

SUSTAINABLE BANKING  
NETWORK (SBN)

# CREATING GREEN BOND MARKETS – INSIGHTS, INNOVATIONS, AND TOOLS FROM EMERGING MARKETS

OCTOBER 2018



Climate Bonds INITIATIVE



*Creating Markets, Creating Opportunities*

© International Finance Corporation [2018], as the Secretariat of the Sustainable Banking Network (SBN). All rights reserved.  
Washington, D.C. 20433  
Internet: [www.ifc.org](http://www.ifc.org)

The material in this work is copyrighted. Copying and/or transmitting portions or all of this work without permission may be a violation of applicable law. IFC and SBN encourage dissemination of its work and will normally grant permission to reproduce portions of the work promptly, and when the reproduction is for educational and non-commercial purposes, without a fee, subject to such attributions and notices as we may reasonably require.

IFC and SBN do not guarantee the accuracy, reliability or completeness of the content included in this work, or for the conclusions or judgments described herein, and accepts no responsibility or liability for any omissions or errors (including, without limitation, typographical errors and technical errors) in the content whatsoever or for reliance thereon. This work was prepared in consultation with SBN members. The findings, interpretations, and conclusions expressed in this volume do not necessarily reflect the views of the Executive Directors of The World Bank, IFC or the governments they represent.

The contents of this work are intended for general informational purposes only and are not intended to constitute legal, securities, or investment advice, an opinion regarding the appropriateness of any investment, or a solicitation of any type. IFC or its affiliates may have an investment in, provide other advice or services to, or otherwise have a financial interest in, certain of the companies and parties named herein.

The boundaries, colors, denominations, and other information shown on any map in this work do not imply any judgment on the part of IFC or The World Bank concerning the legal status of any territory or the endorsement or acceptance of such boundaries.

All other queries on rights and licenses, including subsidiary rights, should be addressed to IFC Communications, 2121 Pennsylvania Avenue, N.W., Washington, D.C. 20433. International Finance Corporation is an international organization established by Articles of Agreement among its member countries, and a member of the World Bank Group. All names, logos and trademarks are the property of IFC and you may not use any of such materials for any purpose without the express written consent of IFC. Additionally, "International Finance Corporation" and "IFC" are registered trademarks of IFC and are protected under international law.

The global SBN activities are supported by the Government of China through the Ministry of Finance, and the Government of Denmark.

This report was made possible thanks to funding provided by the Government of Denmark.



Government of People's  
Republic of China, through  
the Ministry of Finance



Government of Denmark

SUSTAINABLE BANKING  
NETWORK (SBN)

# CREATING GREEN BOND MARKETS – INSIGHTS, INNOVATIONS, AND TOOLS FROM EMERGING MARKETS

OCTOBER 2018

Prepared by IFC and the Climate Bonds Initiative (CBI) for  
the SBN Green Bond Working Group





# Table of Contents

Acknowledgements .....	iii
Foreword from the SBN Secretariat.....	vii
Foreword from the SBN Green Bond Working Group .....	ix
Abbreviations and Acronyms .....	xi
Executive Summary.....	xiii
Summary of findings.....	xiv
Working Group recommendations: a green bond market development toolkit for SBN members .....	xvii
Conclusion .....	xix
1. Introduction.....	1
2. Green Bond Market Overview .....	3
2.1 Green bonds are an instrument to grow green financial flows .....	3
2.2 Green bond benefits for issuers and investors .....	4
2.3 Global green bond market developments .....	4
2.4 Why green bond guidance is important .....	8
2.5 Subsidies and incentives for green bond issuance – examples from Asia .....	9
3. Green Bond Guidance, Standards, and Practice .....	11
3.1 International guidance and standards .....	11
3.2 Mapping of status of guidance for green bonds in emerging markets .....	13
3.3 Overview of regulations and guidelines for green bonds in emerging markets .....	14
4. Case Studies.....	19
ASEAN .....	20
Brazil.....	21
China .....	22

Indonesia.....	25
Malaysia.....	26
Mexico.....	28
Morocco .....	29
Nigeria.....	30
South Africa .....	31
5. Assessing SBN Member Needs for Training and Capacity Building .....	33
5.1 Survey of SBN members on green bond market development.....	33
5.2 Analysis by stage of green bond market development .....	36
5.3 Training needs expressed by respondents.....	37
6. Conclusion: A Green Bond Market Development Toolkit for SBN Members .....	41
6.1 Common objectives for developing green bond markets.....	41
6.2 Self-assessment and planning matrix for developing green bond markets .....	42
6.3 Roadmap with common milestones for developing green bond markets.....	43
6.4 Capacity building needs assessment and mapping of existing international resources .....	44
Annex I: Green Bond Guidance Documents .....	47

## Figures

Figure 1: Roadmap with common milestones for developing green bond markets .....	xix
Figure 2: Total green bonds issued as of 30 June 2018 .....	5
Figure 3: Annual issuance by issuer type 2012-2018 as of 30 June 2018 .....	5
Figure 4: Evolution of issuance by issuer type as of June 2018.....	6
Figure 5: Cumulative use of proceeds as of June 2018 .....	6
Figure 6: Evolution of use of proceeds as of June 2018.....	7
Figure 7: Issuance per type of issuer entity in the first half (H1) of 2017 and 2018 respectively .....	7
Figure 8: Evolution of issuer type in emerging markets as of June 2018 .....	8
Figure 9: Green bond issuance in Brazil (in US\$) up to June 2018.....	22
Figure 10: Global growth in green bond issuance was driven by China in 2016 .....	24
Figure 11: Timeline of green finance reforms in China.....	25
Figure 12: Breakdown of survey respondents.....	34
Figure 13: Roadmap with common milestones for developing green bond markets .....	44

## Acknowledgements

The Sustainable Banking Network (SBN) Creating Green Bond Markets Report was prepared under the guidance of SBN's Green Bond Working Group members, including Indonesia Financial Services Authority (OJK)(Co-Chair), Latin American Banking Federation (FELABAN)(Co-Chair), Morocco Capital Markets Authority (AMMC) (Co-Chair), Bangladesh Bank, Brazil Banking Association (Febraban), China Banking Regulatory Commission, Colombia Banking Association (Asobancaria), Ecuador Banking Association (Asobanca), Egypt Financial Regulatory Authority, Federation of Egyptian Banks, Johannesburg Stock Exchange, Kenya Bankers Association, Mexico Stock Exchange representing the Mexican Green Bond Working Group, Mongolia Bankers Association, National Bank of Georgia, Nigeria Central Bank, Reserve Bank of Fiji, Reserve Bank of India, South Africa Financial Sector Conduct Authority, Union of Banks of Kyrgyzstan, Vietnam Ministry of Finance, Vietnam State Securities Commission, Abu Dhabi Global Market (ADGM) (Observer), Astana International Financial Centre (AIFC) (Observer), Central Bank of Egypt (Observer), CIFAL Argentina y Fundación EcoConciencia (Observer), Green Climate Fund (Observer), Egypt Central Bank (Observer), International Capital Market Association (ICMA) (Observer), Quito Stock Exchange (Observer), and the Swiss State Secretariat for Economic Affairs (SECO) (Observer).

The Creating Green Bond Markets Report benefited from guidance and input provided by Soledad Barrera (Argentine Bankers Association (ADEBA)); Philippe Richard (Abu Dhabi Global Market (FSRA-ADGM)); Dalia Abdel Kader (Arab African International Bank and Federation of Egyptian Banks); Ephyro Luis B. Amatong (ASEAN Capital Markets Forum and Philippines Securities and Exchange Commission); Asif Iqbal and A.T.M. Omor Faruq (Bangladesh Bank); Carolina Landin (Banking Association of Ecuador (Asobanca)); Hugo Martin Villalba Torres (BBVA Paraguay); Stela Barbosa, Beatriz Secaf, and Mario Sergio Vasconcelos (Brazilian Federation of Banks (Febraban)); Rodolfo Alejandro Tarraubella (CIFAL Argentina y Fundación EcoConciencia); Dr Ma Jun (Finance and Development of Tsinghua University, G20 Sustainable Finance Study Group); Yanfei Ye and Zhao Jianxun (China Banking Regulatory Commission (CBRC)); Cheng Lin (Center for Finance and Development, Tsinghua University); Professor Wang Yao (China International Institute of Green Finance); Isabel Mantilla and Andrés Rojas (Colombian Banking Association (Asobancaria)); Basma Amin and Basma Khashab (Egypt Financial Regulatory Authority); Giorgio Trettenero (Federation of Latin American Banks (FELABAN)); Leo Hyoungkun Park (Green Climate Fund); Peter Munro and Denise Odaro (ICMA Green Bond Principles); Edi Setijawan (Indonesia Financial Services Authority (OJK)); Shameela Ebrahim and Akshar

Sewkuran (Johannesburg Stock Exchange); Nuru Mugambi (Kenya Bankers Association); Azreen Idayu Zainal (Malaysia Securities Commission); José Humberto Alarcón Torre (Mexico Banking Association); Alba Aguilar (Mexico Stock Exchange); Enkhlin Davaajav and Nomindari Enkhtur (Mongolia Bankers Association and Mongolian Sustainable Finance Association); Nezha Hayat, Yasser Mounisif, and Nasser Seddiqi (Moroccan Capital Markets Authority (AMMC)); Zviad Zedginidze and Mariam Kharashvili (National Bank of Georgia); Momodu E. Omamegbe (Nigeria Securities Exchange Commission); Rochelle Tomas (Philippines Central Bank); Eduardo Argumedo (Quito stock exchange); Apenisa Tuicakau and Christina Rokoua Qio (Reserve Bank of Fiji); Michael Kabai and Odette Eybers (South Africa Financial Sector Conduct Authority); Stephanie Moore (Superintendencia de Bancos e Instituciones Financieras (SBIF) of Chile); Dhouha Ben Hassen (Tunisia Financial Market Council); Berk Mesutoglu (Turkey Banking Regulation and Supervision Agency); Liesel Van Ast (UNEP Finance Initiative); Ms Nga, Mr. Vu Chi Dzung, and Hoa Nguyen (Vietnam State Securities Commission); Mr Nguyễn Thăng Long and Ms Nguyễn Phương Ngọc Huyền (Vietnam Ministry of Finance).

Research and report preparation was undertaken by the Climate Bonds Initiative (CBI): Diletta Giuliani (Lead Author), Lily Dai, Monica Filkova, Thatyanne Gasparotto, Jason Godfrey, Sean Kidney, Olumide Lala, Justine Leigh-Bell, Giulia Rado, Huan Shao, and Beate Sonerud.

The SBN Green Bond Working Group and the production of the Creating Green Bond Markets report are managed by IFC's Environmental, Social and Governance (ESG) Department, and in particular the Sustainability Leadership Team, which hosts the SBN Secretariat on behalf of IFC and is led by Jamie Fergusson, Rong Zhang, and Wei Yuan. Research and stakeholder engagement was managed by Louise Gardiner (IFC), who is also the coordinator of the Green Bond Working Group. The Leadership Team and the department thank Ethiopis Tafara, Vice President and General Counsel Legal, Compliance Risk and Sustainability, for his leadership and strategic guidance.

Leveraging IFC and World Bank knowledge and resources, valuable input was provided by Jamie Fergusson, Rong Zhang, Wei Yuan, Piotr Mazurkiewicz, Emiola Abass (IFC ESG); Peer Stein, Quyen Thuc Nguyen, Riccardo Ambrosini, Martin Dasek and Gursimran Rooprai (IFC Financial Institutions Group); Jean-Marie Masse (IFC-Amundi Planet EGO Fund); Vikram Widge and Berit Lindholdt Lauridsen (IFC Climate Business); John Groesbeek and Zaresh Kezheneva (IFC Treasury); Aaron Levin and Honglin Li (World Bank); and Farah Imrana Hussain (World Bank Treasury).

IFC's regional ESRM advisory team, Huong Thien Nguyen, Claudia Marcela Ponce, Rahajeng Pratiwi, Batmunkh Batbold, Affa Raihana, Marinela Pascua, and Yi Yang contributed to country information and coordinated with members throughout report development.

The outreach and communications strategy was led by Irina Likhachova, Kathryn Marie Graczyk and Honglin Li. Knowledge management support was led by Rshanikka J. Hayley Fowler, Inna Peoria, and Madhav Reddy Enugu. Report design and printing was led by Yi Yang and Ken Swari Maharani Riyanto.

### **About the Sustainable Banking Network (SBN)**

Established in 2012, and facilitated by IFC (part of the World Bank Group), SBN is a unique international community of financial sector regulatory agencies and banking associations from 35 emerging markets committed to advancing sustainable finance in line with international good practice. The Network facilitates the collective learning of members and supports them in policy development and related initiatives to create drivers for sustainable finance in their home countries. You can read more about SBN here: [www.ifc.org/sbn](http://www.ifc.org/sbn)

### **About the International Finance Corporation (IFC)**

IFC—a sister organization of the World Bank and member of the World Bank Group—is the largest global development institution focused on the private sector in emerging markets. As the secretariat and technical advisor to SBN, IFC is also a global leader in developing and applying environmental, social and governance (ESG) standards to financial sector transactions. IFC has been one of the earliest and leading green bond issuers as well as an investor in green bonds in emerging markets and is a founding member of the international Green Bond Principles Executive Committee. Most recently, IFC partnered with European asset manager Amundi to establish the Amundi Planet Emerging Green One (EGO) Fund, the world's largest green-bond fund dedicated to emerging markets. For more information, visit [www.ifc.org](http://www.ifc.org)

IFC's sister organization the World Bank is a pioneer in developing the green bond market, having issued the first-ever labelled green bond in 2008. Since then, it has issued almost US\$11 billion (USDeq.) through 140 green bonds in 19 currencies. The World Bank provides technical assistance to countries to facilitate the development of green bond markets. For more information, visit <http://www.worldbank.org/en/about/unit/treasury>.

Both IFC and the World Bank are leading efforts to support the integrity of the market, including supporting transparency and harmonized impact reporting as members of the executive committee of the Green Bonds Principles coordinated by the International Capital Market Association. These efforts build the foundation for developing sustainable capital markets.

### **About the Climate Bonds Initiative (CBI)**

The Climate Bonds Initiative is an investor-focused international not-for-profit that promotes investment in projects and assets necessary for a rapid transition to a low carbon and climate-resilient economy. The strategy is to develop a large and liquid green and climate bonds market to help drive down the cost of capital for climate projects, especially in developed and emerging markets. Climate Bonds Initiative is a special member of the Green Finance Committee of China Society of Finance and Banking, a member of the European Commission's High Level Expert on Sustainable Finance and a co-convenor of Mexico's Climate Finance Council, the India Green Bond Council, and Brazil's Green Finance Initiative. For more information, visit [www.climatebonds.net](http://www.climatebonds.net).



# Foreword from the SBN Secretariat



**Mr Ethiopis Tafara**  
Vice President & General  
Counsel, Legal, Integrity Risk  
and Sustainability  
IFC

## *Green Treasure*

Climate change has emerged as one of the greatest global threats. Yet addressing it represents an enormous opportunity for sustainable and impactful investments.

As noted in a 2016 IFC report<sup>1</sup>, meeting the Paris Agreement targets could create US\$23 trillion in investment opportunities for 21 emerging-market countries. IFC research estimates that more than US\$1 trillion in investments are already flowing into climate-related projects in renewable energy, off-grid solar and energy storage, agribusiness, green buildings, urban transportation, water, and urban waste management across developing countries. Much more could be triggered with the right business conditions and financial sector innovation.

Across the world, green bonds are proving to be a promising vehicle for raising awareness, promoting disclosure, and mobilizing the capital necessary to accelerate economic growth in climate friendly ways. The market for green bonds might be small, but it is growing rapidly. In 2017, issuances totalled US\$160 billion – a number that is expected to climb as high as US\$250 billion by the end of this year. Regulators in emerging-market economies, recognizing the transformative potential of green bonds, are increasingly putting in place policies to encourage green-bond issuances.

A year ago, members of the IFC-facilitated Sustainable Banking Network (SBN) – which consists of regulators and bank associations from 35 countries – began to share best practices regarding policy frameworks to support green bonds. A working group on green bonds was formed with the intention of accelerating the growth of the green bond market in member countries, so that the reach of sustainable finance can extend well beyond the banking sector and encompass capital markets as well.

Members of SBN are united by a shared objective to transition their national financial systems toward a sustainable future. They are doing so by combining environmental, social and governance (ESG) risk management with increased capital flows to activities that have a positive impact. Green bonds are one of the financial products and investment strategies that target positive impact as well as financial return.

---

<sup>1</sup> IFC, (2016), *Climate Investment Opportunities in Emerging Markets: An IFC Analysis*.



This report represents the critical beginning for SBN members to build and expand local markets for green bonds. It captures SBN members' diverse experiences and the latest insights into the drivers, challenges, and innovations to create green bond markets in the emerging markets. It highlights the importance of integrating ESG practices as a foundation of integrity and value creation in any impact-focused investment, including green bonds. For the first time, it offers a practical “Green Bond Market Development Toolkit”, including Common Objectives, a Self-assessment and Planning Matrix, a Roadmap with Common Milestones, and a Capacity Building Needs Assessment. Together these spell out the particular steps SBN members need to take to develop strong local green bond markets. The emerging consensus highlights alignment with international good practices and approaches, as well as efforts to harmonize definitions of what is “green”.

As regulators and banking associations consider the role of green bonds in their financial systems, they are tackling critical issues like climate change, social inequality, pollution and deforestation; and are choosing the most appropriate financial instruments to address them. This is an exciting trend that shows the value of developing strong capital and financial markets for sustainable growth. For those that decide that their capital markets are mature enough and that have growing markets in sectors such as renewable energy, energy efficiency, and sustainable transport, this report offers lessons of experience and clear guidance on the steps necessary to develop a green bond market.

Only six years old, SBN has emerged into a network connecting countries of all sizes and levels of development. It has become an important player on the global stage. In 2016, it became a key knowledge partner to the G20's Green Finance Study Group. This report, alongside this year's SBN Global Progress Report ([www.ifc.org/sbnreport](http://www.ifc.org/sbnreport)), demonstrates the value and impact of the collective action and sharing of experiences by SBN members.

