



ROAD MAP:
Actions for Setting a

Green Bond Market^{leaf} in Colombia

in association with



Ecología, Economía y Ética
ASESORÍAS

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Climate Bonds INITIATIVE





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This Road Map has been drafted to help the Colombian Government and, particularly, the Finance Management Committee of SISCLIMA (the National System for Climate Change) consisting of a number of entities and headed by the National Planning Department (www.finanzasdelclima.co), to understand the potential of green bonds as vehicles for funding programs and projects boosting green growth and climate-compatible development in Colombia, and pursue actions conducive for the development of a successful green bond market in Colombia.

Collectively, E3-Ecología, Economía y Ética, Metrix Finanzas, in association with PwC-UK and Climate Bonds Initiative (CBI) prepared this document coordinated and edited by E3-Ecología, Economía y Ética and funded by the Climate & Development Knowledge Network (CDKN).

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1

PRESENTATION

At present, Colombia is formulating policies and strategies conducive for a transition towards a green and low-carbon economy

Green growth has been included as one of the goals set under the National Development Plan and, today, there is a Mission for Green Growth that seeks outlining steps to consolidate the transformations required in the country regarding sustainable development, by identifying necessary goals, policies and strategies consistent with global agendas on sustainable development and the Paris Agreement.

Large monetary investments required to achieve the transformation into green and inclusive development

There are no comprehensive estimates on the costs involved in the transition towards green economy, as these depend on targets set under policies and strategies outlined by the Mission for Green Growth. However, the country made progress on assessing estimate costs of domestic contributions for the Paris Agreement; as a result, boosting green projects in various areas, with the aim of attaining dynamics and cash flow levels as needed, requires involvement by economic, political and social players. Use of innovative tools such as green bonds is significantly important to achieve an in-depth involvement of the capital market.

Setting and enhancing the green bond market demands implementing a series of tools and promoting dynamics suitable to remove barriers that hinder the achievement of this goal

In an endeavor supported by international development banks, by the end of 2016, Bancolombia made the first issuance of green bonds in the country. Thereafter, in April 2017, Davivienda resorted to the same mechanism and framework used by Bancolombia. For allowing the country to have more than two successful cases and a strong market, it is required to set a number of tools identifying the market bases and under-

pinning the next stage, that is, the dynamic and sustained growth of green bond issuances. This Road Map sets forth a number of actions to identify such bases and boost strategies beneficial for the growth of green bond markets.

This Road Map is the second of a series of three documents prepared by E3–Economía, Ecología y Ética, and METRIX–Finanzas, in association with PwC UK and Climate Bonds Initiative, on the development of a green bond market in Colombia

Such documents are intended to assist the Colombian government and other entities interested in issuing green bonds, in understanding the potential of such tool; to that effect, were prepared the documents “Assessment of Potentialities for a Successful Green Bond Market in Colombia” and “Theoretical Case Study for the Issuance of Green Bonds”. Together with this Road Map, the cited papers aim at motivating both public and private entities to explore prospective issuances of bonds beneficial for green programs and projects in Colombia.

Structure of the Document

Chapter 3 contains a briefing on the current perspectives for the market development.

Chapter 4 describes the main challenges and barriers for setting the market in the country.

Chapter 5 sets out actions provided under the Road Map to identify the market foundations and promote strategies for a strong and sustained growth of the green bond market in Colombia.

2

EXECUTIVE SUMMARY

Current Overview for the Market Development

Colombia encourages green growth and climate change policies to create a favorable environment for making investments as required for the transition. Today, it is well known that between 2011 and 2013, major climate-change related investments mostly originate from the public sector for amounts bordering 1,4 and 2,1 billion pesos per year.¹ It is expected that National Determined Contributions (NDCs) of near 57,8 billion pesos will be required by 2030 for mitigating greenhouse gas effects, accounting for an investment of near 3,18 billion pesos per year.² The National Planning Department (NPD) estimates that, in the long run, 62% of such investments should originate from the private sector, and 38% from the public sector, evidencing the significance of engaging the private sector. No estimates are yet available as to possible costs for the transition towards green economy, as these depend on targets set under green growth policies, whereas climate change is just a part of the priority areas.

Moreover, compared to other Latin American countries, the Colombian bond market remains underdeveloped, being the National Government the leading issuer³ (82,9% of the country’s debt market). Said underdevelopment is due to aspects such as high concentration of issuers and limited appetite among investors. The first, derived from increasing costs associated to issuances, against those associated to bank credits; the second, due to the fact that institutional investors in Colombia are few and their investments are strongly regulated; the foregoing discourages risk-taking. Despite the appetite for ordinary bonds, in light of the returns required by applicable regulations, these should be securities rated not below AA+. The above, limits the access to funding through capital markets for companies not having such credit rating, and tightens the

¹ Executive Summary of the Diagnosis on Financial Sources and Needs, Colombian Strategy for Climate Financing, SISCLIMA Finance Management Committee, CDKN and Econometria Consultores, 2016. Page 7. Available in: http://www.finanzasdelclima.co/Documentos/Julio2016/ANEXO_1_DIAGNOSTICO_DE_NECESIDADES.pdf

² Estimates produced in the framework of the 2016 Finanzas del Clima event. Such estimates are not yet official.

³ Source: Banco de la República, Public Debt Report, December de 2016 and Bolsa de Valores de Colombia.

market liquidity. In particular, for issuing green bonds, passing special regulations is not required because the existing framework is suitable to develop said individual segment of the capital market; however, it must be kept in mind that green bonds are expected to operate, at least in domestic markets, subject to the same barriers provided for ordinary bonds.

Colombia has in place a number of tax incentives for environment-related investments and, recently, tax incentives were approved for non-conventional renewable energies. Project developers are entitled to VAT and income tax reductions on investments qualified for rebate. Likewise, there are 30% to 15% source withholding deductions on foreign investments lasting more than one year; all such deductions must be broadly disclosed among foreign investors on green bonds.

The potential of green portfolios was considered in the framework of in three types of entities, to wit: companies from the real sector; cities and provinces; and, national development banks. Essentially, the review refers to entities with authority to issue green bonds, as they own assets matching the Climate Bonds Standard (CBS) and have financial conditions that allow forecasting ratings above AA+, or likewise rated with respect to ordinary bond issuances. Findings indicate that the average size of such entities' portfolio exceeds US 50 million and, those already issuing ordinary bonds may consider the possibility of labeling such issuances as green, backed on qualifying assets and projects.

Barriers and Challenges for Creating and Expanding the Green Bond Market

The following barriers were identified for the creation of a green bond market in Colombia: (1) poor comprehension and awareness among different players in the market and the existence of only two exemplary cases (Bancolombia and Davivienda); (2) although progress has been made in describing the typology of climate change projects, a definition of green investments for the country, including categories and subcategories, is still pending. Such a definition should be in line with green growth policies and NDCs. Additionally, in order to attract foreign and domestic investors, it is required to harmonize project types included in standards and frameworks globally recognized and used to identify green bonds, with project types defined under domestic policies on climate change and green growth; (3) continued identification of green portfolios is needed to guarantee the market supply; (4) there are tax incentives on environmental and non-conventional renewable energy investments, bearing in mind that these only apply to restricted investment categories. Following the formulation of a green growth policy, the type of investments to be promoted and the regulations applicable to tax incentives should be consistent. Likewise, it was determined that approval procedures may be lengthy and cumbersome; (5) governance for boosting the market requires that all concerned players are duly represented, insofar as, to date, there has been no involvement by investors, the real sector, capital market regulators, Bolsa de Valores de Colombia or other associations and guilds qualified to convey knowledge on the matter; (6) domestic verifier organizations are not acquainted with standards and methodologies to label bonds as green bonds and, therefore, resorting to international services would increase transaction costs; (7) there are no mechanisms to follow-up and monitor green investments, nor a definition of standard indicators per project typology, a key aspect for reporting to investors; (8) it is required to disclose modalities for managing funds raised under bond issuances, as well as methodologies to transparently follow-up monetary transactions reported to investors; (9) ensure that innovative funding vehicles additional to green bonds are available in the long run, as this preferential tool is preferably used for asset refinancing.

Barriers and Challenges Affecting Capital Markets

As stated above, green bonds, like ordinary bonds, face barriers originating in the Colombian capital market. Main barriers include: (1) liquidity imbalances in the Colombian banking market, entailing limited devel-

opment of the country's debt market; (2) increased issuance costs and cumbersome procedures, even for recurrent issuers and issuances in the primary market, in spite of the streamline introduced by the Government in the past two years; (3) the concentrated demand for securities rated above AA+; (4) currency-related risks for foreign investors; (5) poor liquidity in the secondary market, making price formation and availability of securities for investors, rather difficult.

