks, stock markets, etc. – is also great, allowing gaps to be identified and filled, synergies to be developed and the service coverage of these networks to be extended.

# ANNEX I: UNEP INQUIRY DEVELOPING COUNTRY REPORTS



UNEP Inquiry global report: The Financial System We Need

<http://bit.ly/232EEBJ>



Bangladesh paper: Monetary Policy and Sustainability - the Case of Bangladesh

<http://bit.ly/1WYARSh>



Brazil: The Brazilian Financial System and the Green Economy: Alignment with Sustainable Development

<http://bit.ly/21UaTQX>



China: Establishing China's Green Financial System

<http://bit.ly/1UDgkoT>



Colombia: Aligning Colombia's Financial System with Sustainable Development

<http://bit.ly/25x8aBI>



India: Designing a Sustainable Financial System for India

<http://bit.ly/1rGVYz9>



Indonesia: Indonesia - Towards a Sustainable Financial System

<http://bit.ly/1WYAYxb>



Kenya: Aligning Kenya's Financial System with Inclusive Green Investment

<http://bit.ly/1TjHWT8>





The Experience of Governance Innovations in South Africa

<http://bit.ly/29u9po8>



Aligning Africa's Financial System with Sustainable Development

<http://bit.ly/1NtbszW>



Aligning the Financial System in the Asia Pacific Region to Sustainable Development

<http://bit.ly/1YQagHD>

All UNEP Inquiry publications are available at [www.unepinquiry.org](http://www.unepinquiry.org).