IFC is one of the earliest and the largest issuers of green bonds in emerging markets. Drawing on our experiences, expertise, and resources, we are proud to support the efforts of SBN to share knowledge and promote collaboration on this exciting topic.

**Co-Chairs SBN  
Green Bond  
Working Group**

---



**Mr Giorgio Trettenero**  
Secretary General, Latin  
American Banking Federation  
(FELABAN)



**Ms Nezha Hayat**  
President, Moroccan Capital  
Markets Authority (AMMC)



**Mr Edi Setijawan**  
Sustainable Finance Director,  
Indonesia Financial Services  
Authority (OJK)

## Foreword from the SBN Green Bond Working Group

The popularity of green bonds has been clearly shown by investor demand. They offer a powerful market-based solution to achieve national sustainable development objectives. They also offer issuers a more diverse investor base and early evidence of lower volatility.

SBN is characterized by the open and practical knowledge sharing among members and our desire to learn quickly from innovations in other countries. For those of us that are often taking the first leap in new directions, it is immensely valuable to get feedback from other countries who are interested in, or already busy with, similar initiatives.

Consequently, SBN's technical working groups provide us an opportunity to share innovations as they are being implemented and to get information on trends across other jurisdictions in real time. It also allows us to collectively identify and discuss some of the challenges we all face, and to surface new topics that need to be explored.

This was very much the case with this research report. The SBN Green Bond Working Group was established with the following broad objectives:

1. To enhance collective knowledge and develop technical resources to support members in developing green bond markets.
2. To support the integration of environmental, social and governance (ESG) factors into all stages of green bond issuance and reporting.
3. To support SBN members to develop and deepen green bond markets through awareness raising, capacity building, and knowledge sharing.

The first step in this process was to map and analyze green bond market developments in SBN member countries, and to assess capacity building needs. The next step will be to develop practical technical resources and capacity building that address the needs that have been identified.

The starting point for this next phase of work will be the 4 Guiding Principles, the Roadmap, and the key milestones presented in this report. These already provide a framework and some forward sight to help members in designing their own national green bond roadmaps and frameworks.

The Principles, in particular, reflect how SBN members already work collectively across a range of different spheres of sustainable finance. Our countries and regions face different challenges and



have unique characteristics. We will therefore always need to tailor the development of national frameworks accordingly. However, it serves us to leverage the convergence in international good practices and definitions that are shaping the global trend in sustainable finance.

As Co-Chairs, we also represent regional initiatives that are actively seeking harmonization as a means to empower our economies. In Asia, the ASEAN (Association of Southeast Asian Nations) Green Bond Standards represent a consensus by the 10 countries of the ASEAN Capital Markets Forum and will facilitate and streamline national and cross-border issuances. Bonds aligned with the Standards have been issued in Malaysia, Singapore, and Indonesia. In Africa, Morocco is leading the charge through several initiatives of the Moroccan Capital Markets Authority. These include the recent update of its own green bonds guidelines and launch of new Social and Sustainability Bond Guidelines, as well as the Marrakech Pledge, a commitment by African regulators to foster green capital markets. In Latin America, FELABAN, the Latin American Banking Federation, is supporting members in voluntary, financial sector innovation. Green bond guidelines have been launched by stock exchanges in Mexico, Peru and Chile. Awareness raising and education initiatives have taken place across the region. Keeping this in mind, FELABAN is considering forming a Latin American Sustainable Banking Committee. Last, but not least, a Green Banking Academy has been launched in partnership with IFC.

Climate change, environmental degradation, and social inequality are challenges we cannot ignore. Green bonds are among the first of a new kind of financial instrument that helps markets address social and environmental challenges while unlocking investment opportunity and increasing financial stability through enhanced risk management.

The value proposition is clear, but much work still needs to be done to create the policy and regulatory conditions as well as sufficient market knowledge to fully capitalize on these trends. We welcome the findings of this study, and particularly the basis for the next phase of work to develop technical resources and build capacity in SBN countries.

## Abbreviations and Acronyms

ABS	Asset-backed securities
ACMF	ASEAN Capital Markets Forum
AMMC	Autorité Marocaine du Marché des Capitaux (Moroccan Capital Markets Authority)
ANBIMA	Brazilian Financial and Capital Markets Association
ASEAN	Association of Southeast Asian Nations
ASEAN GBS	Association of Southeast Asian Nations Green Bond Standards
CBI	Climate Bonds Initiative
CBS	Climate Bonds Standard
CCFC	Climate Finance Advisory Board (Mexico)
CEBDS	Brazilian Business Council for Sustainable Development
CICERO	Center for International Climate and Environmental Research Oslo
CNV	Comisión Nacional de Valores (National Securities Commission Argentina)
COP 22	2016 United Nations Climate Change Conference of the Parties
CSRC	China Securities Regulatory Commission
CBRC	China Banking Regulatory Commission.
CVM	Comissão de Valores Mobiliários (Securities and Exchange Commission Brazil)
EIB	European Investment Bank
ESG	Environmental, social and governance
EU	European Union
FEBRABAN	Federação Brasileira de Bancos (Federation of Brazilian Banks)
FELABAN	Latin American Banking Federation
FSCA	Financial Services Conduct Authority (South Africa)
GBP	Green Bond Principles
GFC	Green Finance Committee of the China Society for Finance and Banking
GLP	Green Loan Principles

G20	Group of Twenty
H1	First half of the year
HKQAA	Hong Kong Quality Assurance Agency
ICMA	International Capital Market Association
ICT	Information, communication and technology
IFC	International Finance Corporation
ISO	International Standards Organisation
JSE	Johannesburg Stock Exchange (South Africa)
KeTTHA	Ministry of Energy, Green Technology and Water, Malaysia
MEP	Ministry of Environmental Protection (China)
NAFMII	National Association of Financial Market Institutional Investors (China)
NDRC	National Development and Reform Commission (China)
NGO	Non-governmental organization
OECD	Organisation for Economic Co-operation and Development
OJK	Indonesia Financial Services Authority (Otoritas Jasa Keuangan)
PAGE	Partnership for Action on Green Economy
PBOC	People's Bank of China
PNB	Permodalan Nasional Berhad, Malaysia
Q1	First quarter of the year
SBN	Sustainable Banking Network
SBP	Social Bond Principles
SC	Securities Commission (Malaysia)
SDGs	Sustainable Development Goals
SEBI	Securities and Exchange Board of India
SEC	Securities Exchange Commission (Nigeria)
SGX	Singapore Exchange Limited
SRI	Socially Responsible Investment
UK FCO	United Kingdom Foreign and Commonwealth Office
UNEP FI	United Nations Environment Programme Finance Initiative
UNFCCC	United Nations Framework Convention on Climate Change

## Executive Summary

The emergence of green bonds has been recognized by the United Nations as “one of the most significant developments in the financing of low-carbon, climate-resilient investment opportunities”<sup>2</sup>. The global green bond market has been growing exponentially over the past 5 years and is demonstrating a formidable potential to scale. Global issuance in 2017 surpassed US\$160 billion, while estimates for issuance in 2018 range from US\$180 billion to US\$210 billion – with the most optimistic projection being US\$250 billion.

In emerging economies, issuances from Latin America, Africa and South East Asia have been on the steady increase. However, with the exception of China, green bond markets in emerging economies have been growing at a slower pace than developed ones, due to a mixture of factors including relatively small and early stage capital markets, limited investor demand for green offerings, and lack of awareness and knowledge.

Members of the Sustainable Banking Network (SBN), representing 35 countries and approximately US\$43 trillion in banking assets in emerging markets, are united by a shared objective to transform their national financial systems toward sustainability. To date, 17 SBN countries have released national sustainable finance policies and principles that address two key themes, namely (i) integrating environmental, social and governance (ESG) factors into financial sector investment, lending and insurance operations; and (ii) increasing capital flows to green projects and assets.<sup>3</sup> Market-based sustainable finance initiatives led by SBN members have made significant progress in directing the financial sector towards sustainability.

The SBN Green Bond Working Group was established in 2017 in response to growing member interest in the green bond trend and its associated market opportunities. The Working Group consists of SBN member country representatives and observers from 21 countries<sup>4</sup> and 30 organizations active or with a strong interest in creating green bond markets. This report is the

---

<sup>2</sup> UN report confirms key role of green bonds in climate investment, (October 13, 2015), <https://renewablesnow.com/news/un-report-confirms-key-role-of-green-bonds-in-climate-investment-497005/> (Accessed 4 September 2018).

<sup>3</sup> Sustainable Banking Network Global Progress Report, February 2018. [www.ifc.org/sbnreport](http://www.ifc.org/sbnreport)

<sup>4</sup> Argentina, Bangladesh, Brazil, China, Colombia, Ecuador, Egypt, Georgia, Fiji, India, Indonesia, Kazakhstan, Kenya, Kyrgyzstan, Mexico, Mongolia, Morocco, Nigeria, South Africa, United Arab Emirates, and Vietnam.

product of the group's first phase of work, to map the current status and lessons learned from national, regional and global developments, with a particular focus on innovations in emerging markets.

Drawing on a survey of over 22 emerging markets and supported by 9 case studies – from Brazil, China, Indonesia, Malaysia, Mexico, Morocco, Nigeria, South Africa, and the ASEAN (Association of Southeast Asian Nations) region – this report provides

- **The latest insights into the drivers, challenges, and innovations** of regulators, stock exchanges, banking associations, and other actors in emerging markets as they look to develop vibrant green bond markets.
- **Recommendations, based on extensive consultation, that form a Green Bond Market Development Toolkit for SBN members**, including (1) a set of Common Objectives; (2) a Self-Assessment and Planning Matrix; (3) a Roadmap with Common Milestones; and (4) a Capacity Building Needs Assessment with a mapping of existing international resources. Together, these will enable SBN members to more effectively plan their national green bond development strategies and collaborate with other market actors.

## Summary of findings

- **Green Bonds are an effective instrument to help achieve the climate and sustainable development goals (SDGs), and, in emerging markets, national guidance is proving essential to the creation of green bond markets.**

The green bond market is currently the most developed segment of thematic, impact-oriented bonds. It carries strong recognition by the international investor community as one of the emerging portfolio of sustainable investment products and strategies, and is the most advanced in terms of policy guidance and support.

Green bonds enable investors to direct funding towards environmentally-friendly activities with a comparable risk-return profile to traditional bonds. They also carry an additional element of transparency to provide assurance to investors. For issuers, green bonds attract a diverse range of investors, enhance reputation, and support stronger ESG risk management.

Clear country-level guidance is proving essential for enabling local green bond market development. It performs the following functions: i) aligning local green bond issuance with national climate and infrastructure targets, thus contributing to the country's sustainable development agenda; ii) maintaining market integrity by ensuring high standards of transparency, independent review, ESG risk management, and ongoing monitoring and reporting; iii) enabling targeted policy support for low-carbon and green bond issuance by clarifying what categories and types of projects qualify as "green"; and iv) enabling green finance markets to scale by reducing transaction costs.

- **National and regional case studies demonstrate the need for a combination of policy leadership and market-based action to ensure success.**

China was the first emerging market to issue mandatory guidelines and a catalogue for green bond issuance in 2015, published by the People's Bank of China (PBOC). Since then, nine other emerging markets have introduced regulations, guidance or listing instructions for green bonds (Brazil, Chile, India, Indonesia, Malaysia, Mexico, Morocco, Peru and South Africa); at least four more SBN countries are in the process of developing green bond guidance (Egypt, Jordan, Kenya, and Nigeria); and the Association of Southeast Asian Nations (ASEAN) has adopted a regional standard. Out of these examples, nine case studies have been developed to analyse the drivers, processes of development, market impact, and future expectations from the perspective of the institutions that are leading the initiatives.

The release and implementation of national green bond frameworks has been received positively by market participants, as they have helped raise visibility and awareness of this new debt instrument and have supported issuers to come to market.

Survey responses from 22 emerging markets<sup>5</sup>, mainly from the SBN community, reveal that action by policy makers and regulators, and initiative taken by local financial institutions, are cited as the top two drivers for local green bond market development. For countries with no issuance, the lack of frameworks and guidance is seen as the most pressing matter to address. In nascent and emerging markets, training and capacity building for regulators, issuers, investors, and verifiers seem to be the greatest challenge. Respondents see a strong role for SBN in terms of sharing country experiences, developing practical tools, and building capacity through peer-to-peer knowledge exchange.

- **Policy makers are promoting harmonization, as indicated by the 13 national or regional green bond frameworks reviewed for this report, which all substantially align to or directly reference international standards, including the Green Bond Principles and the Climate Bond Standards to varying extent.**

A total of 13 country and regional green bond frameworks were reviewed for this research. They include 11 national frameworks developed by SBN member countries<sup>6</sup>; one regional framework, the ASEAN Green Bond Standards, which has implications for multiple SBN members<sup>7</sup>; and Malaysia's guidelines. Malaysia is not an SBN member, but was included in this study given Malaysia's regional influence, its leadership in issuing green sukuk, and link with the ASEAN Guidelines. The different frameworks fall into three broad categories: i) regulations by financial services authorities; ii) green bond listing instructions by stock exchanges; and iii) voluntary initiatives by financial sector industry associations.

---

<sup>5</sup> Argentina, Bangladesh, Brazil, China, Colombia, Ecuador, Egypt, Fiji, Georgia, Indonesia, Kenya, Mexico, Mongolia, Morocco, Nigeria, Paraguay, Philippines, South Africa, Tunisia, Turkey, United Arab Emirates, and Vietnam.

<sup>6</sup> Brazil, Chile, China, India, Indonesia, Kenya, Mexico, Morocco, Nigeria, Peru, and South Africa.

<sup>7</sup> Cambodia, Indonesia, Lao PDR, Philippines, Thailand and Vietnam.

Most interviewees report carrying out careful studies of international best practice and extensive consultation within their institutions and with market participants to develop national green bond guidance. External advice has been sought to benefit from other countries' experiences.

All the guidance reviewed has some level of substantive consistency with, or direct reference to, international guidelines provided by the Green Bond Principles (GBPs) and the Climate Bond Standard.

Many interviewees mentioned that a key challenge is to achieve the right balance between delivering quality products and allowing flexibility for issuers. Respondents highlighted the need to establish and maintain credibility within local green bond markets in order to build investor confidence and ensure that positive environmental and social impacts are achieved. The risk of “greenwashing”<sup>8</sup> was mentioned by a number of interviewees. Eligibility of assets and projects are mostly indicated through broad categories, signalling a gap of adoption of consistent and tight green definitions.

- **More effort is needed to raise awareness and build capacity.**

Most respondents to the SBN survey and interviewees for the case studies are regulatory institutions that are actively helping to raise visibility and awareness of green bonds and have supported issuers to come to market. Barriers to growth are identified in all the countries interviewed, with strong emphasis on the need for capacity building for issuers (especially banks), investors, verifiers, and policymakers.

Clear and consistent communication from senior level executives in the government – such as ministers, and central bank governors – about the importance of sustainability and the role that green bonds can play are viewed as key to kick-start the market. A sustained campaign is also necessary to bring financial intermediaries and investors on board. Capacity building is necessary to help institutional investors in emerging markets to think through the benefits of integrating ESG indicators in their investment decisions. For issuers, training is needed in areas such as developing green bond pipelines, incorporating external reviews, and reporting on impacts.

- **Green bonds are just one form of sustainable investment that can support capital flows to sustainable activities. All sustainable investment asset classes should consider good ESG standards as well as defining the activities supported.**

---

<sup>8</sup> “Greenwashing” is the use of green marketing to promote the perception that a product or activity has positive environmental impacts without sufficient evidence or transparency to substantiate such a claim.

Sustainability-focused investing is gaining traction across all asset classes, with an increasing range of strategies and products within equity and debt markets seeking positive environmental and social impact as well as financial returns. As regulators consider how best to influence their markets and which impact products to support, they should leverage and support the strength of current market activity, be it private equity, bank lending, or capital markets, to encourage impact products. In all cases, the application of good international ESG practices is seen as a fundamental requirement prior to defining the impacts to be targeted.

## **Working Group recommendations: a green bond market development toolkit for SBN members**

Extensive consultation was carried out between February and July 2018 to gather feedback from Working Group members, the broader SBN community, and experts in green bond market development, both globally and in emerging markets. Participants indicated strong interest in, and provided input to, the development of tools to assist SBN members in designing and supporting the growth of green bond markets.

### ***Common Objectives for Developing Green Bond Markets:***

SBN country experiences point to a set of Common Objectives that can help countries avoid pitfalls and navigate the development of green bond guidance and other market components. These objectives support a move towards cross-border harmonization of green bond definitions and approaches, while respecting local market conditions.

- 1) **Alignment:** Aligning with international good practices, learning from peers, and developing common approaches, such as through regional collaboration, are ways that SBN members are leapfrogging and accelerating local green bond market development. Alignment with other jurisdictions also enables cross-border issuance and investment.
- 2) **Quality:** Market integrity and credibility are key components of green bond markets. Guidance should therefore include mechanisms for ensuring quality. For instance, external reviews from experienced and credible entities limit the risk of “greenwashing” and provide investors with assurance around the green credentials of the bonds and the governance around the management of proceeds. Likewise, the need for issuers to apply good international industry practice in managing broader ESG risks of all assets is seen as essential.
- 3) **Flexibility:** Local market conditions must be accounted for and local market players should be involved in the design of appropriate national guidance. Countries may choose to adopt either a principles-based approach or more stringent regulation depending on market maturity and local interest in green bond issuance. A phased approach may be suitable for many. Similarly, different markets may focus on different types of issuers, investors and projects to help drive the market initially, and some jurisdictions may choose to offer incentives where appropriate.

- 4) **Harmonization:** SBN members have noted the value of harmonizing where possible with global definitions of “green”, “social” and “sustainability” bonds and assets. The variety of green and social assets and projects may continue to differ at national level due to local market conditions, industries, and national sustainable development strategies. However, use of global definitions and common categories, as well as reference to global standards for what qualifies as green projects and sectors will build the credibility of bonds among international investors.