Core Actions under the Road Map

Phase I: Lay the foundations for a green bond market: (1) actions relate to capacity-building among players in the market and appropriate disclosure to foster comprehension of the matter; (2) set guidelines to define green projects and related portfolios; (3) define and include guidelines on how to manage raised funds and reporting for investors; (4) continually support the development of green portfolios; (5) have in place a data platform on green bonds, at Finanzas del Clima; (6) set continued disclosure strategies for reporting progresses made; (7) set guidelines on project monitoring and follow-up. Identify simple quantitative or qualitative indicators per project typology; (8) ensure the development of innovative financial tools complementary to green bonds.

Phase II: Expand the market: (1) reliance on exemplary cases of issuances involving different issuers and investors; (2) promote the market of currency swaps, jointly with financial agents; (3) open alternative funds to promote the issuance of bonds rated below AA+; (4) promote the demand of bonds from the secondary market, through additional regulations smoothing existing restrictions on the management of financial entities' portfolios.

3

CURRENT SCENARIO FOR THE MARKET DEVELOPMENT

As an antecedent for the actions proposed under the Road Map, this Chapter outlines the existing scenario in Colombia for building the green bond market; it describes the current policy and investment framework for a transition towards green economy, the country conditions of the bond market, the enabling conditions, and an initial review on the potential of green portfolios in the country.

3.1 Policy and Investment Framework for a Transition Towards Green Economy

The country's policy framework and international commitments ensure the transition towards green and climate-compatible development. Colombia is committed to promote green growth as part of its development plan, in line with the expected accession of Colombia to the OECD. To that effect, Colombia is leading a Mission for Green Growth that prioritizes capabilities for adaptation to climate change, land productivity, natural resources preservation, land productivity and quality, and renewable energies. Likewise, the country has also set long-term goals to address climate change, reflecting the National Determined Contributions (NDCs, its English acronym) provided in the Paris Agreement, and has also undertaken commitments concerning global agendas on sustainable development.

Issues relating to climate change management have been strongly encouraged in terms of institutional policy and development. SISCLIMA is intended as governance framework for climate management and sets out different strategies and plans supporting national policies on climate change: National Plan for Adaptation to Climate Change; Colombian Strategy for Low-Carbon Development; National Strategy for Reducing Emissions from Deforestation and Forest Degradation (REDD+); Disaster Risk Financing Strategies; Colombian country Law ratifying the Paris Agreement on climate change; restrictions on the use of plastic bags (Resolution 668/2016); and, carbon taxes provided in Law 1819/2016. The REDD+ National Strategy covers the initiative known as *Visión Amazonía*, a voluntary country commitment aimed at reaching zero-deforestation in the Colombian Amazonia by 2020.

Colombia's transition towards a green and climate-compatible economy requires large capital investments. Colombian economy is highly dependent on the exploitation of natural resources, particularly, non-renewable (DNP - Global Green Growth Institute, 2017). Although such activities have considerably improved social indicators (Semana Sostenible, 2017), it is clear that recent extreme weather events and the communities' strong resistance to such extractive projects prove the model's limitations. On one hand, the country has fostered certain dynamics for urban sustainable growth, involving more cities in green projects and climate change issues, every day. While Colombia's matrix for power generation is essentially based on hydropower, the challenge on future water management as a result of climate change led to consider sources diversification towards non-conventional renewable energies and energy efficiency.

Both people and infrastructure have been badly hit by extreme weather events, that made local authorities aware of new levels of risks derived from climate change. Agriculture in Colombia is being impacted by water scarcity and floods in different regions of the country; this has led to increases in irrigation and drainage investments and the adoption of mechanisms for adapting plantations to temperature variations. All these dynamics promote green investment in Colombia.

Today, no estimates have been disclosed on possible costs the country should bear to achieve green growth targets, as the latter will be determined upon formulation of policies, strategies and reforms by the National Government; estimates have been made on the grounds of the Paris Agreement with regard to investments needed to implement mitigation-related national contributions, accounting for some 57.8 billion pesos by 2030, that is, an investment of near 3.18 billion pesos per year.⁴ Additionally, those financial needs associated to the four strategies contemplated under the national policy on climate change⁵ account for numbers ranging between 0.08% and 0.29% of the total country GDP, by 2020, while those numbers may increase between 0.43% and 0.98% by 2025.⁶

It is well known that, today, large investments devoted to climate change related issues mainly originate from the public sector in magnitudes of near 1.4 and 2.1 billion pesos per year, between 2011-2013⁷. The NPD concluded that, in the long run, 62% of such investments should originate from the private sector and 38% from the public sector, proving the importance of the private sector involvement.

3.2 Particulars of the Colombian Bond Market

The Colombian bond market is relatively undeveloped and the National Government is the main issuer.

The bond market in Colombia only accounts for 6% of the GDP, compared to the 34% average in leading Latin American economies. (Santamaria, 2015). It is important to bear in mind that the largest issuer of bonds is the National Government, through public debt securities (TESs) for funding the National Treasury, equivalent to 82.9% of the country's debt market.⁸ Moreover, concerning private debt, that is, debt issued by private entities, the largest issuer is the financial sector, which between 2010-2015 issued 73% of the period debt, while the real sector issued the remaining 27%. Some of the reasons why the market of private bonds is essentially centered on the financial sector, include facilities available to the real sector for obtaining bank

⁴ Estimate figures produced in the context of the 2016 Climate Financing meeting; such an estimate is not yet an official figure.

⁵ National Plan for Adaptation to Climate Change; Colombian Strategy for Low-carbon Development; National Strategy for REDD+, and Disaster Risk Financing Strategy.

⁶ Executive Summary of the Diagnosis on Financial Sources and Needs, Colombian Strategy for Climate Financing, SISCLIMA Finance Management Committee, CDKN and Econometria Consultores, 2016. Page 4. Available in: http://www.finanzasdelclima.co/Documentos/Julio2016/ANEXO_1_DIAGNOSTICO_DE_NECESIDADES.pdf

⁷ Idem

⁸ Source: Banco de la República, Public Debt Report, December 2016 and Bolsa de Valores de Colombia.

sector funding in the medium term. Additionally, accessing the capital market by companies from the real sector involves additional costs, extended issuance deadlines and, a limited number of investors, thus, deterring their participation in the market. The banking sector's high liquidity, added to the mentioned aspects of capital markets, hinder complementarity between those two sectors.

Finally, the debt market in Colombia is relatively underdeveloped due to the high concentration of issuers and the limited appetite of investors. Firstly, as a result of high costs associated to given issuances, compared with bank credits; and, secondly, due to the fact that institutional investors in Colombia are few and their investments are regulated, thus deterring risk-taking. The above explains why the Government has taken regulatory measures mainly devoted to recurrent issuers; likewise, the Government has defined actions to follow in order to promote the development of the capital market. The existence of regulations concerning issuance of bonds must be emphasized, in the sense that there is no need to elaborate further standards for green bonds.

Potential investors on green bonds include national Pension and Severance Funds and international investors willing to make green investments. Core investors in Colombia are Pension and Severance Funds, (i.e., four permitted funds). Such funds invest 13% of their portfolio on bonds issued by the real and financial sectors, and 35% on TESs.⁹ On the other hand, investment portfolios of fiduciary companies consist of 6% of private debt securities¹⁰ – either financial or from real sector or multilateral agencies. Despite the appetite for ordinary bonds, given the returns required under applicable regulations, they seek bonds rated above AA+. The foregoing bars the access to capital market financing for companies not having said level of rating, while restricting the market's liquidity and giving rise to a vicious circle that holds back the development of the private debt market in the country.

The share of private debt bonds in both mandatory and voluntary pension funds is 2% of the entire portfolio, and that of financial sector bonds, is 11%. This accounts for a total amount of \$27,633 million pesos by December 2016.¹¹ Since then, investors' portfolios allow transfers to the potential market of green bonds.

Internationally, there is a wide base of investors specialized in green bonds, whose expectations – other than returns and credit ratings – deal with the issuance's conformity with international standards, high level of transparency endorsed by verifier agents and disclosure of investment-related environmental impacts. International investors are not willing to assume currency-related risks on domestic currency issuances and require high credit ratings. Colombia's profiles of ordinary bonds issuances bear ratings higher than most Latin American countries, even though such issuances' size is smaller than the average.

There are few issuers of ordinary bonds in the financial and real sectors, but territorial entities may potentially make issuances. Excluding Colombian public debt devoted to fund the national treasury, represented in TESs, in 2010–2015 the financial sector had almost the same number of issuers (22 financial institutions) as the real sector (21 companies).¹² Commonly, in such two sectors (i.e., financial and real) recurrent issuers are rated AA+ or AAA, and their issuances are mainly purchased by pension funds and insurance companies. In the real sector, there are recurrent issuers in major entities with high financial strength, such as *Cementos Argos, Emgesa, EPM, Codensa and Terpel*.