# REFERENCES

- <sup>1</sup> UNEP Inquiry Country Studies from Bangladesh, Brazil, China, Colombia, India, Indonesia and Kenya are available to download from [www.unepinquiry.org](http://www.unepinquiry.org).
- <sup>2</sup> G20 (2016). G20 Finance Ministers and Central Bank Governors Meeting, Shanghai, 27 February 2016. <http://www.g20.utoronto.ca/2016/160227-finance-en.html>
- <sup>3</sup> UNEP Inquiry (2016). Green Finance and Non-G20 Developing Countries: Needs, Concerns, Aspirations and Approaches. Briefing.
- <sup>4</sup> [www.unepinquiry.org](http://www.unepinquiry.org)
- <sup>5</sup> Sustainable Energy for All (2015). Global Tracking Framework Report. <http://www.se4all.org/tracking-progress>
- <sup>6</sup> UN (2015). Report of the Intergovernmental Committee of Experts on Sustainable Development Financing <http://www.un.org/esa/ffd/publications/report-icesdf.html>
- <sup>7</sup> Osborn, D., Cutter, A. and Ullah, F. (2015). Universal Sustainable Development Goals: Understanding the Transformational Challenge for Developed Countries, Stakeholder Forum. [https://sustainabledevelopment.un.org/content/documents/1684SF\\_-\\_SDG\\_Universality\\_Report\\_-\\_May\\_2015.pdf](https://sustainabledevelopment.un.org/content/documents/1684SF_-_SDG_Universality_Report_-_May_2015.pdf)
- <sup>8</sup> IMF (2006). Overview of the Financial System.
- <sup>9</sup> Bacani, B., Robins, N. and McDaniels, J. (2015). Insurance 2030. UNEP Inquiry/Principles for Sustainable Insurance. [http://unepinquiry.org/wp-content/uploads/2015/06/Insurance\\_2030.pdf](http://unepinquiry.org/wp-content/uploads/2015/06/Insurance_2030.pdf)
- <sup>10</sup> UNEP Inquiry (2015). The Financial System We Need. <http://unepinquiry.org/publication/inquiry-global-report-the-financial-system-we-need/>
- <sup>11</sup> IFC – Sustainable Banking Network (n.d.). [http://www.ifc.org/wps/wcm/connect/industry\\_ext\\_content/ifc\\_external\\_corporate\\_site/industries/financial+markets/news/ifc+launches+sustainable+banking+network+for+regulators+to+share+green+credit+expertise](http://www.ifc.org/wps/wcm/connect/industry_ext_content/ifc_external_corporate_site/industries/financial+markets/news/ifc+launches+sustainable+banking+network+for+regulators+to+share+green+credit+expertise)
- <sup>12</sup> See note 10.
- <sup>13</sup> Paulson Institute/SIFMA/Green Finance Committee/UNEP Inquiry (2016). Green Finance – A Growing Imperative. Briefing.
- <sup>14</sup> Hall, J. (2010). Ten Years of Innovation in Remittances: Lessons Learned and Models for the Future Independent Review of the Multilateral Investment Fund Remittance Portfolio. IADB.
- <sup>15</sup> Lowry, C. and Ramachandran, V. (2015). Unintended Consequences of Anti-Money Laundering Policies for Poor Countries. Center for Global Development. [www.cgdev.org/sites/default/files/CGD-WG-Report-Unintended-Consequences-AML-Policies-2015.pdf](http://www.cgdev.org/sites/default/files/CGD-WG-Report-Unintended-Consequences-AML-Policies-2015.pdf)
- <sup>16</sup> Cubero, R., De, J., Gupta, S. and Kaendera, S. (2016). Bangladesh: Selected Issues. IMF
- <sup>17</sup> Ashiagbor, D., Satyamurthy, N. and Casey, M. (2014). Pension Funds and Private Equity: Unlocking Africa’s Potential. The Commonwealth Secretariat, MFW4A, EMPEA. <http://www.mfw4a.org/nc/knowledge-center/resources/documents/documents-details/file/pension-funds-and-private-equity-unlocking-africas-potential-2014.html>
- <sup>18</sup> Murai, C. and Kirima, M. (2015). Aligning Kenya’s Financial System with Inclusive Green Investment. UNEP Inquiry. <http://unepinquiry.org/publication/kenya-country-report/>
- <sup>19</sup> Lloyds (n.d.). Lloyd’s 360° Risk Insight Insurance in developing countries: Exploring opportunities in microinsurance
- <sup>20</sup> See note 18.
- <sup>21</sup> UNEP Inquiry (2015). Designing a Sustainable Financial System in Bangladesh. <http://unepinquiry.org/publication/bangladesh/>
- <sup>22</sup> World Health Organization (2016). Preventing Disease through Healthy Environments.
- <sup>23</sup> University of British Columbia (2016). Poor air quality kills 5.5 million worldwide annually. <http://news.ubc.ca/2016/02/12/poor-air-quality-kills-5-5-million-worldwide-annually/>
- <sup>24</sup> Haq, A., Aslam, A., Chaudhry, A. A., Naseer, A., Muhammad, K., Mushtaq, K. and Farooqi, M. S. (2013). Who is the “arthi”: Understanding the commission agent’s role in the agriculture supply chain IGC. <http://www.theigc.org/wp-content/uploads/2014/09/Haq-Et-Al-2013-Working-Paper.pdf>
- <sup>25</sup> El Qorchi, M., Maimbo, S. and Wilson, J. (2003). Informal Funds Transfer Systems: An Analysis of the Informal Hawala System. A Joint IMF–World Bank Paper. <http://www.imf.org/external/pubs/nft/op/222/>
- <sup>26</sup> Allianz (2010). Microfinance: Do You Susu? Allianz. [https://www.allianz.com/en/about\\_us/open-knowledge/topics/finance/articles/100220-microfinance-do-you-susu.html](https://www.allianz.com/en/about_us/open-knowledge/topics/finance/articles/100220-microfinance-do-you-susu.html)
- <sup>27</sup> Vulnerable Twenty Group of Ministers of Finance Action Plan. <http://www.v-20.org/wp-content/uploads/2015/10/V20-ACTION-PLAN.pdf>
- <sup>28</sup> See note 15.
- <sup>29</sup> de Koker, L. and McKee, K. (2012). Financial Crime: Risks for New Formal Finance Customers. CGAP. <http://www.cgap.org/blog/financial-crime-risks-new-formal-finance-customers>
- <sup>30</sup> World Bank Group (2016). The World Bank Group’s Response to Illicit Financial Flows: A Stocktaking. [http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2016/04/06/090224b084269440/1\\_o/Rendered/PDF/TheoWorldoBankolows000aostocktaking.pdf](http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2016/04/06/090224b084269440/1_o/Rendered/PDF/TheoWorldoBankolows000aostocktaking.pdf)