### ***Self-Assessment and Planning Matrix for Developing Green Bond Markets:***

The country experiences captured in this report also point to typical phases in the development of green bond markets, with specific interventions identified at each stage. The table below captures these commonalities and can be used by regulators to self-assess their country’s stage of green bond market development and to plan the next steps needed. The actions in each phase do not necessarily need to occur simultaneously through the four market development components.

<b>Self-Assessment and Planning Matrix</b>			
	<b>Phase 1</b>	<b>Phase 2</b>	<b>Phase 3</b>
<b>Market infrastructure</b>	Review current debt capital market structure for bonds and its readiness/suitability for green bond growth	Develop supporting market infrastructure (index, dedicated exchange segment)	Organise an international investor roadshow to present the domestic green bond pipeline
<b>Guidance</b>	Initiate dialogue with domestic market players to consider and, if appropriate, develop national guidelines, aligned with international practices	Convene a Market Development Council with relevant capital market institutions to propose and consult on policy recommendations	Consider incentives as appropriate (grants for external reviews, tax exemptions)
<b>Issuance</b>	Assess readiness and opportunities for green bond issuance	Build demand side through engagement with local investors. Potentially deliver a Green Bond Statement from domestic investors and convene forums with selected potential issuers	Engineer demonstration issuances: such as sovereign, municipal, financial institution, and/or corporate bonds
<b>Capacity building</b>	Set up a promotional campaign to engage market professionals	Set up, partner and deliver training programs for issuers, investors, verifiers and regulators	Consider accreditation schemes for training programs, as well as dedicated training incentives for industry professionals

### ***Roadmap with Common Milestones for Developing Green Bond Markets:***

The diagram below sets out a typical roadmap with milestones and a possible sequence. The roadmap gives countries starting the journey a sense of what lies ahead and lessons that can be drawn from the experiences of others. The milestones can be achieved in a different order depending on the drivers and market development strategy in place.

**Figure 1: Roadmap with common milestones for developing green bond markets**



### ***Capacity Building Needs Assessment and Mapping of Existing International Resources:***

The research assessed the different types of capacity building needed by SBN members and other market players. The findings help to prioritize the topics to be covered, the best channels for delivering support, and the institutions that need assistance. An overview is also provided of the different types of capacity building already being provided by IFC, the World Bank Group, the International Capital Market Association (ICMA), the Climate Bonds Initiative (CBI), the UN, and others.

### **Conclusion**

It is expected that the next 5 years will see continued market-based actions with policy leadership among emerging markets in the development of national guidance and enabling frameworks for green bond issuance.



The challenges identified in this research and consultation with SBN members has led to the design of a Green Bond Market Development Toolkit to help countries take actions and monitor progress with a consistent approach and milestones.

The SBN Green Bond Working Group will consider the findings of this research in defining additional tools and guidance to be developed in the next phase of work. Country progress will be systematically tracked and assessed through the annual SBN Global and Country Progress Reports ([www.ifc.org/sbnreport](http://www.ifc.org/sbnreport)).

SBN member institutions are sharing and building on their collective experience in leading sustainable finance policy reform. They have shown again that it is possible to unite a wide array of countries in support of sustainable finance, in this case to accelerate green bond market development with a collective ambition and a consistent approach.

# 1. Introduction

This report has been developed by IFC and the Climate Bonds Initiative (CBI) on behalf of the Sustainable Banking Network (SBN) Green Bond Working Group.

Established in 2012, SBN is a unique community of financial sector regulatory agencies and banking associations from emerging markets committed to advancing sustainable finance in line with international good practice. The Network facilitates the collective learning of members and supports them in policy development and related initiatives to create drivers for sustainable finance in their home countries. SBN now represents 35 countries and over US\$43 trillion of bank assets in emerging markets.

Responding to strong interest from SBN members in the global green bond trend, a Green Bond Working Group was formed in October 2017 as a Community of Practice on local green bond market development. Comprised of SBN member country representatives and observers from 21 countries and 30 organizations active or with a strong interest in creating green bond markets, the Working Group has the following broad objectives:

1. To enhance collective knowledge and develop technical resources to support members in developing green bond markets.
2. To support the integration of environmental, social and governance (ESG) factors into all stages of green bond issuance and reporting.
3. To support SBN members to develop and deepen green bond markets through awareness raising, capacity building, and knowledge sharing.

The activities of the Working Group have been divided into two phases:

- I. Mapping of the current status and lessons learned from national, regional and global green bond guidance, standards and practices.
- II. Development of practical technical tools to support green bond market development.

This report responds to the first phase of work and provides an overview of national and regional developments and opportunities, capacity building needs expressed by members, and relevant global initiatives. The report is based on:

- A survey circulated between February and June 2018 to all SBN members, assessing capital markets development, green bond market status, available green bond guidance, and preferences for capacity building tools<sup>9</sup>.
- Desk research conducted by CBI on global trends and national developments in green bond guidance and issuance.
- 8 country case studies (Brazil, China, Indonesia, Malaysia, Mexico, Morocco, Nigeria, and South Africa) and 1 regional case study (ASEAN region) developed through in-depth interviews with regulators and other institutions involved in the development of green bond markets.
- Experiences from green bond market support engagements by the World Bank, IFC and CBI in countries such as Brazil, China, Egypt, Fiji, Indonesia, Jordan, Kenya, Lebanon, Malaysia, Morocco, Nigeria, South Africa, Tunisia and Vietnam.
- In-person and virtual consultations with Working Group members and other experts between February and July 2018.

To prepare for the second phase of SBN's green bond work, the survey and interviews also asked respondents about their preferences for the kinds of practical tools and training that should be developed, and which audiences these should target, as well as how they should be delivered.

With the above in mind, the report presents

- I. An overview of the global green bond market, including its purpose and latest trends;
- II. An analysis of existing green bond guidance in SBN member countries, including case studies;
- III. Analysis and recommendations on practical tools and training for SBN to consider to support market growth
- IV. A Green Bond Market Development Toolkit to enable SBN members to more effectively plan their national green bond development strategies and collaborate with other market actors.

---

<sup>9</sup> Completed responses were received from Argentina, Bangladesh, Brazil, China, Colombia, Ecuador, Egypt, Fiji, Georgia, Indonesia, Kenya, Mexico, Mongolia, Morocco, Nigeria, Paraguay, Philippines, South Africa, Tunisia, Turkey, United Arab Emirates, and Vietnam.

## 2. Green Bond Market Overview

### 2.1 Green bonds are an instrument to grow green financial flows

Green bonds are fixed-income instruments with one distinguishing feature: proceeds are earmarked exclusively for new and existing projects with environmental benefits. These relate to climate change mitigation or adaptation/resilience and other environmental issues, such as natural resources depletion, loss of bio-diversity, and air, water or soil.

Over the past 5 years, there has been an increasing demand from institutional investors, particularly from OECD countries, for investment opportunities that i) mitigate the risks arising from climate change, ii) deliver social impact, and iii) support sustainable development. This is reflected in initiatives such as the Principles for Responsible Investment<sup>10</sup> (with signatories representing over US\$70 trillion in assets under management), the Global Investor Statement on Climate Change<sup>11</sup>, and the emergence of green bond funds.

The rising demand from investors has resulted in the development of thematic bond markets. Bond investments meet the needs of institutional investors, as they offer relatively long-term maturities in line with their liabilities, and relatively stable and predictable returns. Labeling well-known fixed-income instruments such as bonds, enables institutional investors to direct financial flows to specific projects and assets. The “green” label is currently the most developed segment of thematic bonds: it carries a strong recognition from the investor base and is the most advanced in terms of policy guidance and support.

<sup>10</sup> UN-supported Principles for Responsible Investment, <https://www.unpri.org/>

<sup>11</sup> The Investor Agenda, <https://theinvestoragenda.org/>

The emergence of green bonds has been recognized by the United Nations as “one of the most significant developments in the financing of low-carbon, climate-resilient investment opportunities”<sup>12</sup>. In the 2016 G20 leaders’ communique in September 2016, the G20 recognized that, in order to support environmentally sustainable growth globally, it is necessary to scale up green financing, and called for development of, and cross-border investment in, local green bond markets.<sup>13</sup>

## 2.2 Green bond benefits for issuers and investors

Green bonds can deliver several benefits for both issuers and investors, as summarised in the table below. The main benefits reported by issuers have been an enlargement of the investor base as dedicated green and socially responsible investors come into play, and an enhancement of reputation driven by the positive publicity and media attention that result from issuing a green bond. Pricing benefits on primary issuances have also been reported by some treasuries, but this is not the case for all green bonds.

For investors, green bonds are a means to invest in sustainable activities without having to sacrifice returns. Bonds are well known instruments and green bonds enable investors to direct funding towards environmentally-friendly activities with a comparable risk-return profile to traditional bonds. Green bonds also carry an additional element of transparency to ensure financing is used for environmentally-friendly assets. This can help provide further assurance to investors on the issuer’s governance processes.

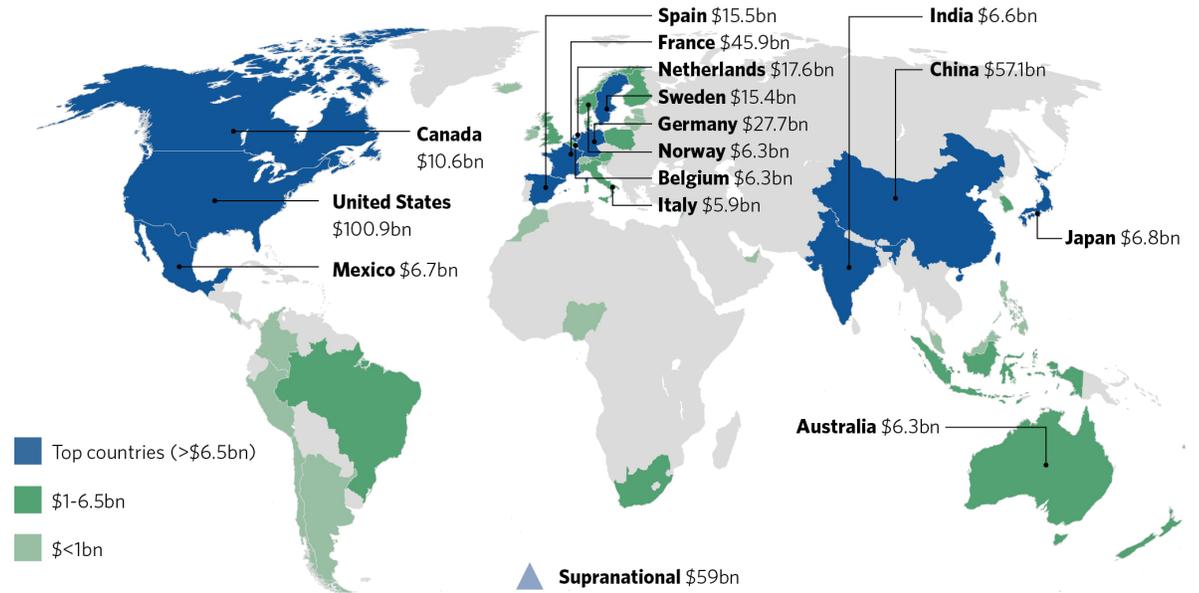
Potential benefits for investors	Potential benefits for issuers
<ul style="list-style-type: none"> <li>• Comparable financial returns with the addition of environmental benefits</li> <li>• Satisfy environmental, social and governance (ESG) requirements for sustainable investment mandates (i.e. when ESG standards such as the IFC Performance Standards are applied to green projects)</li> <li>• Enable direct investment in the “greening” of brown sectors and social impact activities</li> <li>• Increased transparency and accountability on the use and management of proceeds</li> </ul>	<ul style="list-style-type: none"> <li>• Provide an additional source of green financing</li> <li>• Match maturity with project life (in the case of green project bonds)</li> <li>• Improve investor diversification and attract buy-and-hold investors</li> <li>• Enhance issuer reputation</li> <li>• Attract strong investor demand, which can lead to high oversubscription and pricing benefits</li> <li>• Support issuers with environmental risk management</li> </ul>

## 2.3 Global green bond market developments

<sup>12</sup> UN report confirms key role of green bonds in climate investment, (October 13, 2015), <https://renewablesnow.com/news/un-report-confirms-key-role-of-green-bonds-in-climate-investment-497005/> (Accessed 4 September 2018).

<sup>13</sup> G20 Leaders’ Communique Hangzhou Summit 4-5 September 2016, <http://unepinquiry.org/wp-content/uploads/2017/01/2016-09-04-g20-communique-en.pdf> (Accessed 4 September 2018).

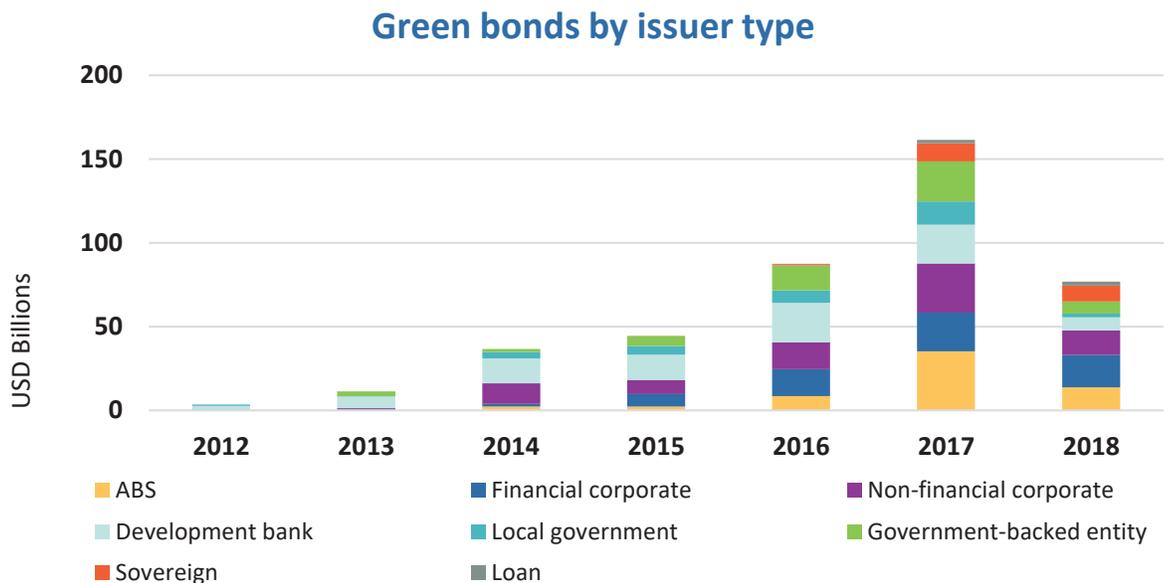
**Figure 2: Total green bonds issued as of 30 June 2018**



Source: Climate Bonds Initiative, 2018

The green bond market has been growing exponentially over the past 5 years, as shown in Figure 3, with issuance in 2017 surpassing US\$160 billion and issuance for 2018 expected to reach US\$180 billion, with optimistic projections of US\$210 billion – US\$250 billion. Figure 4 shows how the market has also been increasingly diversifying, with new issuers and new geographies entering. Started in 2007 by multilateral development banks, the market has been mostly led by public sector issuers, either from municipalities, state-backed entities, government agencies, or international and national development banks.

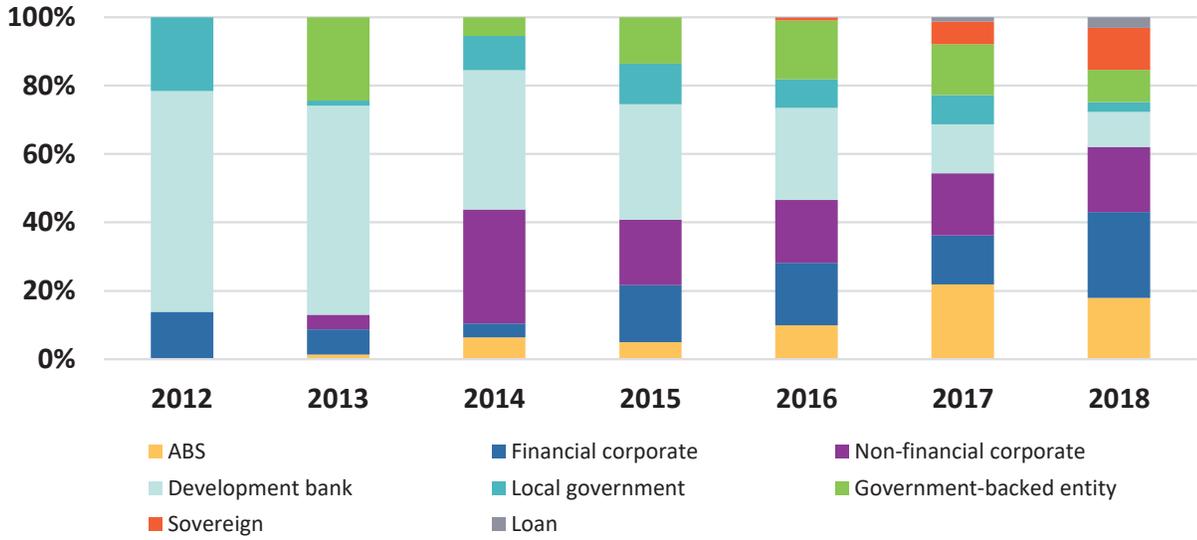
**Figure 3: Annual issuance by issuer type 2012-2018 as of 30 June 2018**



Source: Climate Bonds Initiative, 2018

The latest trends show corporates occupying an increasing market share and new instruments such as asset-backed securities (ABS) and loans also being attributed the green label. Sovereign bonds, which constitute a large share of traditional bond issuance, have entered the market in 2016 and are expected to significantly contribute to the market's growth, not only because of their signalling and benchmarking roles, but also because of the access they provide to a wide institutional investor base.