There is a series of companies, cities and provinces in Colombia that, in spite of having sound financial profiles and green portfolios, do not issue this type of instruments in view of the lengthy procedures and high costs inherent thereto. Nevertheless, such companies and territorial entities are potentially entitled to make green bond issuances in the future. Some companies and territorial entities identified include, among others, *Ingenio Incauca, Ingenio Providencia, Grupo Daabon – CI Biocosta, Ingenio Risaralda, Ingenio Ma-*

⁹ Finance Superintendence

¹⁰ Idem.

¹¹ Idem.

¹² Finance Superintendence

yagüez, Alpina, the Municipalities of Barranquilla and Bucaramanga, the Provinces of Atlántico, Antioquia, Cundinamarca, Santander, and Bogotá D.C.

3.3 Enabling Conditions for the Market and the Green Portfolios Potential

No regulatory, policy or tax barriers entailing significant hindrance for the market have been identified.

Tax setoffs on environment investments and reduced tax rates for foreign investors promote the development of a green bond market. Regarding setoffs provided under environmental and non-conventional renewable energy regulations, there is room for improving enforcement and access. This is a common claim made by those willing to enforce the same, as they see excessive formalities and lack of definition concerning typologies and investments subject to VAT (Value Added Tax) and income tax deductions. Regulations to reduce source withholding on foreign investments hosted in the country for more than one year should enjoy greater international diffusion.

Colombia may benefit from the presence of institutions pertaining to the financial market, in particular, banks and credit rating agencies which rely on comprehensive know-how and expertise on green bond matters. However, such know-how is available among such banks' and agencies' international staff, rather than among human resources in Colombia. Development of a green bond market in the country requires a rapid transfer of know-how and skills to domestic staff, promptly after the green bond market shows initial signs of progress. Entities should be encouraged to be more committed towards awareness and development of the market.

The base of green assets and green projects likely to integrate green portfolios in companies from the real sector, cities, provinces and domestic development banks, has been identified. The identification of green portfolios under the document headed "Assessment of Potentialities for a Successful Green Bond Market in Colombia" resulted in positive outcomes for Colombia's potential in reviewed cities and provinces.¹³ From the analysis of four main cities (Bogotá D.C., Medellín, Barranquilla and Bucaramanga) and four provinces in Colombia (Cundinamarca, Antioquia, Atlántico and Santander) it is concluded that major green assets have been installed and are planned to be installed in forthcoming years, as a result of the adoption of sustainable urban development policies to underpin environment and climate change issues. The foregoing does not imply that other cities in Colombia have no potential; rather, it means that, in light of the quality and size of their portfolios and sound financial condition, such territorial entities may issue green bonds on individual basis. Furthermore, some of the cities and provinces considered make or have made green bond issuances.

In selected cities¹⁴ and provinces, a total of 91 projects were reviewed, 60 of which correspond to green assets, 19 to green projects conducted on staged-basis or under construction or partial operation; accordingly, the concerned cities and provinces have in place green projects and green assets and have included 12 green projects under their city and province development plans. Said portfolio accounts for a total amount of \$24,716 million US Dollars, including green assets for \$12,602 million US Dollars, green projects covering green assets for \$1,717 million US Dollars and \$10,397 million US Dollars in green projects.

On the other hand, companies from the real sector engaged in power generation and production of ethanol and biodiesel host the largest investments of this potential group of issuers. Hydropower prevails in the portfolio and, subject to standards applicable on green bond issuances, it must be resolved whether labelling major hydropower projects (with an installed capacity greater than 20 MW) is possible under this category. Generation through biomasses coming from the agribusiness sector suffices as grounds for issuances by

¹³ Identification of portfolios' potential (E3 Asesorías).

¹⁴ Including city-owned public utility companies.

certain companies, and, it is expected that Law 1715/2014 enhances self-generation possibilities and power efficiency; as a result, the portfolio of projects encompasses more power generation through biomasses, solar generation and other prospects for geothermal and wind power generation. Reviewed companies from sectors such as food, cement, and development of sustainable infrastructure, hold operative and prospective investments for an amount suitable for green issuances. The total amount of such portfolio covering 31 companies and 107 projects is \$19,080 million US Dollars: green assets account for \$8,946 million US Dollars, partially operative green projects account for \$50 million US Dollars, and green projects account for \$10,084 million US Dollars. Some companies selected are included among ordinary bond issuers.

From the group of national development banks, FINDETER was reviewed because it has a more visible profile for sustainable development in cities and territories, added with identifiable investment portfolios and projections publicly disclosed on its website. It is worth highlighting that there are other portfolios from national development banks like *Bancoldex*, *Financiera del Desarrollo Nacional* and *FINAGRO*, which information was not available or reviewed. The outcome is encouraging and proves that the National Government is capable of expeditiously promoting green issuances, subject to capacity-building to follow-up and monitor such investments, in order to report investors adequately on the use of resources and other impacts produced. The same identification exercise may be pursued prospectively with other national development banks.

One of the many advantages of FINDETER is its outstanding ability to gather investments in municipalities and provinces that, autonomously, would be unable of making bond issuances in capital markets, given their nature as small-sized projects.

The total value of FINDETER's reviewed portfolio is \$1,399 million US Dollars, where green assets account for \$138 million US Dollars and green projects account for \$1,259 million US Dollars. The sample taken covered 83 projects: 16 green assets and 67 green projects. The largest investments were made on: (1) transportation, which not only includes mass transport but, also, integration strategies, infrastructure of dedicated channels, water and sea urban transport, non-motorized transport, loading platforms; (2) treatment of residual urban water and waste disposal, including recycling and composting; (3) fight against floods; (4) urban reforest, including green infrastructure in cities and protection of supporting ecosystems; and (5) efficient lightning, including alternative sources of energy.

Although it is true that the exercise concerning pre-identification of project portfolios for green issuances proved good potential, it is required to tune those assets and projects likely to sustain green bond issuances and build capacity in companies and State entities that had never before made any bond issuances. It must be underlined that, in this initial review of potential assets and projects, it was impossible to determine whether there are appropriate follow-up mechanisms suitable for monitoring and certifying green issuances.



4

BARRIERS AND CHALLENGES FOR THE MARKET CREATION AND EXPANSION

The evolving Colombia's potential gave rise to a number of challenges and barriers to face and overcome in connection to the structure of the country's ordinary bond market, including specific needs of green bond markets, lack of knowledge and unreliable skills on the matter, green investments management and monitoring and, the need of a driving factor to promote and manage the market (See the first column in the Chart of Annex 1). This Chapter outlines those challenges and barriers.

4.1 Barriers and Challenges in the Development of a Green Bond Market

The green bond market is new in Colombia and its particulars and operation are barely known. Due to the foregoing, most barriers and challenges relate to the need of acquiring knowledge on green bonds and the formulation of basic definitions for Colombia with regard to climate-compatible green investments in the framework of green growth policies. Findings and actions are set forth below.

Actors in the market lack of knowledge on green bond markets, while capacity-building is required in different contexts and entities. Online surveys and face-to-face interviews led to conclude¹⁵ that financial stakeholders know what green bonds are, but ignore the particulars of their application and the underlying aspects of *Bancomercantil* case. Financial issuers – 100% of them – are acquainted with green bonds but not with the particularities of their operation; they acquired basic knowledge on occasion of their participation in Colombia's Green Protocol.¹⁶ It is remarkable that among this group more than 60% of the entities surveyed highlighted their qualifications to identify green investments, in light of corporate social and environmental

¹⁵ The diagnosis phase included on-line surveys carried out with six types of forms designed according to the duties of each targeted group: promoters in the market of securities, investor risk rating agencies, provinces and cities, potential issuers from the financial sector and potential issuers from the real sector.

¹⁶ A bank and government initiative that seeks joining efforts to promote the country's sustainable development, and focuses on environmental preservation and sustainable use of natural resources.

responsibility schemes and the focus on environmental risk control. Promoters of the securities market are poorly acquainted with green bonds, and 50% of the investors surveyed know them well, but, although considering that such issuances would succeed, these would not be privileged over ordinary issuances, as the latter require achieving profitability targets and certain risk profiles.

Potential issuers interviewed from the real sector are companies that place issuances in the common market of bonds and, while recognizing the existence of such mechanism, ignore other particulars. It was also found that 50% of the cities and provinces interviewed identify green bonds and are aware that these are fit as actual funding alternative but, again, have no knowledge on their operation. Territorial entities know green investments and hold assets and prospective projects in the sphere of climate change and green and sustainable urban investments. Risk rating agencies and firms established in the country and permitted to assess third parties with regard to schemes for green bond certification or differentiation, have no knowledge on the matter but are willing to learn and implement such abilities, as needed in the market. In general terms, it is required to disclose every know-how available, provide training and build capacity among interviewed players, in support of the market rapid growth. Without exception, the mechanism and willingness to learn and undertake the development of the green bond market generated great interest.