- <sup>31</sup> See for example Khor, M. (2011). Challenges of the Green Economy Concept and Policies in the Context of Sustainable Development, Poverty and Equity. In: The Transition to a Green Economy: Benefits, Challenges and Risks from a Sustainable Development Perspective. Report by a Panel of Experts to Second Preparatory Committee Meeting for United Nations Conference on Sustainable Development
- <sup>32</sup> Moss, T. (2012). Unleash OPIC: Why Are We Fighting Climate Change on the Back of the World's Poor? <http://www.cgdev.org/blog/unleash-opic-why-are-we-fighting-climate-change-back-world%E2%80%99s-poor>
- <sup>33</sup> IFC (2014). International Sustainable Banking Forum. [http://www.ifc.org/wps/wcm/connect/Topics\\_Ext\\_Content/IFC\\_External\\_Corporate\\_Site/IFC+Sustainability/Partnerships/Sustainable+Banking+Network/](http://www.ifc.org/wps/wcm/connect/Topics_Ext_Content/IFC_External_Corporate_Site/IFC+Sustainability/Partnerships/Sustainable+Banking+Network/)
- <sup>34</sup> EBRD/UNEP Inquiry Briefing (forthcoming)
- <sup>35</sup> See note 21.
- <sup>36</sup> Barkawi, A. and Monnin, P. (2015). Monetary Policy and Sustainability: the case of Bangladesh. UNEP Inquiry Working Paper. [http://unepinquiry.org/wp-content/uploads/2015/04/Monetary\\_Policy\\_and\\_Sustainability\\_The\\_Case\\_of\\_Bangladesh.pdf](http://unepinquiry.org/wp-content/uploads/2015/04/Monetary_Policy_and_Sustainability_The_Case_of_Bangladesh.pdf)
- <sup>37</sup> CISL (2015). Insurance regulation for sustainable development – Protecting human rights against climate risk and natural hazards. Cambridge Institute for Sustainability Leadership <http://www.cisl.cam.ac.uk/publications/publication-pdfs/insurance-regulation-report.pdf>
- <sup>38</sup> Hohnen, P. (2012). The Future of Sustainability Reporting. Chatham House.
- <sup>39</sup> Daily News Egypt (2015). 87.5% of the investors unaware of sustainable development index <http://www.dailynewsegypt.com/2015/10/25/87-5-of-the-investors-unaware-of-sustainable-development-index/>
- <sup>40</sup> Tarazi, M. (2010). Branchless Banking: The Test and See Approach. CGAP. <http://www.cgap.org/blog/branchless-banking-test-and-see-approach>
- <sup>41</sup> Holmes, B. (2015). Factom Tackles Land Title Disputes, With Bitcoin's Blockchain. <http://bravenewcoin.com/news/factom-tackles-land-title-disputes-with-bitcoins-blockchain/>
- <sup>42</sup> <http://www.infodev.org/crowdfunding>
- <sup>43</sup> Monroe, H., Carvajal, A. and Pattillo, C. (2010). Perils of Ponzi. Finance and Development. March 2010, Volume 47, Number 1. IMF. <http://www.imf.org/external/pubs/ft/fandd/2010/03/monroe.htm>
- <sup>44</sup> Raymond, S. (2015). Crowdfunding in Emerging Markets: Lessons from East African Startups. InfoDev/World Bank. [https://www.infodev.org/infodev-files/crowdfunding\\_in\\_east\\_africa.pdf](https://www.infodev.org/infodev-files/crowdfunding_in_east_africa.pdf)
- <sup>45</sup> <http://www.unpri.org/about-pri/about-pri/>
- <sup>46</sup> Sustainable Stock Exchanges Initiative (2014). Report on Progress

# NOTES



# NOTES







**Inquiry:** Design of a Sustainable Financial System

International Environment House

Chemin des Anémones 11-13

Geneva,

Switzerland

Tel.: +41 (0) 229178995

Email: [inquiry@unep.org](mailto:inquiry@unep.org) - Twitter: @FinInquiry

Website: [www.unep.org/inquiry/](http://www.unep.org/inquiry/)