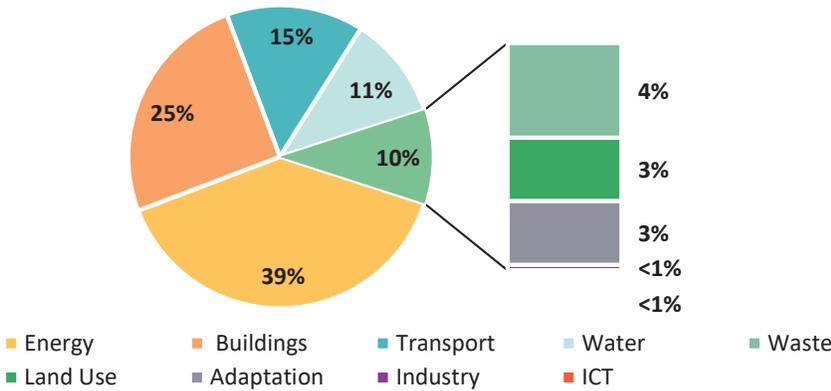
**Figure 4: Evolution of issuance by issuer type as of June 2018**



Source: Climate Bonds Initiative, 2018

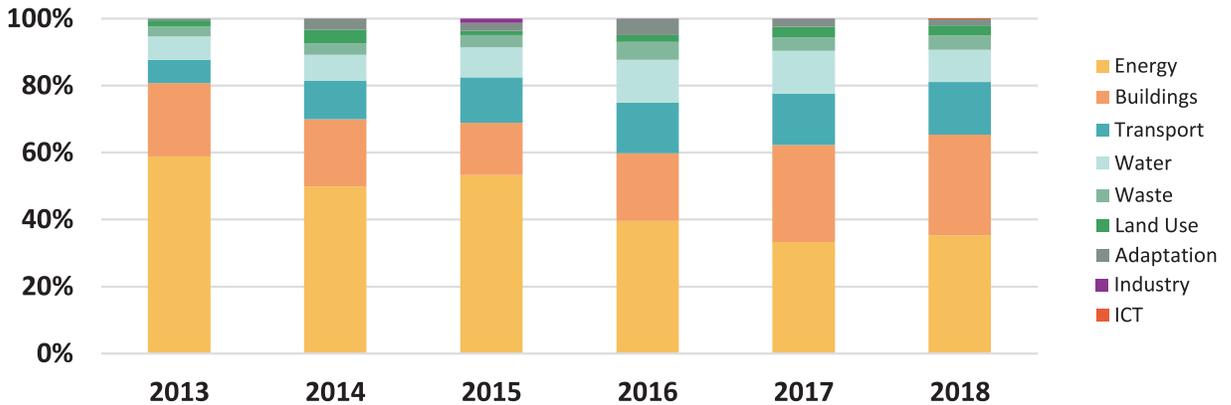
The variety of assets and projects financed through the green bond market has also been increasing. While renewable energy constitutes the largest share of green bond proceeds to date, as also confirmed by SBN members in the Green Bond survey, investments in buildings, transport, and water are occupying increasing market shares. Sustainable land use, waste, and adaptation still cover a small percentage of the sectors financed, but this is expected to grow as clearer definitions for these assets are developed.

**Figure 5: Cumulative use of proceeds as of June 2018**



Source: Climate Bonds Initiative, 2018

**Figure 6: Evolution of use of proceeds as of June 2018**

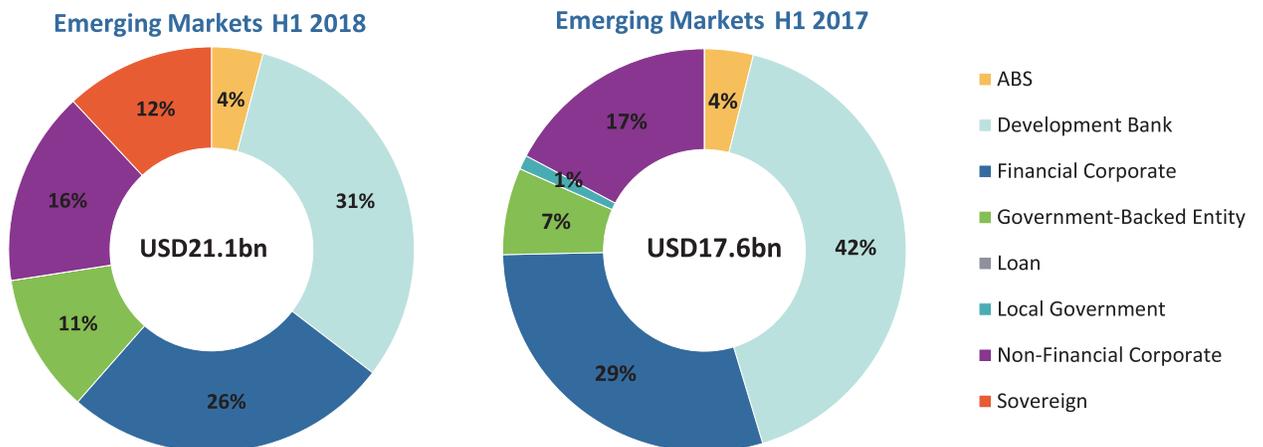


Source: Climate Bonds Initiative, 2018

With the exception of China, green bond markets in emerging countries have been growing at a slower pace than developed ones, mainly due to the fact that in these countries debt capital markets tend to be smaller and less sophisticated, as well as the limited investor demand for green. Lack of awareness and the knowledge needed to issue green bonds is also cited as a key barrier in mature as well as less sophisticated markets. However, issuance of green bonds has been rising in many countries in Latin America, Africa and South East Asia.

A comparison of issuances for the first half (H1) of 2017 and 2018, respectively, shows an increase in total issuance and the emergence of sovereign green bonds. The first sovereign green bonds to be issued in emerging markets were Fiji’s FJ\$100 million sovereign bond to support climate change mitigation and adaptation, issued in October 2017; and Nigeria’s NGN10.69 billion sovereign green bond issued in December 2017; with Indonesia following with the world’s first sovereign green sukuk<sup>14</sup> (Islamic bond) for US\$1.25 billion in February 2018. Sovereign green bond issuances in developed markets include Belgium and Lithuania.

**Figure 7: Issuance per type of issuer entity in the first half (H1) of 2017 and 2018 respectively**



Source: Climate Bonds Initiative, 2018

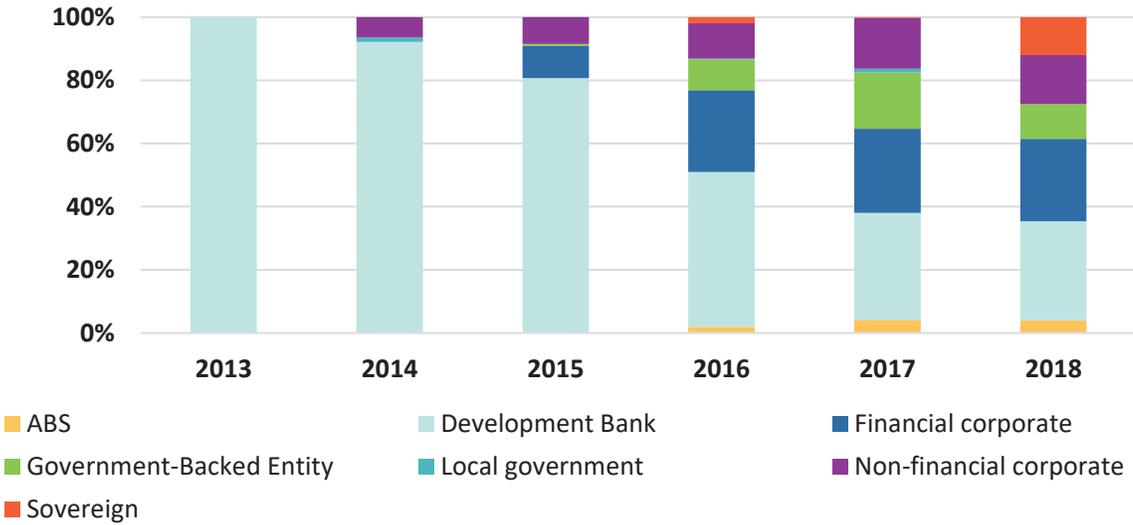
<sup>14</sup> A sukuk is an interest-free bond that generates returns to investors without infringing the principles of ‘Shari’ah’ (Islamic law).

The Republic of Indonesia's issuance followed a growing trend of tapping Islamic finance for investments in climate change solutions. The issuance of the first green sukuk in the world was by Malaysian solar company Tadau Energy in July 2017, under the Securities Commission's Sustainable and Responsible Investment (SRI) Sukuk Framework. Four other green sukuk have been issued in Malaysia in the form of SRI Green Sukuk.

The share of corporate bonds issued by financial institutions is also on a growing trend, decreasing the relative contribution of issuances from development banks and government-backed entities. This is a typical trend of nascent markets where the first issuers are typically highly-rated public institutions and other entities follow in a second phase.

In 2013 the only issuer type was development banks; by 2018 there have been seven different types of issuers, with the share of issuance from development banks dropping to 40%.

**Figure 8: Evolution of issuer type in emerging markets as of June 2018**



Source: Climate Bonds Initiative, 2018

**2.4 Why green bond guidance is important**

Developing clear guidance for issuers, investors, and intermediaries, such as verifiers, is one of the first steps to establish and grow a domestic green bond market. A key reason for issuing Green Bond Guidelines is that clear guidelines help dispel misconceptions regarding the cost and complexities of the green debt issuance process and help to catalyze green bond issuances. Guidelines perform the following functions:

*Meeting climate and infrastructure targets:* robust green credentials can help achieve the overarching goal of meeting climate mitigation and adaptation targets as well as infrastructure demand, thereby contributing to the country's sustainable development agenda by addressing food security, public health, poverty reduction and unemployment. Green bonds can help achieve the climate goals set in the Paris Agreement and the SDG goals related to infrastructure and climate.

*Maintaining market integrity:* issuance guidelines and standards provide clarity for investors that are attracted to the “green” impact. They can help build confidence in the market and limit the risk of “greenwashing”, namely the portrayal of activities and financing as environmentally-friendly when in fact they are not. This is particularly important for an investor-driven market, such as that of green bonds. Credible reporting on the use of proceeds and expected environmental impact of projects is also critical to maintain the integrity of the green bond market and a major challenge for most issuers in emerging markets.

*Implementing targeted policies:* clarifying what is green enables targeted policy support for low-carbon projects and green bond issuance. For example, in the case of tax exemptions, subsidies or preferential capital treatment, eligible assets need to be easily identifiable to ensure only truly green assets receive the envisaged policy support.

**Achieving scale:** high volumes of investments are necessary to develop a liquid market and facilitate more investments, enabling the transition to a low-carbon economy. Green standards reduce transaction costs, therefore facilitating scale.

## 2.5 Subsidies and incentives for green bond issuance – examples from Asia

New issuers often face initial costs and administrative hurdles when first entering the green bond market. For instance, new types of monitoring, external review, and disclosure are required to ensure green bond market credibility. Additional institutional effort may also be needed to identify and structure innovative new issuances.

In some markets, public sector entities are stepping in to offer subsidies and other types of incentives to reduce the initial cost impact and encourage the growth of the market. Over time, repeat issuances will lead to increased institutional and market efficiencies and subsequent reductions in these costs. **The following are some of the strategies being applied in the Asia region.**

**Malaysia** has introduced several incentives to encourage more issuances of Sustainable and Responsible Investment (SRI) sukuk, such as tax incentives as well as grants. In 2017, the Securities Commission Malaysia established a RM6 million (US\$ 1.5 million) Green SRI Sukuk Grant Scheme, which is administered by Capital Markets Malaysia, to support external review costs incurred by sukuk issuers.

In June 2017, the **Monetary Authority of Singapore** launched the “Green Bond Grant Scheme” in order to cover the costs of obtaining an external review. The scheme applies to green bonds issued in Singapore and listed on the Singaporean Stock Exchange (SGX), with size between S\$200 million and S\$100,000 million and a tenure of at least three years. In addition, measures have been developed to determine “qualifying issuers” as well as “qualifying criteria” for bonds. “Qualifying issuers” are corporate entities or financial institutions issuing a green bond, while sovereign issuers do not qualify. Issuers can apply to the Grant Scheme multiple times for issuance of different green bonds. It is compulsory to submit an independent external review or rating based on internationally recognized green bond standards.

In **China**, some examples of interest subsidies by industrial parks have emerged. To date, the Beijing Zhongguancun Administrative Committee has implemented a 40% discount on the interest rate of green bonds with a maximum size of RMB1 million and maximum tenure of 3 years. The local government provides 40% of the interest rate, which is paid to investors. Shenzhen Futian District government has announced a 2% subsidy on the green bonds interest rate. The People's Bank of China (PBoC) has also introduced new monetary and prudential measures to incentivise green lending: green bonds have been included as eligible collateral for the bank's Medium-Term Lending Facility, which offers three-month loans to commercial lenders, and green credit is being considered as part of its Macro Prudential Assessment (MPA) of banks, meaning the more green assets a bank holds, the higher the score it can receive in the MPA.

The **Hong Kong Monetary Authority** has also introduced a "Green Bond Grant Scheme". The Grant Scheme offers subsidies to eligible projects certified under the green finance certification scheme developed by the Hong Kong Quality Assurance Agency (HKQAA). The HKQAA certification scheme provides third-party conformity assessment, which is based on international standards such as the Green Bond Principles (GBP), China's Green Bond Endorsed Catalogue, and the UNFCCC Clean Development Mechanism.

In **Japan**, the Ministry of Environment has introduced subsidies in the form of grants to cover the additional costs associated with green bond issuance. Grants reach a maximum of JPY50 million per issuance, which is allocated to obtain support from expert third-parties, such as external review entities, green bond consulting firms, and structuring agents. Grants are provided to green bond issuance that is compliant with international standards, such as the GBP, ASEAN Green Bond Standard, and Climate Bonds Standard.

## 3. Green Bond Guidance, Standards, and Practice

### 3.1 International guidance and standards

At the international level, the **Green Bond Principles (GBP)** have become the main point of reference for green bond issuance. The Principles are the product of an industry-led "initiative" convened by the International Capital Market Association (ICMA), to promote integrity in the market through guidelines that recommend transparency, disclosure and reporting<sup>15</sup>. The GBP were launched in 2014 and have since undergone yearly revisions. They cover the establishment of sound management processes for the use of proceeds and the use of independent reviewers for both environmental credentials and reporting practices.

Alignment of green bonds with the GBP has become the shared foundation of green bond issuance, with virtually all green bonds issued now referencing the GBP explicitly. The platform has also issued dedicated **Social Bond Principles and Sustainability Bond Guidance**.

Close to 300 market participants and stakeholders, including leaders from all parts the market, have become Members or Observers of the GBP. The GBP Executive Committee (ExCom), elected by Members, has ensured regular updates of the Principles and delivery of a range of tools such as i) guidance on impact reporting, ii) guidelines for external reviews, iii) mapping to the SDGs, and iv) research on investor opinions.

The GBP are based on four pillars, outlining disclosure and reporting for the issuer in four areas:

1. **Use of proceeds:** the utilization of the proceeds for financing or re-financing of green projects should be appropriately described by the issuer. A list of broad categories for eligible green projects is provided.
2. **Process for project evaluation and selection:** the issuer should communicate the process by which the green projects have been selected and identified, as well as the related eligibility criteria.
3. **Management of proceeds:** the proceeds should be credited to a sub-account, moved to a sub-portfolio or otherwise tracked by the issuer in an appropriate manner.

---

<sup>15</sup> For more information on the Green Bond Principles visit <https://www.icmagroup.org/green-social-and-sustainability-bonds/>

4. **Reporting:** issuers should keep up-to-date information on the use of proceeds, to be renewed annually until full allocation of proceeds and as necessary after that in case there are material developments to the use of proceeds. Qualitative performance indicators and quantitative ones, where feasible, are recommended.

The GBP also recommend that issuers use an external review to confirm the alignment of their green bonds with the key features of the GBP. This can take the form of a verification, consultant review, certification, or green rating.

In terms of standards, the **International Standards Organisation (ISO)** has commenced work on a standard for green bonds by establishing a green bond working group with global representation. For bonds that finance climate change mitigation and adaptation, the international Climate Bonds Standard (CBS) & Certification Scheme is available. It is a FairTrade-like scheme for climate-aligned bonds that builds from the GBP disclosure and reporting requirements and includes a Taxonomy with a set of sector-specific, science-based eligibility criteria for green projects. Bonds must comply with these criteria to be attributed a certification. The scheme includes a pool of approved verifiers that assess the compliance of the bond against the Standard<sup>16</sup>.

At the regional level, the **ASEAN Green Bond Standards** have been adopted by the ASEAN Capital Markets Forum. The Standards replicate the GBP model, with the addition of an explicit exclusion of fossil fuel power generation projects and criteria for external reviewers. Bonds aligned with the Standards have been issued in Malaysia, Singapore, and Indonesia.

At the European level, the **European Commission** has committed to explore an EU green bond standard as part of its Action Plan on Sustainable Finance adopted in May 2018. The standard will build on current best practices to determine the content of the prospectus for green bond issuances by Q1 2019. In November 2017, the **European Investment Bank (EIB)** and the **Green Finance Committee (GFC) of the China Society for Finance and Banking** published a White Paper<sup>17</sup> that provides an international comparison of several green bond standards. The paper paves the way for enhancing the consistency of green finance definitions and standards between China and the European Union.

The EMEA-focused Loan Markets Association and the Asia-Pacific Loan Market Association have developed **Green Loan Principles (GLP)**, building on the GBP, with a view to promote consistency across financial markets. According to the GLP, green loans are loans made available exclusively to finance or re-finance new or existing eligible green projects. Green loans must be aligned with the same four components outlined in the GBP, and disclosure and reporting requirements must be carried out by the borrower. The GLP also recommend that borrowers obtain external reviews to assess alignment with the components of the GLP.