Define green investments and review whether sectoral categories and subcategories are compatible with those adopted globally under green bond standards. No guidelines are available to define green investments for Colombia, both in sectoral and sub-sectoral terms, including investments on climate change and other forms of green investment. Such a definition should be conceived between public and private sectors to ensure due consideration of both perspectives. In turn, and to the possible extent, the foregoing should be consistent with other international definitions, such as Climate Bonds Standard (CBS) to facilitate the entry of foreign investors while easily understanding green investments in the country and the alignment with intended goals.

The Colombian Government and other key players in the green bond market must assess whether such standards are suitable to achieve the country's environmental targets, including NDCs, green growth goals and Colombia's environmental policies. Specific country guides may help bridging international principles and standards with local rules, and may also help to drive the financing of priority areas. On the matter, there are examples of country guides, some developed upon public initiative and, others, upon initiative from the private sector. For instance, Brazil's Country Guide was drafted by the Federation of Brazilian Banks, while China's resulted from a public initiative.

Identify and open green portfolios on permanent basis, as attracting investors requires a constant flow. Efforts to search for solid portfolios compatible with domestic and international investors' requirements should take place steadily and require tools and skills for updating and monitoring any potential impacts on the environment.

Availability of high-quality investments and green projects is essential to attract international and domestic investors. To that end, it is required to permanently identify such type of investments and tools for the purposes of expeditious analysis and inclusion on a given portfolio. On the other hand, the country still needs to outline clear categories of internationally-accepted green investments meeting green bond standards. It is important to highlight that the national Government has made initial efforts to define expenditure investments or investments on climate change.

Skills for analyzing this type of investments, identifying indicators and a system for monitoring environmental impacts derived from such investments, should be included in reports required by investors willing to invest in green portfolios. To that end, prompting a system for know-how generation and transfer in both public entities and the private sector, is mandatory.

Disclose available incentives and, often, regulations for a comprehensive application thereof. Incentives contemplated under environmental laws, those recently adopted for non-conventional renewable energies and power efficiency and other incentives existing for foreign investment, were reviewed in the context of the diagnosis phase. Colombia has in place a broad base of incentives for environmental investments, but most stakeholders ask for a revision on the applicable procedures to access such incentives. In addition, in order to promote climate-compatible green development in Colombia, those categories of technologies driving tax exemptions should be broader than those currently regulated. Law 1775/2014 encourages the use of non-conventional renewable energies and power efficiency while providing that incentives should be comprehensively regulated and access procedures should be clear and streamlined.¹⁷ Incentives existing for foreign investment are sufficient, but barely known.

Disclosure of environmental and tax incentives is necessary between foreign green promoters and investors, in order to promote investments and external capital flows.

Involvement of market players in governance mechanisms is necessary to implement the foundations of the green bond market and promote its growth. Involvement of investors, issuers from the real sector, rating agencies and the Finance Superintendence is required. Presently, banks are involved in the role of issuers; however, fostering a meeting with key players from the market in the context of the proposed Finance Subcommittee for Green Bonds, is necessary to boost the market.

It is worth stressing that promoting this Road Map to set a green bond market, is a priority for the above-mentioned Subcommittee. Nevertheless, as stated below, green bonds are mostly used for refinancing projects and assets, rather than for initial investment funding. This means that, for the market growth to succeed, there should be complementarity between green bond mechanisms and other tools and financing policies. Therefore, it is proposed that the Subcommittee for Green Bonds should focus, not only in view of setting the market, but, also, to achieve complementarity as needed between financing vehicles for green growth. The foregoing includes developing policies, incentives, green definitions and guidelines to support the green bond market and any other mechanisms.

Domestic verifier organizations lack of knowledge on the matter of green bonds and standards for labeling purposes. Verifier organizations established in Colombia have full experience on the enforcement of environmental standards; however, except for Deloitte, which supported Bancolombia issuance under "Green Bonds Principles", such firms have no knowledge on the enforcement of green bond standards. In spite of the fact that such firms' international staff work in that area, they should transfer know-how to Colombia offices, in order to facilitate the performance of verifying tasks by staff commissioned in the country, while reducing costs associated to such services provision, during the issuance-cycle (pre-issuance, issuance, post-issuance). The Climate Bond Initiative (CBI) may support the transfer of know-how on Climate Bonds Standard (CBS), to enable domestic verifiers to apply the same in Colombia. Using standards reduces transaction costs, including fees charged by verifier organizations.

There are no standardized mechanisms to follow-up and monitor green investments and reporting to investors. Green investments require follow-up and monitoring on every associated green financing and, particularly, climate financing, as investors need reports based on indicators adequate to identify impacts, level of progress in each project's goals and full-range portfolios. Every project typology developed under green categories and subcategories, should rely on standardized follow-up mechanisms. While Colombia has made efforts to set follow-up systems in terms of public investment, international investors' requirements under green bonds labeling standards entail certain particularities to check whether such

¹⁷ Available in <http://www.elespectador.com/economia/el-pais-despierta-las-energias-renovables-articulo-693194>

investments meet the concerned requisites, and, subsequently, in the implementation and operation phase, the achievement of desired impacts. The private sector should also rely on standards to follow-up and monitor investments.

In presence of a standardized follow-up and monitoring approach supported on implementation guidelines according to requisites on green bond labeling and verifier organizations, issuers and investors will make significant savings in transaction costs. Such approach helps comparing different issuances in the market, saves time to issuers, verifiers and investors, and, as stated above, saves costs for all players involved. In Colombia, standardizing and proposing guidelines to monitor green investments and produce reports for verifiers and investors, is a pending task.

Small-sized projects and portfolios are unviable for green bond issuances, given the costs accrued and the scarce interest among investors. In reviewed cities and provinces, portfolios larger than US \$150 millions were found, thus enabling national and international issuances. In other cities and provinces with lower financial capacity, portfolio sizes would make impossible any local or international issuance. For small-sized projects and credit ratings below AA+, resort to entities adding investments and credit ratings as required in the market, would be necessary. Costs on bond issuances in Colombia, additional costs incurred for credit ratings and others payable to verifiers and certifiers for labeling and recognizing green issuances, would render the promotion of issuances inviable, due to the portfolios limited size.

Development and business banks are more qualified to handle size and credit rating requirements. Individual issuances would only be feasible in large-sized companies.

Rules for managing funds raised from green bonds, making transparent use thereof in green investments and facilitating reports to investors, are required from the outset Contemplated under the rules to manage funds raised from green bond issuances is a key principle enabling the transparent follow-up of resources. To that effect, it is advisable to set rules for the investment of funds in green projects and the transparent monitoring of funds raised under such investments.

In the best possible scenario, interim investments of funds should be in companies that had issued ordinary bonds and hold green projects not yet recognized under international standards applicable in the concerned market. Usually, green bond issuances are mostly supported on operative green assets subject to refinancing; thus, interim investments would apply to resources prospectively invested in green projects. Public and private entities should adopt this practice to make sure that any resources or funds will be used in green investment categories duly recognized under applicable standards. Adopting methodologies to evidence follow-up of funds and resources, is possible.

It must be assured that refinancing green project portfolios would be possible in the long run. Based on experiences drawn from other global markets, green bonds are refinancing vehicles par excellence, used for green assets already included in a portfolio. Such tool of the capital market suffices to channel large amounts of funds towards projects bearing outstanding green ratings and issuers with sound credit ratings. The foregoing means that financing climate-compatible green projects requires mutually complementary financing vehicles. Colombia has made efforts to develop innovative financial products for green investments, but, reaching certain pace in investments and involvement by the private sector – at least in connection to NDCs by Colombia – requires the financial sector to act dynamically. A successful market of green bonds requires complementarity with other financing vehicles and the country should strongly promote the development of said complementarity in the financial sector, in order to have green portfolios for refinancing through fresh resources from the capital market.

4.2 Barriers and Challenges in the Market of Ordinary Bonds

From the stand point of the capital market and its structure and operation in Colombia, green bonds face the same barriers as ordinary bonds. The diagnosis identified the following barriers and challenges.

Reducing the fiscal deficit should be a priority in the Government's agenda to balance the high liquidity existing in the Colombian banking market and foster a favorable context for the development of a debt market in the country. The Colombian financial system has not fostered complementarity between banks and the capital market; therefore, said two markets compete in providing financing to companies, in the mid- and long-run. The foregoing is essentially due to the fact that the bank sector enjoys of high liquidity derived from high returns and scarce competition in the sector. It must be underlined that such barrier is beyond the scope of duties of SISCLIMA Finance Management Committee, and, consequently, of this Road Map.