---

<sup>16</sup> For more information on the Climate Bonds Standard, visit <https://www.climatebonds.net/standard>. The Taxonomy can be found at <https://www.climatebonds.net/standard/taxonomy>

<sup>17</sup> European Investment Bank and Green Finance Committee of China Society for Finance and Banking, 11 November 2017, *The need for a common language in Green Finance: Towards a standard-neutral taxonomy for the environmental use of proceeds*, <http://www.eib.org/attachments/press/white-paper-green-finance-common-language-eib-and-green-finance-committee.pdf>

## Social & Sustainability Bonds

Following the example of the Green Bond Principles, ICMA has coordinated the development of Social Bond Principles (SBPs) and guidance on Sustainability Bonds. The SBPs include the same four pillars of the GBPs but differ on the eligible broad categories for the use of proceeds, which need to target projects with social benefits. These include projects delivering basic infrastructure, generating employment, securing food production, and alleviating poverty. Sustainability bonds include projects with both social and environmental benefits. SDG bonds are also emerging, explicitly tying the financing of green and social projects to progress on the UN's Sustainable Development Goals (SDGs). All thematic bonds carry the same disclosure and reporting requirements and differ only in the assets financed.

The market for Sustainability and SDG Bonds is expected to grow, as issuers and investors become familiar with these products and wider pools of projects are identified to tap into the growing demand for sustainable investments. The development of green, social, and sustainable markets are expected to converge as disclosure and reporting frameworks are consistent and there is a broad overlap between climate, especially climate resilience, and social goals, as well as SDG goals. This is already happening in Europe, where the European Commission has proposed the development of a classification system for sustainable activities.

### 3.2 Mapping of status of guidance for green bonds in emerging markets

Alongside international good practices, regulators around the world have started developing national and regional guidelines and regulation for green bonds in order to develop and grow domestic markets. The table below provides an overview of the current guidance available in SBN member countries for green bond issuance. These include regulation from securities regulators, central banks and capital markets authorities, listing requirements for stock exchanges, and voluntary guidance provided by market-led initiatives.

The table reveals that all guidance developed so far has some notion of the international guidelines provided by the Green Bond Principles and the Climate Bonds Standard, requiring at a minimum disclosure on the use of proceeds, and going as far as referencing the international guidance directly. Eligibility of assets and projects are mostly indicated through broad categories, signalling a gap of adoption of green definitions.

External reviews are becoming increasingly mandatory and are especially required to access stock exchanges' green bond segments. Requirements for verifiers are also rising, to provide further assurance to the market without over-burdening the authorities, and leaving the assessment of green bond frameworks and underlying assets to experts.

### 3.3 Overview of regulations and guidelines for green bonds in emerging markets

Country	Entity	Type of guidance	Alignment with international guidelines	Use of proceeds	Reporting requirements	Mandatory external review	Selection of external review providers
<b>FINANCIAL SERVICES AUTHORITY REGULATIONS</b>							
Association of Southeast Asian Nations (ASEAN)	ASEAN Capital Markets Forum	Voluntary Standards for ASEAN for green bonds to be labelled as ASEAN Green Bonds	✓ Based on the international Green Bond Principles	✓ Fossil fuel power generation projects are excluded	✓ At least annually, and encouraged to report more frequently, until proceeds are fully allocated	✓ Voluntary	✓ Verifier must disclose relevant credentials and expertise
China	<ul style="list-style-type: none"> <li>- People's Bank of China (PBoC)</li> <li>- China Securities Regulatory Commission (CSRC)</li> <li>- National Development and Reform Commission (NDRC)</li> <li>- National Association of Financial Market Institutional Investors (NAFMII)</li> </ul>	<ul style="list-style-type: none"> <li>- Financial institutions</li> <li>- Corporations</li> <li>- State owned entities (SOEs)</li> <li>- Non-financial corporates</li> </ul>	<p>✓ However, NDRC allows issuers to use up to 50% of proceeds for non-green activities (e.g. working capital). Retrofits of fossil fuel power stations and clean coal projects are also not in line with international guidelines</p>	<p>✓ Green Bond Endorsed Project Catalogue (PBoC, CSRS, NAFMII)</p> <p>NDRC's Green Bond Guidelines (NDRC)</p>	<p>✓</p> <ul style="list-style-type: none"> <li>- Quarterly</li> <li>- Semi-annually</li> </ul> <p>- Annually or semi-annually</p> <p>- Semi-annually</p>	<p>Issuers are encouraged to have an external review</p>	<p>PBoC and CSRC jointly released the qualification criteria and guidance for verifiers</p>

Country	Entity	Type of guidance	Alignment with international guidelines	Use of proceeds	Reporting requirements	Mandatory external review	Selection of external review providers
India	Securities and Exchange Board of India (SEBI)	Disclosure requirements for issuance and listing of green bonds	✓	✓ Broad categories indicated	✓ - Bi-annually, an audited report on the use and management of proceeds - Annually, the selection of projects and environmental impact	Optional	Not specified
Indonesia	Indonesia Financial Services Authority (OJK)	Requirements for Green Bonds	✓ However, the issuer must use at least 70% (and not 100%) of bond proceeds for environmentally-friendly activities	✓ Broad categories indicated	✓ Annual audited review to be submitted to OJK until the full allocation of proceeds	✓ An environmental assessment of the assets underlying the issuance is mandatory	Verifier must demonstrate relevant expertise
Malaysia	Securities Commission	Sustainable and Responsible Investment (SRI) Sukuk Framework	✓ Benchmarked against GBP and Social Impact Bond Framework In accordance with Shariah requirements	✓ Eligible sectors and projects are specified	✓ Annual reporting	✓ The review is mandatory for offerings to retail investors, optional for other SRI sukuk	Verifier must be an independent third party
Morocco	Autorité Marocaine du Marché des Capitaux (AMMC) – Moroccan Capital Markets Authority	Guidelines for Green, Social & Sustainability Bonds	✓ Developed with the support of the IFC Aligned with GBP 2018	✓ Broad categories indicated	✓ At least annually, for the lifetime of the bond	✓ The review may cover all or part of the issuance process	Verifier must be an independent third party

Country	Entity	Type of guidance	Alignment with international guidelines	Use of proceeds	Reporting requirements	Mandatory external review	Selection of external review providers
Nigeria	Securities Exchange Commission	Regulation for green bonds (under development)	✓	✓ Broad categories indicated	✓ Annual reporting	✓	Not specified
<b>GREEN BOND LISTING REQUIREMENTS</b>							
Chile	Bolsa de Santiago	Guide for the Green and Social Bonds Segment	✓ GBP and CBS explicitly recognised	✓ As indicated by the GBP and CBS	As indicated by the GBP and CBS	✓ Minimum content for a verifier report is provided	✓ Verifier must be approved under the Climate Bonds Standard
Kenya (under development)	Nairobi Securities Exchange	Listing rules for green bonds (integrated in the listing rules for bonds)	✓ Developed with the support of CBI	✓ Green Bond Principles, Climate Bonds Taxonomy and other standards acceptable to the Exchange	✓ At least annually, for the lifetime of the bond	✓ Pre-issuance and post-issuance verification	✓ Verifier must be approved under the Climate Bonds Standard
Mexico	Bolsa Mexicana de Valores Consejo Consultivo de Finanzas Climaticas (CCFC)	Green Bonds Segment Green Bond Principles MX	✓ Built on the 4 pillars of the GBP	✓ Broad categories indicated	✓ Annual reporting, for the lifetime of the bond	✓ Second party opinion or Climate Bonds Certification is accepted	Not specified
Peru	Bolsa de Valores de Lima	Green Bonds Guide for Peru	✓ Developed with the support of MexiCO2 and the UK FCO	✓ Broad categories indicated	✓ At least annually	✓	Verifier must be an independent third party

Country	Entity	Type of guidance	Alignment with international guidelines	Use of proceeds	Reporting requirements	Mandatory external review	Selection of external review providers
South Africa	Johannesburg Stock Exchange	JSE Green Bond Segment	✓	Not indicated	✓ Annually, to confirm compliance of green assets	✓	✓ The verifier must be independent and demonstrate expertise in environmental and market-specific issues. Affiliation with industry bodies such as the Climate Bonds Standards or others is acceptable.
<b>PRIVATE SECTOR VOLUNTARY INITIATIVES</b>							
Brazil	Federação Brasileira de Bancos (FEBRABAN) – Federation of Brazilian Banks	Voluntary guidelines for Brazilian issuers	✓	✓	✓ At least annually	Strongly recommended	Not specified

*Source:* the table has been developed with the information provided in the documents listed in Annex 1 as well as through IFC and CBI engagement with regulators in SEN member countries.  
*Note:* As of publication, guidelines are also under development in Egypt, Jordan, Lebanon, and Tunisia.



## 4. Case Studies

The following case studies have been developed through interviews with SBN members and other key regulatory and industry institutions in emerging markets.

These direct testimonies indicate that there are **several drivers that prompt institutions to embark on the green bond journey**. These include

- i) Serious environmental concerns and the need to finance assets with a positive environmental impact.
- ii) Gaining a competitive advantage and providing market diversification.
- iii) Opportunity in markets with large portfolios of nature-based assets or undergoing a transition.

Most interviewees report carrying out careful studies of international best practice and extensive consultation within their institutions and with market participants to develop the guidance. External advice has also been sought to leapfrog on others' experiences. A balance between delivering quality products and allowing flexibility for issuers has been one of the main challenges. To this end, close collaboration between departments focused on capital markets and sustainability have proved very effective.

Overall, the release and implementation of guidance around green bonds has been received positively by market participants. Respondents have helped raise visibility and awareness of this instrument and have supported issuers to come to market. Areas of growth are identified in all the countries interviewed, supported by capacity building for issuers, especially banks, investors, verifiers and policymakers.



## ASEAN (Association of Southeast Asian Nations)

*“Developing regional guidance first can create a more attractive label for investors and inform a better design of national guidelines. National uptake is important to provide guidance to domestic market participants”* - Mr. Ephyro Luis B. Amatong, Commissioner, Securities and Exchange Commission, Philippines

**Type of guidance:** The ASEAN (Association of Southeast Asian Nations) Capital Markets Forum (ACMF), comprising the capital markets regulators from the 10 ASEAN countries<sup>18</sup>, released the ASEAN Green Bond Standards (ASEAN GBS) in November 2017.

**Key driver:** The group’s interest was spurred by the regional impetus to move toward supporting sustainable growth within and among the member countries of ASEAN. This was demonstrated by several initiatives, including a green bond issuance in the Philippines and the introduction of the Sustainable and Responsible Investment (SRI) Framework in Malaysia. Recognizing the importance of green finance in supporting this goal, the ACMF, following its 25th ACMF Meeting in Jakarta on 8 September 2016, announced that it would take a leadership role in identifying green finance standards that can be applied for the ASEAN region. With the support of the Asian Development Bank, United Kingdom Foreign and Commonwealth Office (UK FCO), International Capital Market Association (ICMA), and World Bank, the ASEAN GBS were developed. They aim to enhance transparency, consistency and uniformity of ASEAN green bonds, which will reduce due diligence costs and help investors make informed investment decisions. Issuers in the region are encouraged to issue green bonds under the internationally-aligned ASEAN GBS.

**Highlights:** The standards are built on the Green Bond Principles (GBP) and developed with support from ICMA. Notably, the ASEAN GBS explicitly exclude fossil fuel power generation projects in order to mitigate greenwashing and protect the ASEAN Green Bonds label. Additional requirements for external reviewers are also introduced, as well as mandatory disclosure in issuance documentation of information on the use of proceeds, project evaluation and selection, and management of proceeds. Such information should also be publicly accessible from a website designated by the issuer throughout the tenure of the ASEAN Green Bonds.

**Process of development:** The standards were developed following a decision by the Chairs of the ACMF in September 2016. Consensus within the ACMF was achieved relatively quickly, as infrastructure needs and climate change are high on the agenda of all the regulators. The UK FCO, ACMF’s dialogue partner, facilitated preliminary discussions with ICMA. The ASEAN GBS were drafted leveraging ICMA’s GBP. All ACMF member countries are expected to adopt the ASEAN GBS in their own jurisdictions based on their market readiness. During the development of the ASEAN GBS, a survey was undertaken by the World Bank jointly with the ACMF to identify

<sup>18</sup> Brunei, Cambodia, Indonesia, Laos PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam.

member countries' capacity building needs as well as key issues affecting green bond market development in each country in the region.

**Market impacts:** Six green bonds were issued in the region after the release of the Standards, three of which were issued under the ASEAN green bond label. Malaysia is leading on green sukuk issuance, followed by Indonesia, which issued the first sovereign green sukuk.

**Future expectations:** As the Standards are rolled out in each country, market awareness and issuance are expected to grow. Renewable energy, green buildings, and mass transport are expected to be the main sectors to seek green funding. Banks will have an important role to play as issuers by aggregating small loans, for example for renewable energy. Development banks will be important in providing anchor investment and risk mitigation measures (e.g. partial guarantee) to crowd in other investors.



## Brazil

**Type of guidance:** FEBRABAN (Federação Brasileira de Bancos), the Brazilian Federation of Banks, developed voluntary guidelines for green bond issuers in Brazil in 2016.

**Key driver:** Two main drivers prompted FEBRABAN to undergo the process of developing guidelines: i) the opportunity to increase the resources mobilized by the financial sector for projects with environmental benefits, helping banks better manage social and environmental risks in their portfolios, and ii) the vast opportunities to develop green projects held by the country's natural capital base.

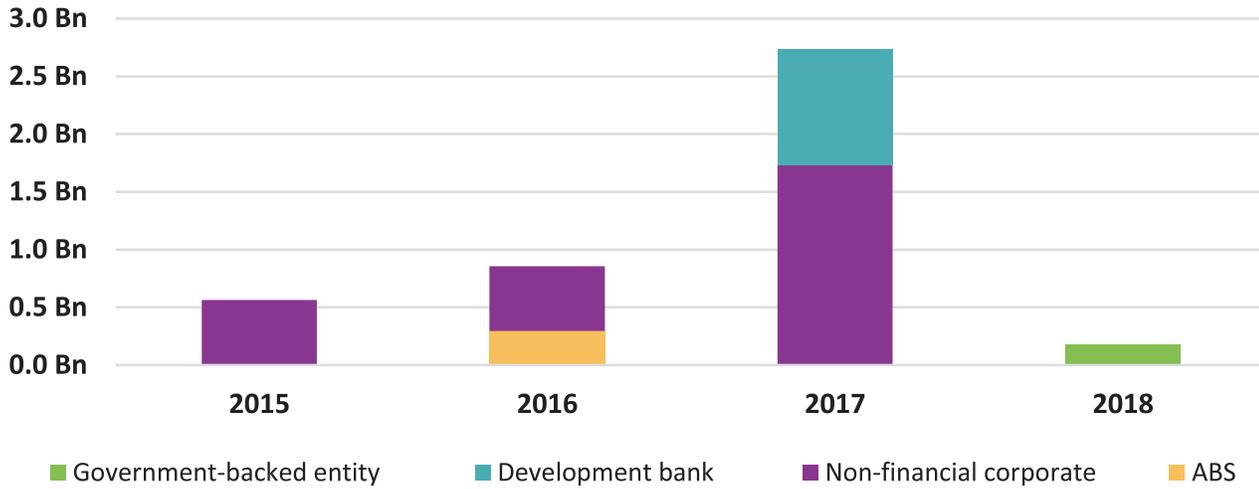
**Highlights:** The guidelines were developed in partnership with the Brazilian Business Council for Sustainable Development (CEBDS), and with technical support from the sustainable finance NGO SITAWI and the FGV Centre for Sustainability. They include pre- and post-issuance requirements and guidance around external reviews and reporting.

Issuers, banks, and verifiers were involved in the process. Challenges included the limited number of external reviewers and investor demand – due to lack of ESG/sustainability mandates – and stringent requirements for investable products.

**Process of development:** With a membership of private and public banks, and given the already cumbersome regulatory landscape of capital markets in Brazil and the uncertain political environment, the Federation decided to develop guidance that market players could take as a reference without the need to amend existing regulation. The existing regulation for fixed-income products was deemed sufficient to create a “green” product that could grow, driven by investor demand and benefits for issuers, without the need for further incentives.

Working groups with interested member banks from FEBRABAN and potential issuers from the corporate sector members of CEBDS were formed and worked for one year. The working groups

**Figure 9: Green bond issuance in Brazil (in US\$) up to June 2018**



investigated the essentials of what green bonds are, international references (Green Bond Principles, Climate Bonds Standard, IFC/World Bank green bonds), and requirements for local and offshore issuances. The Brazilian Financial and Capital Markets Association (ANBIMA), the Brazilian Stock Exchange, the Securities Regulator CVM, and other companies were consulted as well. Workshops were held before and after the guidelines were published to increase awareness around green bonds and promote the instrument.

Market impacts: Once published, the guidelines were recognised by market players as an important source of information and had a positive market impact. Several issuances mention the guidelines in their official documentation. Prior to the guidelines, only two bonds had been issued. Twelve additional issuances have followed since.

Future expectations: The pulp and paper and renewable energy sectors hold the greatest potential for future issuances, as well as agribusiness. More issuance from private banks is envisaged. To date there has been only one issuance from a bank, namely from the giant national development bank BNDES.



## China

*"China's experience shows the powerful effect of providing clear definitions and disclosure requirements to industry and the financial sector for the design and issuance of green bonds. Having done so in 2015, China rapidly took a lead position in global green bond issuance. Our approach addresses local priorities for creating a green economy. In addition, by building alignment with the international green bond market, we aim to unlock the full potential of cross-border investment and issuance" - Dr. Ma Jun, Member of the PBOC Monetary Policy Committee, Director of the Tsinghua Center for Finance and Development, Chairman of Green Finance Committee of China Society for Finance and Banking, Co-Chair of the G20 Sustainable Finance Study Group.*

**Type of guidance:** In 2016, the People’s Bank of China (PBOC), China’s central bank, issued the Guidelines for Establishing the Green Financial System and stipulated to promote green bond market development amid a wide range of plans to green the entire financial markets. This is among the first of its kind globally as a central bank guidance.

A series of regulations covering different green bond issuer types have been established over the past few years by PBOC for financial intermediary issuers, China Securities Regulatory Commission (CSRC) for exchange-traded corporate green bonds, National Development and Reform Commission (NDRC) for public-sector issuers, and the National Association of Financial Market Institutional Investors (NAFMII). These include guidance on, and requirements for, green definitions, management and use of bond proceeds, reporting, and incentive measures.