Consequently, an indirect manner to overcome such barrier is enhancing the country's economic stability. This is the proper environment for developing the capital market. The foregoing, as dealing with funds derived from issuances of securities requires low interest and inflation rates. Notwithstanding, it is necessary to clarify that current high interest rates coupled with inflation uncertainty, raise distrust and instability among the population. The national Government fosters economic stability and formulates plans to achieve the mentioned stability.

Boosting the green bond market requires suitable examples from different sectors and players involved in green investment, as the only valid examples refer to Bancolombia and Davivienda. These issuances were made for investors from the "Segundo Mercado", streamlining the rules of issuance and targeting professional investors.¹⁸ International Finance Corporation (IFC) subscribed those issuances in full while guarantees were also posted with support of multilateral banks. Producing further examples is necessary to encourage other issuers and investors to participate, as well as proving the placement made in the primary market of investors, where not only professional investors act. Furthermore, it would be very important to cause other issuers from the real sector, development banks, cities and provinces, to resort to green bonds for financing and refinancing investments aimed at green growth. This would accord more liquidity in the market and would become a virtuous cycle by attracting other investors.

The bond market is subject to high issuance costs and a cumbersome process for authorizing and placing issuances. Costs associated to any issuance of bonds in the capital market, either primary or secondary, are rather high compared to other Latin American economies. This assertion is one of the findings contained in a study produced in the context of the "World Economic Forum" (WEF)¹⁹ with regard to the development of the Colombian capital market. Said paper pointed that one of the challenges to address is reducing the costs a company should bear in making a debt issuance and streamlining requisites for approval of the issuance by

¹⁸ In Colombia, according to the share required from investors, regulations refer to primary market and the "Segundo Mercado". Resolution 400/1995 sets the "Segundo Mercado" for the purpose of facilitating access to the local capital market to an increased number of issuers. The only parties permitted to subscribe issuances from the "Segundo Mercado" are professional investors. The following are conditions required from professional investors:

- Hold an equity equal to or higher than 10,000 current monthly minimum wages (SMMLV) and, at least one of the following conditions:
 - Hold an investment portfolio for an amount equal to or higher than 5,000 SMMLV and have directly or indirectly performed fifteen (15) or more purchase transactions during 60 calendar days, within a term not to exceed two (2) years before making the classification. Aggregate value of all such transactions must be equal to or higher than the equivalent of 35,000 SMMLV.
 - Hold a valid professional certificate as market dealer recognizing it as operator by the Self-Regulator for the Securities Market (AMV) (Autorregulador del Mercado de Valores).
 - Be foreign and multilateral financial agencies.
 - Be entities under supervision of the Colombian Finance Superintendence.

¹⁹ Accelerating Capital Markets Development in Emerging Economies, World Economic Forum, May 2016

the Finance Superintendence of Colombia (i.e., RNVE registration fees, rating agency costs, Deceval and DCV management and custody fees, structuring agent fees).

It is well known that the "Segundo Mercado" enables the reduction of requisites and amounts payable in making an issuance. However, this strategy has been inefficient as the market has not produced significant results. Finally, it must be underlined that a number of adjustments have been introduced for streamlining procedures required to recurrent issuers. Accordingly, while liquidity conditions remain in the banking system, resorting to the capital market will not be more beneficial than obtaining a bank loan for the purposes of long-term financing.

Demand in the country market of ordinary bonds focuses on high credit ratings, while currency fluctuations may impact the returns for foreign investors. One constraint regarding investors is the nil demand for securities rated below AA+. This barrier results from the minimum returns required under regulations applicable to pension and severance funds, which are the main investors in this type of securities in the country. Failing to ease this condition discourages risk taking by investors and, hence, tends to render portfolios homogeneous. Consequently, this hinders the access to financing through the capital market for companies that do not meet said level of credit rating, while restricting the market liquidity and producing a vicious circle that holds back the development of the private debt market in the country. There is no secondary market for private debt issuances as investors are not willing to resell their securities.

Currency fluctuations may impact the total returns on investments made by foreign investors. For mitigation purposes, they use currency hedge vehicles although such coverage is not widely available for long-term hedging and is rather costly.

Developing a strategy to promote the secondary market for private debt issuances is a pending issue. The secondary market of private debt is rather illiquid as a consequence of other barriers exposed above; requiring high ratings on securities that are part of such portfolios, makes such bonds selling unattractive. Furthermore, there are few investors and a small volume of issuances. At the end, arises a vicious circle as low liquidity is troublesome for pricing formation and investors are discouraged to enter into purchase transactions, whereby those bonds eventually remain in portfolios until maturity. Low liquidity is also a risk that discourages foreign investment in the country's market of private debt, in view of the high risks that impact price formation on those securities.



5

ACTIONS PROPOSED IN THE ROAD MAP TO SET AND PROMOTE A GROWING GREEN BOND MARKET IN COLOMBIA

This Road Map provides two phases, as follows: first, identification of market foundations and, second, detailed description of actions to expand the green bond market on sustainable basis. This section, sets out the actions referred to in the Road Map. The attached Annex contains a summary chart describing the Road Map actions proposed to overcome and face barriers and challenges existing in Colombia in the creation and sustained expansion of a green bond market, the appropriate schedule and potential players and agents to complete such intended actions.

5.1 PHASE I: SET FOUNDATIONS FOR THE GREEN BOND MARKET

5.1.1 First Goal: Improve know-how among different players in the market

For developing a new market, it is indispensable to thoroughly disseminate the relevant know-how and enable potential beneficiaries to clearly understand the advantages of using this vehicle. Training should be specific for each particular group of players. Additionally, platforms for data and know-how sharing help to enhance the skills of participants in the green bond market. Two individual subgoals are proposed to achieve the first general goal:

Basic training to build knowledge and understanding among different players in the green bond market.

The first,²⁰ are potential issuers of green bonds from the real or financial sectors, municipalities and provinces autonomously empowered to make issuances in the capital market. Any training would be advertised through associations and guilds suitable for each individual audience. Training should focus on enabling the group to identify green issuances and other requirements provided for green bond labeling. In fact, there is general

²⁰ As a working definition under this Road Map: issuers autonomously entitled to implement green bond issues, holding a large-size portfolio of green investments, almost higher than US\$50 millions, and minimum investment grade BBB-.

basic knowledge of the steps to follow in any issuance of green bonds; such knowledge must be disclosed to learn the particulars of every issuance. Included among the associations entitled to provide training with support from external experts are the following: Colombian Entrepreneurial Council for Sustainable Development (CECODES); B-Type companies; National Business Association of Colombian (ANDI); Chambers of Commerce; Colombian Association of Sugar Cane Agribusinesses (ASOCAÑA); National Federation of Oil Palm Growers (FEDEPALMA); Colombian Association of Electric Power Generators (ACOLGEN) and Colombian Association of Bank Entities (ASOBANCARIA).

It is also required to train and raise awareness among domestic investors focusing on the advantages that green issuances represent for their respective portfolios, but, also, state detailed steps to follow for completing green issuances. In the future, Colombia's stock exchange (i.e., *Bolsa de Valores de Colombia* (BVC)) may be an agent that supports the market dynamics, in being the scenario where issuers and investors concur. Training should aim at learning the detailed operation of green bond markets and promote exchanges with other green bond divisions existing in stock exchanges globally, in order to set a similar division within BVC, in the context of a dynamic market.

Trainings may be backed by guidelines on how to make green issuances for Colombia and disclose the same through platforms devoted to green or climate-related finance, which platforms may be likewise promoted by entities such as BVC, ASOBANCARIA and other associations. There are some examples of guides or "kits" on green bond issuances which may be adjusted to the Colombian scenario.²¹

Data platforms and forums allow the disclosure of know-how and experience sharing to enhance the process for setting a green bond market in Colombia; therefore, the website of *Finanzas del Clima* or *Bolsa de Valores de Colombia* should include a section on know-how information and disclosure or any other appropriate data platform suitable to exchange dynamically any data, know-how, documents, fora aid-memoires and workshops, success stories, among others.

Promote a Latin American forum or annual meeting attended by different players in the market to disclose and learn progresses made and share experiences among Latin American countries and other countries worldwide. A prompt proposal for this type of event may be joining efforts with global entities promoters of climate-related finance and green bonds.²² Most likely, sponsors of this type of events will be engaged with the leadership of the NPD or another agency interested in developing the green bond market.

5.1.2 Second Goal: Define green investments in Colombia, including categories and subcategories

To help mechanisms or vehicles that channel investment flows for green growth and climate change to approach prioritized areas, it is important to find a common definition of green investment, clearly visible for the public sector and indicative for the private sector when building green portfolios. Two subgoals and related actions are proposed to achieve the stated goal.