**Key drivers:** The development of Green Bond Regulation inserts itself in a wider context of green finance reforms. The push for green finance reforms came firstly from grave environmental concerns, namely pollution of air, water and soil, that were seriously compromising the growth of the Chinese economy. It started with the launch of the Green Credit Policy in 2007 by PBOC, China Banking Regulatory Commission (CBRC), and the Ministry of Environmental Protection (MEP), with a focus on promoting green lending by banks. CBRC subsequently developed operational guidance for banks as well as definitions and reporting templates to track banks’ performance. In 2015, China announced its Integrated Plan for Promoting Ecological Progress, which confirmed the national strategy on sustainable development and led to PBOC’s 2016 guidelines for greening the financial system.

**Highlights:** The regulations provide clear criteria for use and management of proceeds and reporting. Eligible green projects are identified by the Green Bond Endorsed Project Catalogue published by PBOC in 2015. Guidelines for green bonds verification and post-issuance disclosure have also been released by PBOC and CSRC.

In 2018, PBOC further introduced a series of support measures for green credit and green bond market development. The green credit performance of banks is now included in PBOC’s macro-prudential assessment (MPA). PBOC will now accept green bonds as collateral in its liquidity operations, such as Mid-term Lending Facility (MLF), as an effort to promote the green bond market development.

**Process of development:** In 2015, PBOC established the Green Finance Committee (GFC), following the landmark report from the Green Finance Task Force.<sup>19</sup> The GFC has set up several working groups to undertake research on how to implement PBOC’s vision for a green financial system in China and to support China’s work for the G20 Green Finance Study Group (now the G20 Sustainable Finance Study Group).

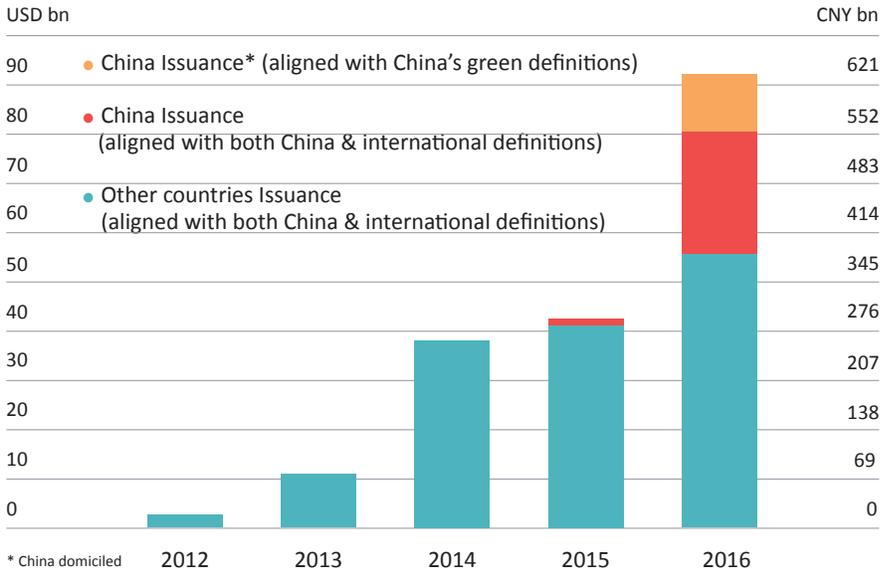
---

<sup>19</sup> In 2014, the PBOC established a Green Finance Task Force in conjunction with the United Nations Environment Programme Inquiry into the Design of a Sustainable Financial System (UNEP Inquiry). The Green Finance Task Force spans regulators, government departments, financial market actors, and local and international experts working on the establishment of a green financial system in China.

In August 2016, the Guidelines for Establishing the Green Financial System were jointly released by seven ministries in China.<sup>20</sup> The following year, the State Council, China's cabinet, announced its decision to set up pilot zones for green finance.

**Market impact:** The launch of official guidelines in 2015 led to China being a major driver of global growth in green bond issuance in 2016, accounting for 39% of global issuance in the year, with proceeds going to clean energy (21%), clean transport (18%), energy saving (18%), pollution prevention and control (17%), resource conservation and recycling (17%), and ecological protection and climate change adaptation (8%)<sup>21</sup>. Total green bond issuance from China reached US\$37.1 billion (RMB248.6 billion) in 2017 – a 4.5% increase year-on-year.<sup>22</sup> China is now the second largest green bond issuer following the United States. A combination of policy developments, growing momentum at the local level, and a diversification of issuer types and use of proceeds has led to this rapid growth in the market.

**Figure 10: Global growth in green bond issuance was driven by China in 2016**



Source: Climate Bonds Initiative and China Central Depository & Clearing Co. Ltd. (CCDC), (2016), China Green Bond Market 2016

**Future expectations:** China has been working on the harmonization of green definitions. In March 2017, PBOC and the European Investment Bank (EIB) established a joint green finance initiative to harmonize the green definitions between Chinese and European markets.<sup>23</sup> In November 2017,

<sup>20</sup> PBOC, Ministry of Finance, NDRC, Ministry of Environmental Protection, China Banking Regulatory Commission (CBRC), China Securities Regulatory Commission (CSRC), and China Insurance Regulatory Commission (CIRC).

<sup>21</sup> Climate Bonds Initiative and China Central Depository & Clearing Co. Ltd. (CCDC), (2016), China Green Bond Market 2016

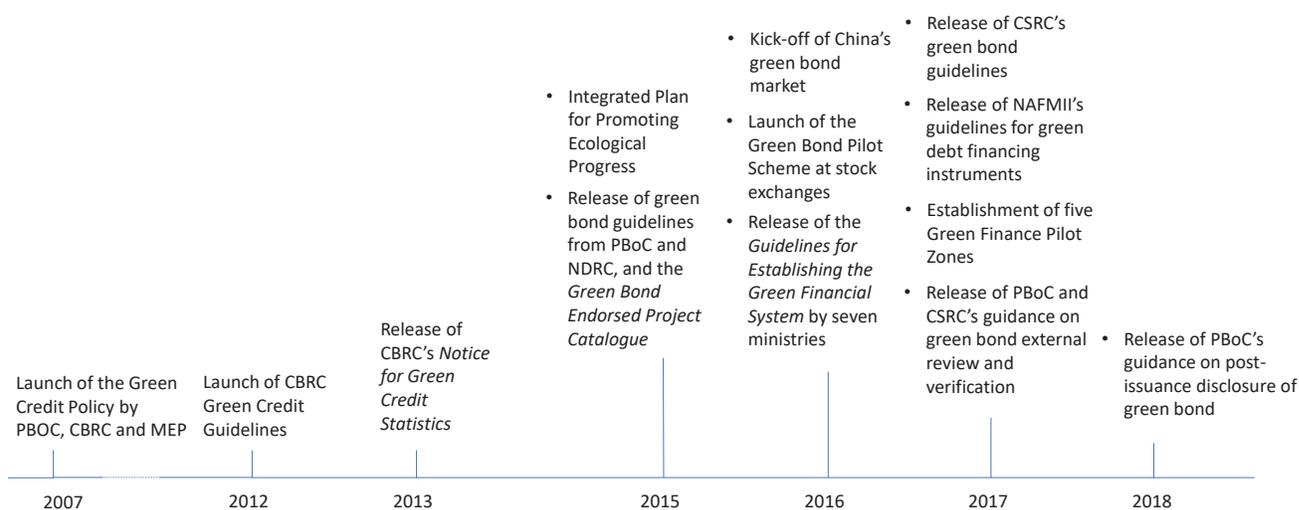
<sup>22</sup> Climate Bonds Initiative, (2018), China Green Bond Market 2017.

<sup>23</sup> New People's Bank of China and EIB initiative to strengthen green finance, 22 March 2017, <http://www.eib.org/infocentre/press/releases/all/2017/2017-073-new-peoples-bank-of-china-and-eib-initiative-to-strengthen-green-finance.htm> (Accessed on 4 September 2018).

the initiative released a White Paper that compares different green definitions in European Union (EU) markets and China, providing a basis for harmonization of green definitions and standards.<sup>24</sup>

In addition, China is also actively involved in global dialogues on green finance. During China's presidency for G20 in 2016, PBOC and the Bank of England jointly introduced green finance into the G20 agenda and have played a leading role for the G20 Green Finance Study Group since then (now renamed the Sustainable Finance Study Group). China also partners with initiatives such as SBN and the UNEP Finance Initiative in sharing its experience and lessons learnt on green finance and green bond market development.

**Figure 11: Timeline of green finance reforms in China**



## Indonesia

**Type of guidance:** The Indonesia Financial Services Authority (OJK) issued Requirements for Green Bonds in December 2017. These are aligned with the Green Bond Principles (GBP) and ASEAN Green Bond Standards.

**Key driver:** The guidance on green bond issuance responds to the need for long-term financing for climate-related projects, building on OJK's Roadmap for Sustainable Finance 2015-2019 and other green finance measures to support sustainable development. These include the 2017 OJK regulation on Sustainable Finance for Financial Services Institutions, Issuers and Public Companies; the financing guidelines for renewable energy, energy efficiency, green buildings, organic farming and palm oil; and the launch of the Bali Center for Sustainable Finance.

<sup>24</sup> Joint White Paper by China Green Finance Committee and EIB set to strengthen international Green Bond market, 11 November 2017, <http://www.eib.org/infocentre/press/releases/all/2017/2017-311-joint-white-paper-by-china-green-finance-committee-and-eib-set-to-strengthen-international-green-bond-market.htm> (Accessed on 4 September 2018).

**Highlights:** The requirements build on the 4 pillars of the GBP and identify 11 green sectors. They include a mandatory expert review, an annual report after the bond is issued and until the full allocation of proceeds, and mandatory correction action.

**Process of development:** Throughout 2016, OJK conducted an analysis of green bonds in Indonesia to serve as the main reference for its green bond policy. Public and stakeholder consultations were held as part of the policy draft developments, including through workshops. Technical experts from international organisations, such as IFC, the World Bank, and others, provided examples of international best practices and lessons learned from other countries. The policy was issued in December 2017.

**Market impacts:** Following the release of the green bond policy, the first sovereign green sukuk (Islamic green bond) was issued by the Government of Indonesia in February 2018 for US\$1.25 billion. The first Asian corporate sustainability bond was also issued in February 2018 for sustainable rubber plantations in Indonesia, followed by a US\$580 million corporate bond financing geothermal energy from Star Energy. Two more bonds have since been issued: PT SMI (a state-owned non-bank financial institution) issued a green bond with support from the World Bank in July 2018 for IDR 3 trillion (US\$ 200 million) with a maximum emission value of IDR 1 trillion (US\$ 60 million) in the first phase of 2018; and OCBC NISP issued a US\$150 million green bond to IFC as sole investor.

**Future expectations:** More Indonesian financial institutions are expected to issue green bonds/sukuk to raise capital to finance more sustainable projects and support the implementation of SDGs and climate change targets. More technical guidance on definitions of sustainable projects and procedures for third-party verification is needed to scale up issuance. Development and dissemination of best practices and lessons learned from green bond issuances so far will also support new issuers to come to market. OJK is committed to developing a monitoring and reporting system on green bonds development in Indonesia to keep track of progress.



## Malaysia

*“The deal [world’s first green sukuk issuance in 2017] marks another milestone in product innovation that enhances Malaysia’s position as a leading Islamic finance marketplace as well as its value proposition as a centre for sustainable finance. This also illustrates how Malaysia leads in advocating convergence between Islamic and green financing.”* – **Datuk Zainal Izlan Zainal Abidin**, Deputy Chief Executive, Securities Commission, Malaysia

**Type of guidance:** The Sustainable and Responsible Investment Sukuk Framework was released in 2014 by the Securities Commission Malaysia (SC) to facilitate financing of projects that benefit the environment and society. Given this experience, and its role as chair of the ASEAN Capital Markets Forum, the SC also took a leadership role in developing green bond standards for the ASEAN region.

**Key driver:** In 2017, Malaysia remained the largest sukuk market globally, with 38% of total issuances during the year and 47%<sup>25</sup> of sukuk outstanding as at end-2017 issued out of Malaysia. Malaysia was well positioned to drive the development of sustainable finance in the region, given the similarities of Islamic finance and sustainable finance<sup>26</sup>. As a regulator, the SC is committed to creating a facilitative ecosystem to develop Malaysia as a regional centre for Sustainable and Responsible Investments (SRI). The Capital Market Masterplan 2, which is a 10-year strategy blueprint for the Malaysian capital market, recognizes the importance of sustainability and that the role of the capital market can be expanded to support this agenda by creating market-based solutions.

**Highlights:** The SRI Sukuk Framework was developed with reference to international standards, such as the Green Bond Principles and Social Impact Bond Framework. The Framework is designed to be versatile, as it provides guidance for the issuance of green, social and sustainability sukuk, providing greater financing options for issuers. Given this wide coverage, Malaysian authorities did not develop a dedicated standard for green bond and sukuk. However, the ASEAN Green Bond Standards can also be used as a reference point. Issuances that comply with both sets of guidance can carry both labels, such as in the case of Malaysia's Permodalan Nasional Berhad (PNB) first green SRI sukuk.

**Process of development:** The SC has formulated the 5i strategies<sup>27</sup> to develop the SRI ecosystem in the Malaysian capital market. In January 2017, SC and the Central Bank of Malaysia formed a Technical Working Group with the participation of the World Bank to explore options to encourage investments in green or sustainable projects through the development of green Islamic finance markets. The Technical Working Group promoted the concept of the green sukuk and shared international experience of green bond issuance with various stakeholders in the green economy, including the Ministry of Energy, Green Technology and Water (KeTTHA), Green Tech Malaysia Sdn Bhd, Ministry of Finance, financial institutions and potential issuers.

**Market impact:** Following the release of the Framework, the inaugural SRI sukuk programme of RM1 billion was established in 2015 to fund education programs. This was the first social impact sukuk issued under the SRI Sukuk Framework. In July 2017, Tadau Energy Sdn Bhd, issued the first green sukuk in the world, raising RM250 million (US\$59 million) to finance a 50MW solar photovoltaic power plant in Sabah, Malaysia. The sukuk was issued under SRI Sukuk Framework, endorsed by the Shari'ah Advisory Council, and received the highest rating by the Center for International Climate and Environmental Research Oslo (CICERO). Four other green SRI sukuk have since been issued, bringing the total issuance size to RM2.4 billion to date.

<sup>25</sup> IFSB Islamic Financial Services Industry Stability Report, 2018.

<sup>26</sup> Sukuk and green bonds are similar in that i) both raise funds for a specific purpose, ii) the values of both are deeply rooted upon ethical and socially responsible principles, iii) the notion of environmental stewardship, the protection of air, water and land, and the ecosystems that depend on them, are intrinsic to Shari'ah principles. Source: *World Bank Case study – Helping Malaysia Develop the Green Sukuk Market*, <http://pubdocs.worldbank.org/en/514801523545420821/case-study-financial-products-malaysia-2018-GreenSukukMarketDevelopment.pdf> (Accessed on 4 September 2018).

<sup>27</sup> The 5i strategies comprise: i) widening the range of SRI instruments; ii) increasing SRI investor base; iii) building a strong SRI issuer base, iv) instilling internal culture and governance, and v) designing information architecture in the SRI ecosystem.

**Future expectations:** Incentives have been introduced to encourage more issuances of SRI sukuk. For example, an income tax deduction on issuance costs of SRI sukuk is provided for five years from 2016 to 2020. In addition, the Securities Commission has recently established a RM6 million Green SRI Sukuk Grant Scheme, which is administered by Capital Markets Malaysia, to incentivise the issuance of green sukuk in Malaysia by reimbursing issuers for the external review costs incurred. The grant is tax-exempt for the recipient issuers.

While there is increasing awareness amongst the market participants, on-going initiatives to promote green sukuk and bonds are still required and efforts need to be intensified to encourage corporates to identify eligible green projects. Currently, only two domestic service providers are capable of providing external review services to support the issuance of green sukuk and bonds. The SC will continue to collaborate with relevant stakeholders to further develop the green finance ecosystem.



**Type of guidance:** The Green Bond Principles MX, released by Mexico's Climate Finance Advisory Group (CCFC) (Consejo Consultivo de Finanzas Climaticas) in January 2018, are the official reference point for listing green bonds on the Mexican Stock Exchange.

**Key driver:** Green bonds represent an important diversification opportunity for the Mexican market. Market players demanded new instruments and the stock exchange, through its sustainability arm MEXICO2, met these needs. The ambition is also to reaffirm Mexico's regional leadership in climate change through financial innovation and sharing best practices with Latin American exchanges.

**Highlights:** The Principles reflect international best practice. The process of developing the principles resulted in the establishment of the CCFC, an initiative led by Bolsa Mexicana de Valores (BMV Group) and CBI, headed by three of the largest pension funds in Mexico (Afore Sura, Afore Citibanamex, and Afore XXI Banorte). It gathered the Mexican finance sector together to channel the discussion on climate finance and influence market development and public policy.

**Process of development:** The process was mostly driven by MÉXICO2, with support from the Mexican Stock Exchange and the UK government through the Foreign and Commonwealth Office. An extensive consultation process was carried out, with institutions such as AMAFORE (Pension Funds Association), AMIS (Insurance Companies Association), ABM (Banking Association), AMIB (Capital Markets Associations), HSBC (global branch) and NAFIN (most important local development bank). As in most markets, the biggest challenge was the knowledge gap within key financial institutions on climate and green finance, and therefore also coordinating an agenda and active discussions.

**Market impact:** The initiative has been successful in positioning the green bond market in the public agenda. Visibility was also achieved thanks to the active cooperation of the most important market players: issuers, investment banks, associations, multilateral banks, and other relevant stakeholders.

**Future expectations:** Further steps are needed to grow the market. These include i) development of a green project pipeline, ii) strengthening of the market offer of green finance instruments beyond the debt market, and iii) building capacity within the demand side, corporations, and investment bankers on ESG risk management.



## Morocco

*“We tried to balance between market security – rules to protect investors and prevent greenwashing – and at the same time allow some flexibility to issuers to come to market” – Mr. Yasser Mounisif, Head of Corporate Finance, Moroccan Capital Market Authority (AMMC)*

**Type of guidance:** AMMC (Autorité Marocaine du Marché des Capitaux), the Moroccan Capital Markets Authority, issued its Green Bonds Guidelines in 2016. The guidelines set out requirements and guidelines for issuers as well as raising awareness among investors and the public around green bonds. After being tested on a few issuances, the guidelines are now being transformed into regulation and incorporated into the Capital Markets Rulebook.