Harmonize the notion of green investment for the country and draft a guidance document consented between public and private sectors. Said harmonization should take into consideration other concepts drawn from green growth policies, NDCs, investments on climate change, urban sustainable development, sustainable transport, rural sustainable development, power and other priorities set in domestic productive sectors. Building trust among promoters and investors and channeling projects towards domestic priorities are some of the possible benefits. The guide (i.e., Nacional Guide on Green

Investments) may be promoted within the Subcommittee for Green Bonds and posted on the platform for climate finance under the section on green bonds.

Make a categorization known to domestic and international investors and facilitate the understanding of Colombian green portfolios. Once identified a suitable country definition for green investments, it must be proceeded to harmonize in the Guide on Green Investments any domestic definition, category and subcategory, with the concerned international definitions per sector and subsector used by green bond investors and generally contemplated under similar guidelines and standards like Green Bonds, Climate Bonds Standards (CBSs) and other types of green bond investments consented by investors. As a result, there should be an indication as to categories significant for Colombia in developing international standards. Preliminarily, in the diagnosis phase if was found that the foregoing should also be done for hydroelectric power. Managers of international standards like CBI would be willing to review Colombia's particular needs.

5.1.3 Third Goal: Identify and open green portfolios on permanent basis

The offer of projects and green portfolios ensures the possibility of issuing green bonds and attracting international and domestic investors. The following subgoals and related actions are proposed to achieve the stated goal:

Search for assets to be allocated to green portfolios, in data bases containing information on expenditure made in national and territorial public investments. National public investments are compiled in data bases like SIF,²³ National Royalty System and Adjustment Fund, whereas regional investments are compiled in the FUT.²⁴ Today, the NPD implements a methodology for classifying investment expenditure on climate change relating to investments recorded on such data bases. The classification of annual investment expenditure on climate change may support the identification of projects satisfying green bond features. For instance, projects for urban mass transport will need investments during several years, whereas projects for handling urban waste may embody different activities and assets, fit for inclusion in green portfolios. Furthermore, climate change does not cover the entire range of green investments; therefore, it is suggested that, after elaborating appropriate green growth policies, the expenditure classification should be extensive to environment and green growth in all sectors and territorial entities, on cross-cutting basis.

With regard to future investments by national and territorial governments, as part of the creation of a public bank of projects or investment plans, it is necessary to identify, from the outset, which investments may be considered green, so that such information may serve as benchmark in the search for green bond portfolios.

Have available tools and continued support for identification, creation and follow-up of investments and green portfolios. Using standard tools and designs according to the project type, facilitating the analysis, design, monitoring and follow-up of green investments contained in portfolios, may expedite the formation thereof. It is proposed to create standard designs for recurrent green projects in the public sector, providing, from the outset, the use of adequate indicators to measure environmental impacts. This initiative may also extend to investment typologies frequently used in productive sectors involving private investments.

Additionally, it is possible to rely on continued support for identifying green investments, design, follow-up and monitoring, at least while the market dynamics reach a steady growth within public or private entities having capacity and willingness to carry out such tasks.

²¹ For an example, see: http://cebds.org/wp-content/uploads/2016/10/Guia_emissa%CC%83o_ti%CC%81tulos_greens_ING-2.pdf;

²² See Climate Bonds Initiative, Environmental Finance, Emerging Markets.

²³ SIF - Integral System for Financial Data, Ministry of Finance.

²⁴ FUT - Single Territorial Form, National Planning Department

5.1.4 Fourth Goal: Encourage a more extensive use of incentives

Environmental regulations provide broad and sufficient incentives; although some are not yet regulated, these are indeed suitable to promote green investment. Tax exemptions on clean production have been regulated, but users claim that the process is lengthy and cumbersome, and only addressed to a limited range of investments. Incentives available to foreign investors making investments on green bonds have been barely disclosed. Prior to the tax reform, source withholding on foreign investments on debt with maturity beyond one year was 33%; the reform reduced said percentage to 15%. This significant reduction must be informed to foreign funds to widen the investors base for the bond market.

Nevertheless, the reform did not amend the double taxation barrier for some countries, except Italy, Germany, Chile, Spain, Switzerland, and México, among others. The Government may amend such limitation in view of promoting investments originating from countries like the United States of America.

The following subgoals and related activities are proposed:

Extensive disclosure of tax incentives available for environmental and foreign investments. Such disclosure should be on different publications addressed to green bond investors and foreign investment, jointly with Government authorities and posted on the website of Finanzas del Clima.

Have in place incentives consistent with the pursued goals and streamline the access thereto. Applicable regulations on VAT and income tax exemptions relating to environment investments have restricted the scope of application to certain investment typology likely to be broadened. The foregoing does not require amendment to tax laws; rather, other types of investment may be included in ordinances and resolutions. It is not expected that all categories of green investments – but those more relevant for Colombia – be subject to exemptions.

On the other hand, for streamlining and efficiency purposes, reviewing the procedures to enforce tax incentives on environmental matters and renewable energies is also proposed. Accordingly, conditions conducive to green investment development would be mandatory to implement various financing vehicles.

Environmental regulations contemplate economic tools that encourage environmental investments. Developing such regulations is part of environmental policies and, therefore, this action aims at considering existing possibilities to prioritize those rules, in line with the goals set on the matter of green growth.

5.1.5 Fifth Goal: Consolidate the Governance Mechanism

Leadership and coordinated actions with involvement of key players is required to promote the market development. Brazil and Mexico adopted governance mechanisms that foster actions provided in this Road Map for each individual country.

To that effect, it is proposed to integrate the Green Bonds Subcommittee part of SISCLIMA Finance Management Committee through designation of one representative per each of the following entities or agencies: Colombian Association of Pension and Severance Fund Managers (ASOFONDOS); Ministry of Finance (MHCP); Ministry of Environment and Sustainable Development (MADS), BANCOLDEX; FINDETER; the Green Protocol; Financing Fund for the Agricultural Sector (FINAGRO); Finance Superintendence; *Bolsa de Valores de Colombia*; and, issuers from the real sector.

Once the Green Bonds Subcommittee is formally integrated, it should adopt an agenda to implement the proposed Road Map and follow-up the same on regular basis. Finally, creating a Technical Secretariat and adopting the framework for its operation is also proposed.

5.1.6 Sixth Goal: Have available verifier organizations for green bond standards in the country

In order to build confidence among investors in portfolios underlying green issuances, well recognized standards are applied for labeling green bond issuances. Verification of standards takes place throughout the entire cycle of the bond (i.e., pre-issuance, issuance and post-issuance). Availability of those skills among local staff of verifier organizations expedites the relevant procedures and make them less costly for issuers. In this case, one single subgoal and related action is recommended herein.

Engage verifier organizations together with their local staff. To that effect, it is recommended to sponsor disclosure events among international firms having agencies in Colombia with main headquarters abroad and capable of sharing verification expertise and know-how in connection to green bond standards; likewise, it is also recommended to arrange meetings between verifier agents and the Green Bonds Subcommittee for the purposes of agreeing on actions necessary to boost the market. Firms are expected to train local staff for the provision of the concerned services and, as the case may be, the Green Bonds Subcommittee may also promote activities in support of the training provided to verifier agents.

5.1.7 Seventh Goal: Standardization of follow-up and monitoring tasks relating investment impacts upon verifier agents and investors

Issuers and managers of green portfolios underlying green bonds are required to submit reports to both verifier organizations and investors. Three are the purposes of such reporting: learn the progress made in projects and targets; monitor environmental impacts; and describe the use of funds.

Availability of standardized indicators per type of project and reporting guidelines facilitates monitoring and following-up green portfolio issuers and managers. The foregoing brings about decreased costs associated to monitoring, follow-up and reporting. Two activities are proposed to that effect: (i) define the type of follow-up indicators and impacts matching the project typology, in each category and subcategory of the country Guide on Green Investments; and (ii) design or adapt a standard follow-up and monitoring report to facilitate issuers and project developers in Colombia to perform their respective reporting tasks to investors as well as facilitate reviewing tasks of verifier organizations. All of the foregoing under international standards and support from managers of Green Bond Standards.

5.1.8 Eighth Goal: Adopt mechanisms for managing funds raised under green bond issuances

Principles applicable to green bonds and investors seek that any funds raised be applied transparently to green investments. It is intended to build confidence in the management of funds devoted to green investments, particularly those made by the public sector. In this case, one single subgoal and related actions are recommended herein:

In the context of other cases, adopt guidelines for managing funds raised in the context of green bond issuances, therein specifying investment rules for funds devoted to refinancing and new projects. These guidelines must also provide rules for managing funds already placed or pending to be allocated for green investments.

Additionally, to trace any movements of funds raised from green bonds, it is recommended that the guidelines provide separate accounts fit to carry a detailed follow-up of movements and transactions. This is particularly relevant in the case of public entities, which besides reporting matters concerning green bonds,

must also report to regulators and supervisor agencies. In the context of creating separate accounts, project developers and issuers should be informed as to the various systems available to record fund transactions and the subsequent reporting of such movements to investors.