In July 2018, the Green Bonds Guidelines were amended, and AMMC, with IFC support, launched the Green, Social and Sustainability Bond Guidelines. The guidelines outline the principles and the steps to follow in issuing these types of bonds. Investors can also find useful information allowing them to better understand this segment of the debt market.

**Key driver:** There were two main strategies behind the development of the AMMC’s Green Bond Guidelines: i) Morocco’s national ambitions in terms of renewable energy development, and ii) making Morocco a green financial hub to bridge the gap between northern investors and southern projects. During the 2016 United Nations Climate Change Conference of the Parties (COP 22) held in Marrakech, the AMMC also committed to fostering green finance in Morocco and in Africa.

**Highlights:** The Green Bond Guidelines include mandatory disclosure for the four pillars of the Green Bond Principles (GBP), as well as a mandatory external review and minimum requirements for verifiers (they must be independent and qualified). The guidelines have been developed with a focus on a balance between market integrity to safeguard investors and avoiding greenwashing, while at the same time leaving enough flexibility for issuers to come to market.

**Process of development:** The green bond journey started in 2016, on the occasion of COP 22 organised in Morocco. Several initiatives were undertaken as part of the COP 22, including the Marrakech Pledge a commitment by African capital markets regulators to foster Green Capital Markets in Africa.

*The Green Bond Guidelines* were developed in partnership with the IFC, which allowed a rapid turnaround and the opportunity to build on the experience already acquired by the IFC in this field. This avoided adopting a trial and error approach. The AMMC decided to start from a

principle-based approach, with the focus point being the second-party opinion, rather than requesting burdensome documentation from issuers.

*Market impacts:* Issuers have come to market following the release of the guidelines. The regulator has played an active role in supporting issuers by providing advice on the external review process.

**Future expectations:** The main market growth is expected to come from the financing of renewable energy and energy efficient buildings. Smaller initiatives that cannot attract finance individually are to be aggregated, either through a public platform or within banks. Banks are expected to drive issuance, although the eligibility of portfolios may be challenging for some. More external review providers need to be trained locally and local investors further educated.

### Examples of Green Bond issuances in Morocco

Issuer name	Issuer sector	Size	Date	Proceeds	External review
MASEN	State development bank	MAD 1.15bn (USD 117m)	Nov 2016	Renewable energy	Climate bonds certified (Vigeo Eiris)
BMCE Bank	Commercial bank	MAD 500m (USD 50m)	Nov 2016	50% renewable energy, 50% low-carbon buildings (energy efficiency)	Second Party Opinion (Vigeo Eiris)
Banque Central Populaire	Commercial bank	EUR 135m	Jun 2017	Renewable energy	Second Party Opinion (Green Investment Group)

## Nigeria

**Type of guidance:** The Securities and Exchange Commission (SEC) of Nigeria is developing green bond regulation to provide guidance to its market following the Nigerian government’s sovereign green bond issuance in December 2017, the first African sovereign green bond.

**Key driver:** A set of rules was regarded as the first step to develop a domestic green bond market in Nigeria. The main driver was the need to develop a tool to finance the huge infrastructure gap in a manner that is sustainable, and being aware of climate risks.

**Key highlights:** The regulation will follow international best practice and require disclosure on behalf of the issuer of the bond’s use of proceeds, selection of projects, management of proceeds, and reporting. A segregated account for the bond’s proceeds and a mandatory external review, in the form of a second party opinion or Climate Bonds certification, are expected.

**Process of development:** The Rules Committee of the SEC started developing the rules based on

international practices and in collaboration with CBI. Consultation was carried out with the Capital Markets Committee and the Ministry of Finance.

An initial challenge was education and general awareness, as well as lack of capacity within the regulatory agency. Collaborating with external experts and leveraging existing guidelines and adapting them to the local context was an important part of the process for the SEC. Through engagement with international bodies like IFC, the UN Environment Programme (UNEP), and CBI, existing resources were leveraged to develop new rules.

**Market impacts:** The SEC rules are expected to have significant impact as market players will have confidence there is transparency in the market and the regulator will provide monitoring.

**Future expectations:** Issuers are expected to follow the first few successful issuances, so market awareness and capacity building are key activities to get the first few issuances off the ground. Current market conditions are unfavourable towards corporate issuance, but sovereign rates are expected to further decrease. Further policy support may be needed for corporate green bonds to take off.



## South Africa

*“Green bonds are a tool that give issuers the opportunity to monetise their sustainability effort and at the very least diversify their investor demand” – Ms. Shameela Soobramoney, Senior Manager: Group Strategy and Sustainability, Johannesburg Stock Exchange (JSE)*

**Type of guidance:** The Johannesburg Stock Exchange (JSE) has developed listing requirements for its Green Bond Segment, which was formally launched in October 2017. The requirements for green bonds are integrated into the JSE’s listing regulation. The Financial Services Conduct Authority (FSCA), the South African regulator in terms of the Financial Markets Act No. 19 of 2012, published the listing requirements for public comment, and assessed and approved the proposed listing requirements of the JSE.

**Key drivers:** The main drivers of the development of the green bond segment have been i) the JSE’s sustainability goal of promoting ESG integration and responsible investment by issuers and investors, and ii) the need for South Africa to change its energy pathway and for this shift to be financed.

**Highlights:** Based on the international Green Bond Principles, the JSE rules go a step further and require a mandatory external review to access the segment. Requirements for verifiers are also spelled out, indicating that independence from the issuer and expertise must be demonstrated. A verifier may be selected from the pool of verifiers approved under the Climate Bonds Standard or any other acceptable industry body.

**Process of development:** The capital markets team of the JSE, including an expert on group strategy and sustainability, and one on bond markets, carried out desktop research and consultations with other market players better understand what investors need and what issuers are able to do. The Climate Bonds Standard framework was selected as the most robust, and was included as the gold standard, something to aspire to; but on its own there was worry it could choke the market and exclude projects that could help South Africa down a decarbonisation pathway. Therefore, the Green Bond Principles were considered. The requirements of other stock exchanges, such as London Stock Exchange and Luxembourg Stock Exchange, will also be reviewed.

Two consultative workshops were held, one with issuers and one with investors. From these, the need to deliver quality products for investors, without overburdening the issuers, became evident. A mandatory external review was seen as essential to ensure positive environmental impacts and maintain credibility, while allowing flexibility. An initial draft was shared with the Issuers and Investors team at the JSE and finally passed onto the regulation team, where, once the draft was turned into regulation, it underwent a public consultation process and was then finalised.

**Market impacts:** A wide market consultation effort ensured the guidelines were positively accepted, and the first corporate bond was issued. The combined sustainability and market expertise ensured there was a balance between credibility and workable propositions for the market. Issuers that have sustainable assets appreciate they can monetise on their sustainability efforts by diversifying the investor base and tapping into some additional liquidity in the responsible investment domain. In South Africa, green bonds can also help raise the profile of corporate issues from a governance point of view, providing transparency over assets and management processes thanks to the external review.

**Future expectations:** Further growth is expected to be seen in the property and energy sectors. Independent Power Producers in particular could access refinancing through the capital markets with a green project bond. The sovereign is also a likely candidate, which would be very important for further market development given its signalling power and benchmarking role. Banks are currently showing less interest as they mostly manage their liquidity and have less interest in refinancing portfolios of loans. South Africa is also currently finalizing its national policy paper on sustainable and green finance, which will be published in the near future.

## 5. Assessing SBN Member Needs for Training and Capacity Building

Earlier this year, SBN produced a Global Progress Report measuring progress by financial sector regulators and industry associations to promote the transition to sustainable finance in member countries, such as through national guidelines, roadmaps, and other enabling initiatives. The assessment includes a pillar on green finance flows, which measures the presence of green finance initiatives and definitions, and the availability of data regarding flows and their related impacts.

Green bond guidance for issuers and alignment with international standards is one of the sub-indicators used to measure progress under the green finance flows pillar. The report's results show that SBN members are conscious of the importance of developing common and consistent sets of definitions, and a few countries are leading the way by setting policies and principles that define green assets and priority sectors of investment. Stock exchanges have also played a role in providing guidance and definitions aligned with good international industry practices for the listing of green bonds<sup>28</sup>.

### 5.1 Survey of SBN members on green bond market development

In order to better understand how SBN could support the development of domestic green bond markets and therefore enhance green financial flows, the IFC circulated a survey to all SBN members in February and March 2018 to assess the main drivers for green bond market development as well as the main challenges regulators are facing.

Completed responses were received from 22 of the 35 SBN member countries: Argentina, Bangladesh, Brazil, China, Colombia, Ecuador, Egypt, Fiji, Georgia, Indonesia, Kenya, Mexico, Mongolia, Morocco, Nigeria, Paraguay, Philippines, South Africa, Tunisia, Turkey, UAE-ADGM, and Vietnam.

#### GREEN BOND MARKET MATURITY

Respondents were asked to self-assess the level of local market maturity in terms of green bond developments, according to the following levels:

---

<sup>28</sup> Sustainable Banking Network, (2018), Global Progress Report, [www.ifc.org/sbnreport](http://www.ifc.org/sbnreport)

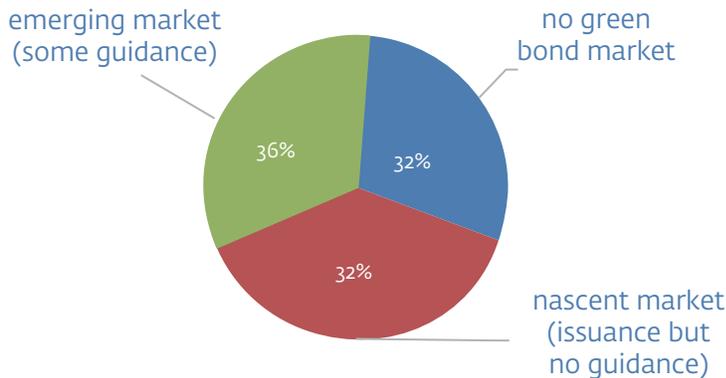
Level	Description
Not started	No issuances to date; no regulatory guidance in place
Nascent	Some issuance has taken place, but no framework or regulatory guidance in place
Emerging	Some regulatory guidance in place; a growing number of issuances
Established	Detailed regulation and guidance in place; a variety of issuances occurring on an ongoing basis
Robust	Vibrant green bond market; comprehensive guidance in place; diversity of issuances; secondary market developing

Respondents self-reported the following levels of maturity. None of the participating SBN countries felt that their local green bond markets have reached the levels of “Established” or “Robust”. This indicates humility about the ongoing learning journey as well as growth opportunities in all cases.

Self-reported stage of development of national green bond markets				
Not started (7)	Nascent (7)	Emerging (8)	Established	Robust
Bangladesh Egypt Georgia Kenya Mongolia Paraguay Tunisia	Argentina Ecuador Fiji México Philippines Turkey United Arab Emirates	Brazil China Colombia Indonesia Morocco Nigeria South Africa Vietnam	None	None

It is also important to note that in many cases – including countries that self-reported as “Not started” – work is currently underway to issue guidelines and to prepare green bond issuance. Consequently, the assessment below is expected to quickly evolve over the coming months.

**Figure 12: Breakdown of survey respondents**



## DRIVERS

Overall, respondents have recognised that the primary drivers of the development of national green bond markets have been, in decreasing order of frequency:

Drivers of green bond market development	
1	Opportunities identified by policymaker/regulators
2	Initiative taken by local financial institutions
3	Major environmental concerns requiring urgent financing solutions
4	Initiatives taken by stock exchanges
5	Initiative taken by local municipality, province or city

## CHALLENGES

The survey also helped identify the main challenges that regulators face in developing domestic green bond markets. These have been identified as follows, in decreasing order of impact:

- 
- Lack of knowledge and capacity within regulatory agencies
  - Lack of interest among financial institutions
  - Insufficient demand for green bonds among local investors
  - Lack of supporting regulation
  - Lack of local frameworks and guidelines
  - Lack of qualified local organizations to provide independent verification
  - Insufficient pipeline of suitable green bond assets

## THE ROLE OF SBN

Responses indicated that SBN is well placed to help grow these markets by sharing country experiences, developing practical tools, and building capacity within financial institutions and regulatory agencies.

Priority	Role of SBN	Demand for training	Training topics	Training delivery channels
1	<ul style="list-style-type: none"> <li>• Capturing and sharing country experiences</li> <li>• Developing practical tools and guidance</li> <li>• Providing capacity building</li> </ul>	Regulators	How to create pipelines of green bond projects and prepare issuers	Conference/workshop
2	<ul style="list-style-type: none"> <li>• Facilitating peer-to-peer knowledge exchange</li> <li>• Promoting best practices</li> <li>• Providing training</li> </ul>	Financial Institutions	How to integrate environmental, social and governance (ESG) risk and impact assessment at all stages of issuance and project implementation	Case studies
3	<ul style="list-style-type: none"> <li>• Undertaking in-depth research on trends and practices</li> </ul>	Policymakers	Guidance and case studies for creation of regulatory and market frameworks for green bond issuance	Academic/executive education E-learning
4	<ul style="list-style-type: none"> <li>• Benchmarking country-level performance</li> <li>• Tracking and reporting on the results and impacts of green bond issuance</li> </ul>	Stock exchanges	Good practice in transparency and reporting on green bond performance and impacts	E-learning
5	<ul style="list-style-type: none"> <li>• Articulation of the business case of green bond issuance versus vanilla bonds</li> </ul>	Potential issuers NGOs	Good practices and case studies of innovation in green bond issuance Good practices in the use of independent external review	Research

## 5.2 Analysis by stage of green bond market development

Breaking down the responses by the state of development of the green bond market provides further insight into support tools that the SBN can help deliver to support market development. Unsurprisingly, in countries with no issuance the lack of frameworks and guidance is seen as the most pressing matter to address, while in nascent and emerging markets, training and capacity building for regulators, issuers, investors and verifiers seem to be the greatest challenges.

The role of the SBN is clearly recognised as that of sharing country experiences developing practical tools and building capacity through peer-to-peer exchanges, across markets. The preference for training topics differs slightly: the more advanced markets require a deeper understanding of reporting frameworks and external reviews, while less advanced markets are focused on green pipelines, guidance documents and the integration of ESG risk management in green bond issuances.

## EMERGING

Main challenges in developing a green bond market:



- Lack of knowledge within regulatory institutions
- Insufficient demand from local investors
- Lack of local verifiers
- Multiple standards
- Need for incentives as the market is nascent
- Local market conditions

### Primary drivers:

1. Opportunities identified by policymakers/regulators
2. Opportunities identified by local finance institutions
3. Environmental concerns requiring urgent financing solution

## NASCENT

Main challenges in developing a green bond market:



- Lack of interest among local financial institutions
- Lack of supporting regulation
- Insufficient demand for green bonds among local investors
- Lack of knowledge and capacity within regulatory agencies
- Insufficient pipeline of suitable green bond assets

### Primary drivers:

1. Environmental concerns requiring urgent financing solutions
2. Opportunity identified by policymakers/regulators
3. Initiative taken by local finance institutions

## NOT STARTED

Main challenges in developing a green bond market:



- Lack of local frameworks and guidelines
- Insufficient demand for green bonds among local investors
- Lack of knowledge and capacity within regulatory agencies
- Lack of supporting regulation
- Insufficient pipeline of suitable green bond assets

### Primary drivers:

1. Opportunity identified by policymakers/regulators
2. Initiative taken by local finance institutions
3. Major environmental concerns

## 5.3 Training needs expressed by respondents

The survey helped reveal several focus areas where the SBN can intervene to build capacity amongst its members. Different levels of training and information sharing are required depending on the country's stage of green bond market development and general capital markets maturity.

Responses have focused on the need for general market education around green bonds, guidance on regulatory frameworks through information sharing among members, and technical assistance to identify green bond projects and bring bonds to market.

Priority	Emerging status	Nascent status	No market
1	Good practice in transparency and reporting on green bond performance and impacts	How to create pipelines of green bond projects and prepare issuers	How to create pipelines of green bond projects and prepare issuers
2	How to create pipelines of green bond projects and prepare issuers	Guidance and case studies for the creation of regulatory and market frameworks for green bond issuance	Guidance and case studies for the creation of regulatory and market frameworks for green bond issuance
3	Good practices in the use of independent external review And Good practices and case studies of innovation in green bond issuance	How to integrate environmental, social and governance (ESG) risk and impact assessment at all stages of issuance and project implementation	How to integrate environmental, social and governance (ESG) risk and impact assessment at all stages of issuance and project implementation

IFC and the World Bank are already working with regulators to develop green and social bond guidelines, as well as with first-time green bond issuers by supporting them through the process or acting as a cornerstone investor and helping financial institutions develop a pipeline of eligible green assets.

The potential to partner with academic institutions to build e-training tools and certified trainings is also being explored. For instance, this is one of the ways that the IFC-Amundi Planet Emerging Green One (EGO) fund will seek to build capacity in emerging markets around green bond issuance<sup>29</sup>.

The following table provides an overview of existing efforts by international institutions and related initiatives to support regulators, financial institutions, stock exchanges, banking associations and other market players in emerging markets to issue green, social and sustainability bonds and guidelines. It provides a useful reference for SBN members seeking technical support and capacity building. It will also be used in the next phase of the SBN Green Bond Working Group efforts to identify and develop additional capacity building and technical resources.

<sup>29</sup> In March 2018, IFC and Amundi, Europe's largest asset manager, announced the successful launch of the world's largest targeted green bond fund focused on emerging markets, the Amundi Planet Emerging Green One (EGO). The fund, which closed at \$1.42 billion, is expected to deploy \$2 billion into emerging markets green bonds over its lifetime, as proceeds are reinvested during 7 years. With a \$256 million cornerstone commitment from IFC, the fund aims to increase the capacity of emerging market banks to fund climate-smart investments.