5.2.9 Ninth Goal: Ensure the possible financing of green project portfolios, in the long run

In the long run, green financing must be supported on different debt and equity investment instruments. Green bonds are generally used for refinancing transactions, rather than new projects. In practice, portfolios underlying green bond issuances combine assets and future projects. In this case, one single subgoal and related actions are recommended herein.

Build different mechanisms and financial instruments to boost green financing. This action aims at working with domestic commercial and development banks to widen the range of innovative products for green financing, per type of project prioritized under the Guide on Green Investments, in connection to matters such as availability of long-term products and other forms for aggregating small-sized projects.

Together with national and international development banks, structure guarantees to allow the transfer of funds towards green investment.

5.2 PHASE II: SUSTAINED AND SUCCESSFUL EXPANSION OF THE MARKET

5.2.1 First Goal: Develop further examples with different types of issuers and investors

An effective approach for promoting the market expansion is to test green bonds with different types of issuers and investors. In particular, those two cases implemented in the country (*Bancolombia and Davivienda*) involve commercial banks and IFC as investor, subject to streamlined rules applicable to the "Segundo Mercado".²⁵ Today, testing issuances with local development banks, the real sector, cities and provinces is still pending. From the standpoint of investors, the primary market has not been tested yet, nor any international investors, other than IFC. The following subgoal and related actions are recommended in this connection:

Build confidence in the market, both regarding issuers and investors and inform them as to the type of potential green investments, standards testing, and rules. It is proposed to make at least two or three green bond issuances during the first year, with national development banks such as FINDETER, Bancoldex, FDN and FINAGRO/Banco Agrario, devoted to their respective sectors, as each individual bank is now specialized in managing investment risks in the relevant sector.

At the same time, it is possible to promote green issuances among large-sized companies meeting the four conditions mentioned below: (a) have current valid issuances of ordinary bonds; (b) have experience in the market and credit ratings equal or higher to AA+; (c) have duly identified assets and green projects; (d) have in place trustful sustainability policies for investors.

Likewise, green bond issuances can be made with cities and provinces autonomously empowered under their respective policies on sustainable urban development and holding assets and green projects for sustainable urban transport; urban waste handling; efficient power management; buildings subject to eco

²⁵ For a definition of "Secondary Market" and streamlined rules, see the diagnosis document.

efficiency standards; management of the city's ecologic infrastructure; water handling; and adaptation to climate change. In the category of public issuers, there is room to support State utility entities operating in municipalities and having independent estate and management powers. In general, utility companies handle sewages and some are involved in power generation and transmission. Companies that had made ordinary bond issuances and capable of holding a green project and green assets portfolio should be selected.

Finally, among the above-mentioned issuers, there is room for considering the possibility that any issuances of ordinary bonds of large-sized companies, municipalities and provinces, or, even, banks, holding non-labeled green portfolios may enforce green bond standards.

5.2.2 Second Goal: Reduce issuance costs and streamline the process for authorizing and placing issuances

Two actions are proposed to achieve the stated goal:

Reduce costs associated to issuances made by private agents in the market in line with the WEF diagnosis, with the aim of encouraging other issuers to place bonds and eventually leading to positive outcomes for all. On one hand, private agents (i.e., risk rating agencies, managers and DECEVAL custodians, issuance structuring agents), benefit from larger placements while issuers find a less costly mechanism as alternative source of financing. It is worth stressing that most costs associated to issuances are borne by private agents.

Disclose efforts made for reducing costs and streamlining government procedures, because, in spite of streamlining and reduced costs to make issuances, particularly with regard to recurrent issuers, this measure has not led to expected results, in part due to lack of effective communication strategies for entrepreneurs from the real sector, enabling them to extensively use the bond market as financing mechanism.

Information concerning progress made on costs reduction and procedures streamlining must be available in the guidelines proposed in this Road Map to promote the green bond market, and, also in different data platforms such as *Finanzas del Clima*, the Finance Superintendence, BVC, ASOFONDOS, among others.

5.2.3 Third Goal: Diversify the demand for securities rated below AA+.

Decree 765 of May 6 2016 entitles pension funds to level the ceiling applicable to investments in domestic and foreign private equity funds, to an aggregate of 10% for moderate funds and allow a more flexible management of concerned assets. Likewise, a new category of investments on "restricted assets" allowing greater flexibility in terms of investment, was created. Lastly, in 2016 the Government approved an investment vehicle on alternative assets for pension funds, not to exceed 10,000 million USD. All these measures evidence the Government's willingness to promote the capital market development, by diversifying the demand with securities rated below AA+. The following subgoals and related actions are proposed:

Promote issuances rated below AA+ in view of the scarce demand for securities with lower ratings, while fostering small-sized issuances. Based on the developments set forth in the precedent paragraph, an option for promoting the green bond market, is the creation of alternative equity funds suitable to open a special channel for green bonds.

Encourage institutional investors to make investments rated below AA+. While there is an alternative to encourage pension funds to invest on private debt securities rated below AA+, this would nevertheless require amending the existing regulations. A stripe to determine minimum returns may foster investments on high-risk securities; the above would entail changes on the current floor to set a permitted ceiling and floor for returns fluctuation. Accordingly, any excess above the ceiling would be used in case of returns below the floor. Low rated companies would be encouraged to make general bond issuances and, some, green bond issuances.

5.2.4 Fourth Goal: Mitigate the impact of currency-related risks for foreign investors.

To conclude, taking into account the significant devaluation of Colombian currency in recent years, it is important to create an environment favorable for foreign investors' mitigation of currency risks, through the market of long-term currency swaps. It is advisable that Colombian financial entities open spaces to develop said market.

5.2.5 Fifth Goal: Promote the secondary market of private debt issuances

The secondary market in Colombia has low liquidity and, hence, is rather unattractive for investors. For enhancing the participation of investors in the market, it is necessary to develop certain strategies that foster an adequate environment for new issuers and increase involvement by investors. To that effect, the following subgoals and actions are proposed:

First, remove any negative bias *vis-à-vis* holding private debt securities in financial dealers' portfolios.

An approach to encourage the bank sector to participate in trading bonds may be reducing those securities' weighted average, pursuant to the formula for calculating the entity's technical patrimony.

Second, reduce constraints hindering the brokers entry into the market. This means permitting that financing operations on secured private debt is excluded from the leverage limits set by stock brokers. This would also allow reducing any constraints for the entry of stock brokers into the market, which is currently limited by the broker's technical equity.

Third, amend compensation schemes for the management of pension portfolios, by including the management of additional returns and management efficiency, insofar as, today, only minimum returns are taken into consideration.

Fourth, enhance follow-up over the market. To that end, it is proposed to generate transfer indexes for the private debt market, suitable as start point to assess portfolio managers. Additionally, investors would be empowered to follow-up that segment of the market.

All of the foregoing are strategies that allow developing an appropriate ecosystem for risk markets and generate liquidity conditions and diversified demand, so that issuers rated below AA+ may have actual and efficient access to funds from the capital market.



6

CONCLUSIONS AND RECOMMENDATIONS

Colombia has enormous potential to drive green growth and elaborate programs and projects leading to genuine competitiveness for the country, based on its vast range of natural and human resources. To that end, it is required to create an attractive portfolio of programs and projects, which, in turn, use new financial vehicles such as green bonds for financing purposes. In the same vein, this Road Map sets forth the steps to follow for the country to proactively promote green bonds in due consideration of other means to understand the concept of green projects and training on green bonds, generation of project portfolios and solutions to overcome financial structural challenges in the issuance of bonds.

Actions required aim at building capacities and recognizing the vehicle of green bonds among different players in the market. The Road Map sets out a series of actions that may be expeditiously implemented for a rapid development of the green bond market. First, those actions identify a governance mechanism involving players in the market but not members of the Green Bonds Subcommittee. Additionally, examples with different issuers and investors, enhance the knowledge and understanding of the matter. A base to rapidly support potential issuers will be available if such activity is coupled with the definition of different guides and methodologies on green investment, reporting, monitoring and conformity with international standards.

In turn, the country has not yet shed any light on green investments, either public or private, to understand their potential in terms of sectoral economic development in every city and territory. Classifying green investments in domestic accounts and produce green portfolios will accelerate investment opportunities with both internal and external funds, and facilitate the development of financial instruments like green bonds.

Disclosure campaigns and data platforms may be initially implemented in the medium-term, after implementing actions concerning skills and understanding. To conclude, it is well known that the barriers existing in market of ordinary bonds, also exist in the green bond market. One proposal addressed to financial authorities to continue encouraging the reduction of costs and procedures for issuers, as well as regulations to render more flexible those credit risk related requisites that investors are obliged to comply, benefit the whole capital market and provide a better context for green bonds growth. Such proposals

may also cover incentives for the secondary market of securities and regulations more suitable for the investment typologies subject to tax incentives.