## Overview of Training and Capacity Building currently being offered and planned by international institutions

Institution	Offering	Target audience	Format	Experience
IFC and World Bank (World Bank Group)	Introductory workshops and technical assistance	Regulators, central banks, banking associations, stock exchanges, financial institutions	As a leading investor and issuer in green bonds, IFC is also working actively with local market players in a number of emerging markets to build capacity and support local issuances. Workshops and technical assistance are tailored to meet the needs of individual countries and institutions.	<p><b>Development of national green bond guidelines:</b> IFC and World Bank teams have provided direct support to regulators and capital markets authorities in Malaysia, Morocco, Egypt, Indonesia, Lebanon and Jordan to develop national guidelines and promote green bond markets.</p> <p><b>Support to issue sovereign green bonds:</b> IFC and World Bank teams supported Fiji to issue the first sovereign green bond by an emerging market in October 2017.</p> <p>Support to financial institutions to issue green, social and <b>sustainability bonds:</b> when IFC's Financial Institution Group clients issue bonds, IFC provides support using the CAFI (Climate Assessment for FI Investments) Tool which helps track impact at portfolio level.</p>
IFC/Amundi	Training to be delivered as part of the IFC/Amundi Planet Emerging Green One (EGO) fund	Financial Institutions	The IFC-Amundi approach to deploy training programs will be market driven to “create and accelerate the growth of the green bond asset class in emerging markets”. Priority countries will be selected and training delivered to selected FIs and other stakeholders to achieve the program’s ultimate goal: to create demonstration effects and accumulate and disseminate lessons learned.	A first training curriculum is under preparation and will focus on green buildings and green bonds. It is expected to be delivered first in Asia where, due to growth trends in GDP and urbanization, there is a vast potential to build new green buildings and refurbish existing ones to make them more energy efficient and reduce their carbon footprint. Green bonds can accelerate this transition by efficiently raising funding via capital markets solutions.
International Capital Markets Association (ICMA)	Introduction to green bonds, and support in the development of national frameworks	Full range of market professionals including issuers, intermediaries, investors, external reviewers (verifiers), service and infrastructure providers, regulators, and banking associations	1-2 day in-person workshop giving comprehensive intro to market and regulatory essentials: market context, benefits of green bonds, strategy for issuers, green definitions, market governance & regulation, external reviews, reporting and buy-side strategies. Includes wide-range of case studies, and participation of market practitioners that share their experience.	<p><b>Training:</b> Launched Q1 2018; frequency on average every 2 months; builds on 40 years of executive education experience in debt capital markets, where ICMA is market leader; supported by e-learning platform and accreditation systems, in-country testing, and translation of materials in many languages; best done in combination with in-person support. Complemented by a foundation module on debt capital markets.</p> <p><b>Advice on the development of frameworks:</b> GBP ExCom representatives and ICMA have regularly offered advice to those developing national and regional frameworks for green bond issuance, including initiatives in China, other parts of Asia, and in Latin America and the Middle East. The GBP’s New Markets Taskforce has commented on draft frameworks from a range of authorities and other developers of frameworks, such as banking associations, on a confidential and pro-bono basis.</p>

Climate Bonds Initiative (CBI)	Green Bond Bootcamp, training workshops and technical assistance	Potential issuers, investors, verifiers, regulators, underwriters, service providers and other market professionals	<p><b>Bootcamp:</b> 1.5 day in-person introduction to green bonds and good practice cases, including green bond basics, market and policy global trends, green definitions, Climate Bonds Standard &amp; Certification Scheme.</p> <p><b>Workshops:</b> Targeted workshops carried out by CBI staff with issuers, verifiers, investors and regulators separately.</p> <p><b>Verifier roundtables:</b> Ongoing training in the form of in-person and virtual roundtables for verifiers approved under the Climate Bonds Standard &amp; Certification Scheme.</p> <p><b>Technical assistance:</b> Technical assistance for issuers and regulators</p>	<p>The <b>Bootcamp</b> was launched in 2018 in New York. Other iterations are being explored for Stockholm, Hong Kong, London and Paris</p> <p><b>Workshops</b> are held throughout the year as part of Market Development Programmes launched by CBI. Active programmes are in Kenya, Nigeria, Brazil, India and China.</p> <p>Training of trainers or internal staff training for interested institutions can also be carried out.</p> <p><b>Verifier trainings</b> are held throughout the year by the Climate Bonds Certification team to train new and existing verifiers on updates to the Standard and Sector Criteria as they become available.</p> <p><b>Technical assistance</b> is provided to issuers to support them with the identification of eligible green projects. Technical assistance for regulators to develop green bond guidelines and advise on incentives.</p>
GIZ/SEB	Capacity building workshops (program completed)	Potential issuers, investors, verifiers, regulators, underwriters	<p>Focus on green definitions and advice for first movers in the market</p>	<p>Workshops on <b>Definitions, Selection &amp; Verification</b> were held in China, Mexico and Brazil</p>
UNEP FI, with support of Frankfurt School, CICERO, CBI, and PAGE <sup>30</sup> partners	Green Bonds Training	Investors, issuers, verifiers and other market professionals	<p>Topics include strategic benefits, global developments, green definitions and verification for green bonds and green loans, how to issue and lessons learnt</p>	<p><b>2-day workshop:</b> launched in Mauritius in 2018; introduction on day 1 and stakeholder-specific sessions on day 2; needs assessment conducted before delivering the training. There is an opportunity to develop a roadmap to assist participants in next steps.</p> <p><b>E-learning:</b> being developed by UNITAR and PAGE with other partners including GIZ, CBI, UNEP FI and IFC.</p>
IFC / IE Business School	Green Banking Academy (program recently launched)	Bank CEOs and Senior management	<p>IFC has joined efforts with IE Business School to develop and conduct a Certificate in Green Banking focused on financial institutions in Latin America and the Caribbean.</p>	<p>IFC is a leader in climate finance within the banking sector and IE Business School is a leading global academic provider. The curriculum will provide bank staff with foundational knowledge about climate finance in the context of the banking sector, including topics on capital markets and green bonds.</p>

<sup>30</sup> PAGE is a partnership between UN Environment, ILO, UNITAR, UNIDO, and UNDP to support countries' inclusive green economy initiatives by providing policy advice, assessment and evaluation tools with the aim to put sustainability at the heart of economic policymaking.

## 6. Conclusion: A Green Bond Market Development Toolkit for SBN Members

The research has confirmed that green bond guidance, in the form of regulation, listing requirements, or voluntary guidelines, is an important first step in developing green bond markets. Clarity of rules provides issuers and investors with the tools to come to market in an effective manner. Aligning with international standards and leveraging the experiences of others can help develop rules that at the same time provide market integrity and allow flexibility for issuers. The external review has been cited as a key element of this approach.

Greater guidance on definitions and tools to assess the “greenness” of portfolios will be required as markets develop and fund more assets outside well-known sectors such as renewable energy and low-carbon transport. Where these definitions are being developed, such as in China, we are seeing signals of convergence towards common cross-border standards. Other efforts, such as the development of the European taxonomy for sustainable activities and the ISO green bond working group, are also expected to contribute to the harmonization of the market by setting useful benchmarks.

Further guidance around other thematic bonds, including social and sustainability, is expected to emerge, including for bonds that are specifically aligned to the Sustainable Development Goals (SDGs).

### 6.1 Common objectives for developing green bond markets

SBN country experiences point to a set of Common Objectives that can help countries avoid pitfalls and navigate the development of green bond guidance and other market components. These objectives support a move towards cross-border harmonization of green bond definitions and approaches, while respecting local market conditions.

#### Common Objectives for Developing Green Bond Markets:

- 1) **Alignment:** Aligning with international good practices, learning from peers, and developing common approaches, such as through regional collaboration, are ways that SBN members are leapfrogging and accelerating local green bond market development. Alignment with other jurisdictions also enables cross-border issuance and investment.

- 2) **Quality:** Market integrity and credibility are key components of green bond markets. Guidance should therefore include mechanisms for ensuring quality. For instance, external reviews from experienced and credible entities limit the risk of “greenwashing” and provide investors with assurance around the green credentials of the bonds and the governance around the management of proceeds. Likewise, the need for issuers to apply good international industry practice in managing broader ESG risks of all assets is seen as essential.
- 3) **Flexibility:** Local market conditions must be accounted for and local market players should be involved in the design of appropriate national guidance. Countries may choose to adopt either a principles-based approach or more stringent regulation depending on market maturity and local interest in green bond issuance. A phased approach may be suitable for many. Similarly, different markets may focus on different types of issuers, investors and projects to help drive the market initially, and some jurisdictions may choose to offer incentives where appropriate.
- 4) **Harmonization:** SBN members have noted the value of harmonizing where possible with global definitions of “green”, “social” and “sustainability” bonds and assets. The variety of green and social assets and projects may continue to differ at national level due to local market conditions, industries, and national sustainable development strategies. However, use of global definitions and common categories, as well as reference to global standards for what qualifies as green projects and sectors, will build the credibility of bonds among international investors.

## 6.2 Self-assessment and planning matrix for developing green bond markets

The country experiences captured in this report also point to typical phases in the development of green bond markets, with specific interventions identified at each stage. The table below captures these commonalities and can be used by regulators to self-assess their country’s stage of green bond market development and to plan the next steps needed. The actions in each phase do not necessarily need to occur simultaneously through the four market development components.

Self-Assessment and Planning Matrix			
	Phase 1	Phase 2	Phase 3
<b>Market infrastructure</b>	Review current debt capital market structure for bonds and its readiness/suitability for green bond growth	Develop supporting market infrastructure (index, dedicated exchange segment)	Organise an international investor roadshow to present the domestic green bond pipeline
<b>Guidance</b>	Initiate dialogue with domestic market players to consider and, if appropriate, develop national guidelines, aligned with international practices	Convene a Market Development Council with relevant capital market institutions to propose and consult on policy recommendations	Consider incentives as appropriate (grants for external reviews, tax exemptions)
<b>Issuance</b>	Assess readiness and opportunities for green bond issuance	Build demand side through engagement with local investors. Potentially deliver a Green Bond Statement from domestic investors and convene forums with selected potential issuers	Engineer demonstration issuances: such as sovereign, municipal, financial institution, and/or corporate bonds
<b>Capacity building</b>	Set up a promotional campaign to engage market professionals	Set up, partner and deliver training programs for issuers, investors, verifiers and regulators	Consider accreditation schemes for training programs, as well as dedicated training incentives for industry professionals

### 6.3 Roadmap with common milestones for developing green bond markets

Working Group members expressed particular interest in the possibility of developing a common roadmap that members can use as a reference when developing their own strategies and approaches.

The diagram below sets out a typical roadmap with milestones and a possible sequence. The roadmap gives countries starting the journey a sense of what lies ahead and lessons that can be drawn from the experiences of others. The milestones can be achieved in a different order depending on the drivers and market development strategy in place.

**Figure 13: Roadmap with common milestones for developing green bond markets**



## 6.4 Capacity building needs assessment and mapping of existing international resources

The research captures different types of capacity building needed by SBN members and other market players. The findings will help to prioritize the topics to be covered, the best channels for delivering support, and the institutions that need assistance.

SBN members have identified the following priorities for the second phase of the Green Bond Working Group:

- Sharing country experiences.
- Developing practical tools and guidance.
- Providing capacity building.

Financial institutions are identified as the primary entities in need of training. While corporates have been active in coming to market, banks seem to be struggling with identifying eligible portfolios and recognising the opportunity of issuing green bonds.

Preferred training topics include

- developing green pipelines and preparing issuers.
- integrating ESG risks and impact assessments in the issuance stages.

For countries that are yet to develop markets, priority topics include capacity building within regulatory agencies, and guidance and case studies on how to develop regulatory frameworks for

green bond issuance. Preferred methods of engagement are conferences and workshops, followed by case studies and e-learning.

Challenges identified by this research and consultation with SBN members has led to the design of a Green Bond Market Development Toolkit to help countries take actions and monitor progress with a consistent approach and milestones.

The SBN Green Bond Working Group will build on the Toolkit and consider the research results in defining the tools to be developed in the next phase of work.

The following are tools already identified as priorities by the Working Group:

- o Good practice in integrating ESG risk and impact assessment.
- o Transparency and reporting on green bond performance and impacts.
- o Good practice in the use of independent external review.
- o Research on good practices, case studies, and innovation.

It is expected that the next 5 years will see continued market-based actions with policy leadership among emerging markets in the development of national guidance and enabling frameworks for green bond issuance. Country progress will be systematically tracked and assessed through the annual SBN Global and Country Progress Reports ([www.ifc.org/sbnreport](http://www.ifc.org/sbnreport)).

SBN member institutions are sharing and building on their collective experience in leading sustainable finance policy reform. They have shown again that it is possible to unite a wide array of countries in support of sustainable finance, in this case to accelerate green bond market development with a collective ambition and a consistent approach.



## Annex I: Green Bond Guidance Documents

- ASEAN Capital Markets Forum. (2017). ASEAN Green Bond Standards. Available online, at: [http://www.theacmf.org/ACMF/upload/ASEAN\\_Green\\_Bond\\_Standards.pdf](http://www.theacmf.org/ACMF/upload/ASEAN_Green_Bond_Standards.pdf)
- Autorité Marocaine du Marché des Capitaux. (2016). Green Bonds Guidelines. Available online, at: <http://www.ammc.ma/en/publications/green-bonds-guidelines>
- Bolsa de Comercio de Santiago. (2018). Green and Social Bonds Segment Guide. Available online, at: <http://inter.bolsadesantiago.com/sitios/en/actores/Paginas/Green-and-Social-Bonds.aspx>
- Bolsa de Valores de Lima. (2018). Green Bonds Guidance for Peru. Available online, at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/703502/27-04\\_GUIA\\_PERU\\_MX2\\_FINAL.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/703502/27-04_GUIA_PERU_MX2_FINAL.pdf)
- China Securities Regulatory Commission. (2017). Notice on the Launch of Green Corporate Bond Pilot Scheme. Available online, at: [http://www.sse.com.cn/lawandrules/sserules/listing/bond/c/c\\_20160316\\_4058800.shtml](http://www.sse.com.cn/lawandrules/sserules/listing/bond/c/c_20160316_4058800.shtml)
- China Securities Regulatory Commission. (2017). Guidance on Supporting the Development of Green Bonds. Available online, at: [http://www.csrc.gov.cn/pub/newsite/flb/flfg/bmgf/fx/gszj/201805/t20180515\\_338154.html](http://www.csrc.gov.cn/pub/newsite/flb/flfg/bmgf/fx/gszj/201805/t20180515_338154.html)
- Consejo Consultivo de Finanzas Climáticas. (2018). Green Bond Principles MX. Available online, at: [https://www.bmv.com.mx/docs-pub/MI\\_EMPRESA\\_EN\\_BOLSA/CTEN\\_MINGE/GREEN\\_BONDS\\_PRIN\\_MX2.pdf](https://www.bmv.com.mx/docs-pub/MI_EMPRESA_EN_BOLSA/CTEN_MINGE/GREEN_BONDS_PRIN_MX2.pdf)
- Febraban. (2016). Guidelines for Issuing Green Bonds in Brazil. Available online, at: <https://portal.febraban.org.br/pagina/3188/52/en-us/guidelines-issuing-green-bonds>
- Grupo BMV. (2016). Guidelines for Listing Green Bonds. Available online, at: [https://www.bmv.com.mx/docs-pub/MI\\_EMPRESA\\_EN\\_BOLSA/CTEN\\_MINGE/BONOS%20VERDES\\_cambios\\_2018.pdf](https://www.bmv.com.mx/docs-pub/MI_EMPRESA_EN_BOLSA/CTEN_MINGE/BONOS%20VERDES_cambios_2018.pdf)
- Johannesburg Stock Exchange. (2017). JSE Debt Listing Requirements. Available online, at: <https://www.jse.co.za/content/JSERulesPoliciesandRegulationItems/JSE%20Debt%20Listings%20Requirements%20Service%20Issue%2025.pdf>
- National Association of Financial Market Institutional Investors. (2017). Guidelines for Green Debt Financing Instruments from Non-Financial Corporates. Available online, at: [http://www.nafmii.org.cn/ggtz/gg/201703/t20170322\\_60431.html](http://www.nafmii.org.cn/ggtz/gg/201703/t20170322_60431.html)
- National Development and Reform Commission. (2015). Guidelines for the Issuance of Green Bonds. Available online, at: [http://www.ndrc.gov.cn/zcfb/zcfbtz/201601/t20160108\\_770871.html](http://www.ndrc.gov.cn/zcfb/zcfbtz/201601/t20160108_770871.html)

- Otoritas Jasa Keuangan. (2017). Regulation of Issuance and Requirements of Environmental Debt (Green Bonds). Available online, at: <https://www.ojk.go.id/id/regulasi/otoritas-jasa-keuangan/rancangan-regulasi/Documents/RPOJK%20Green%20Bond%206%20Sept%202017.pdf#search=green%20bond>
- People's Bank of China. (2015). The People's Bank of China Announcement No. 39. Available online, at: <http://www.pbc.gov.cn/tiaofasi/144941/144959/2993398/index.html>
- People's Bank of China and China Securities Regulatory Commission. (2017). Green Bond Assessment and Verification Guidelines (Provisional). Available online, at: <http://www.pbc.gov.cn/goutongjiaoliu/113456/113469/3449947/index.html>
- People's Bank of China. (2015). Notice on Strengthening the Supervision and Management of Green Financial Bonds During Bond Tenor. Available online, at: <http://www.pbc.gov.cn/zhengwugongkai/127924/128038/128109/3493704/index.html>
- Securities and Exchange Board of India. (2017). Disclosure Requirements for Issuance and Listing of Green Debt Securities. Available online, at: [https://www.sebi.gov.in/legal/circulars/may-2017/disclosure-requirements-for-issuance-and-listing-of-green-debt-securities\\_34988.html](https://www.sebi.gov.in/legal/circulars/may-2017/disclosure-requirements-for-issuance-and-listing-of-green-debt-securities_34988.html).



Access SBN knowledge resources at:  
[www.ifc.org/sbn](http://www.ifc.org/sbn)

Access this report at:  
[www.ifc.org/sbngreenbond](http://www.ifc.org/sbngreenbond)



DONORS