The series of measures proposed may be developed in the short run, with a work agenda sponsored by the Green Bonds Subcommittee, including involvement of new players, such as pension funds and potential issuers from the private sector. Synergies between State functions to breed enabling conditions for the issuance of bonds and other issuance opportunities visible in the private sector, will be essential to build confidence as necessary to promote green bonds as a viable tool for green growth in Colombia.



7. ANNEX 1: SUMMARY ACTIONS PROPOSED UNDER THE ROAD MAP

BARRIERS/CHALLENGES	PURSUED GOALS	ACTIONS PROPOSED IN THE ROAD MAP	PLAYERS	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
PHASE I: SET FOUNDATIONS FOR THE GREEN BOND MARKET											
1 Players in the market have insufficient knowledge on the green bond market.	Provide basic training for different players of the green bond market.	Train potential issuers of green bonds from the real and financial sectors, municipalities and provinces, through guides, associations and SISLIMA, with contents appropriate for each individual audience.	Real Sector: CECODES, B-Type Companies, ANDI, Chambers of Commerce, ASOCANA, FEDEPALMA, ACOLOGEN, Financial Sector: ASOBANCARIA and Green Protocol. Provinces and Municipalities: FINDETER, Bancolombia, the National Federation of Provinces (FND) and the Colombian Federation of Municipalities (FCM) and other experts on the matter.								
		Provide training to ASOBANCARIA and raise awareness among domestic investors in connection to processes and advantages of green issuances.	NPD, ASOBANCARIA and other experts on the matter								
		Provide training to BVC on the particularities of the green bond market operation.	NPD, or <i>Balsa de Valores de Colombia</i> (BVC) and other experts on the matter								
		Design or adjust a kit on green issuances for Colombia and disclose it through the relevant platform.	NPD, or <i>Balsa de Valores de Colombia</i> (BVC)								
		Sponsor annual workshops for Latin America, in a suitable context for disclosing and sharing experiences.	NPD, ASOBANCARIA, BVC, CBI, E3/METRIX								
2 Define the concept of green investment and review whether sectoral categories and subcategories are compatible with those adopted globally.	Disseminate knowledge and share experiences to enhance the process of setting a green bond market	Disclose knowledge through adequate platforms.	BVC, NPD, ASOBANCARIA								
	Find a common definition of green investment.	Publish a definition of green investments in Colombia agreed between the public and private sectors.	NPD, MADS, with the support of experts on the matter								
	Facilitate cash-flows from and to international and domestic investors interested on green bond issuances	Harmonize in the Guide on Green Investments any domestic definition, category and subcategory, with the concerned international standards and guidelines	NPD, MADS, with the support of experts on the matter								
		Develop, together with managers of international standards, all and any categories and subcategories relevant for Colombia's green development.	NPD, MADS, experts on the matter, Ministries in the Sector								

BARRIERS/CHALLENGES	PURSUED GOALS	ACTIONS PROPOSED IN THE ROAD MAP	PLAYERS	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
3 Identify and open green portfolios on permanent basis	Search, in national and territorial public investments, any green investments suitable for inclusion in portfolios backing such issuances Have available tools and continued support for identification, creation and follow-up of investment and green portfolios	Search in data bases containing information on public investments, any assets to be allocated to green portfolios. As to future investments by national and territorial governments, as part of the creation of a public policy bank of projects or investment plans, identify, from the outset, which investments may be deemed green investments. Design, adjust and disclose the use of tools facilitating the analysis, design, monitoring and follow-up of green investments included in portfolios. In entities developing, operating and managing green projects for bond issuances, support the use of adequate indicators to measure environmental impacts. Rely on continued support for identifying green investments, design, follow-up and monitoring, with the assistance from experts on the matter.	NPD, supporting experts, entities interested in green portfolios from public and private sectors. NPD, MADS, provinces, municipalities, supporting experts NPD, MADS, supporting experts NPD, MADS, supporting experts Supporting entity for the identification of portfolios								
4 Insufficient enforcement of tax incentives on environmental investment and non-conventional renewable energies; unregulated economic tools under environmental regulations, and lack of disclosure, including incentives on foreign investment	Widely disclose tax incentives available for environmental and foreign investments. Rely on incentives aligned with the goals pursued and streamline the access thereto	Disclose the manner to profit environmental incentives: Report any deduction on source withholding rates, as provided in the 2016 Tax Reform, for foreign investments hosted for more than one year (30% to 15%). Widen the range of green investments for VAT and income tax exemptions and streamline the access thereto, in line with the relevant green investment typology required for green growth. Regulate certain economic tools provided in environmental laws encouraging green investment.	Ministry of Trade, Industry and Tourism, Procolombia, MADS, NPD MADS, DIAN, NPD.								
5 Consolidation of the governance mechanism to boost the green bond market with the involvement of key players for the market development	Coordinate, undertake and promote consented and necessary actions with key players from the market	Engage institutional investors, participants from real sector selected among current issuers in the bond market, i.e. Finance Superintendence, <i>Bolsa de Valores de Colombia</i> . Adopt an agenda to encourage implementation of actions proposed in the Road Map and follow-up the same on periodical basis Adopt framework regulations for the operation of a larger Green Bonds Subcommittee and set an Executive Secretariat responsible for disseminating information among its members and coordinating actions as needed.	NPD NPD NPD								

BARRIERS/CHALLENGES	PURSUED GOALS	ACTIONS PROPOSED IN THE ROAD MAP	PLAYERS	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
6 Lack of knowledge among potential verifier organizations locally, in connection to green bonds and labeling standards	Draw the attention of verifier organizations for the provision of services concerning green bond issuances through local staff	Sponsor disclosure events among verifier organizations Sponsor meetings between verifiers and the Green Bonds Subcommittee to reach a common understanding on the actions required to boost the market If necessary, sponsor the training of local verifiers.	Green Bonds Subcommittee, with the support from experts and international staff of verifier organizations Green Bonds Subcommittee and verifier organizations Green Bonds Subcommittee with the support from experts and international staff of verifier organizations								
7 There are no standardized mechanisms to follow-up and monitor green investments and reporting to investors	Adopt standardized indicators per project typology and reporting guidance to facilitate monitoring and follow-up concerning green portfolios	Design standard follow-up and monitoring report forms in line with international standards. Define the type of follow-up and impact indicators per project typology addressed in each individual category and subcategory	Verifier organizations and experts on the matter, supported by standards managers Verifier organizations and experts on the matter, supported by standards managers								
8 Lack of mechanisms for managing funds raised under bond issuances, as well as methodologies to transparently apply the same to green investments	Build confidence regarding the management of funds allocated to green investments, particularly those made by the public sector	Set guidelines for managing funds raised under green bond issuances. Implement rules for managing funds raised under green bond issuances, either actually placed or to be allocated to green investments Encourage the creation of separate accounts to facilitate follow-up on the use of funds Inform project developers and as to the various systems available to register funds transactions	NPD con with the support of experts on the matter NPD con with the support of experts on the matter NPD with the support of experts on the matter NPD with the support of experts on the matter								
9 Ensure the possible financing of green project portfolios, in the long run	Build different mechanisms and financial instruments to boost green financing in the long run	Work together with domestic and international commercial and development banks to conceive guarantees suitable to transfer funds towards green investment. Work together with domestic commercial and development banks, in widening the range of innovative products for green financing, per type of project prioritized under the Guide on Green Investments.	NPD, ASOBANCARIA, BYC NPD, ASOBANCARIA, BYC								
PHASE II: MARKET EXPANSION											
10 Insufficient examples relating to sectors/players involved in green investments and the primary market of bonds	Build confidence in the market, both regarding issuers and investors and inform them as to the type of potential green investments, standards testing, and rules.	Make green bond issuances together with domestic development banks Promote green issuances among large-sized companies.	Development banks, with the support of experts on the matter Large-sized companies, with the support of experts on the matter								

	BARRIERS/CHALLENGES	PURSUED GOALS	ACTIONS PROPOSED IN THE ROAD MAP	PLAYERS	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
10	Insufficient examples relating to sectors/players involved in green investments and the primary market of bonds	Build confidence in the market, both regarding issuers and investors and inform them as to the type of potential green investments, standards testing, and rules.	Make green bond issuances with cities and provinces autonomously empowered to do so Support other state utility entities operating in municipalities and provinces, holding independent patrimony and managerial powers, vis-à-vis green issuances. Considering the possibility that any issuances of ordinary bonds of large-sized companies, holding non-labeled green portfolios, may enforce green bond standards. Enact additional regulations to reduce issuance costs in the primary market and the 'Segundo Mercado' as well as recurrent issuers. Streamline the process of issuances in the primary market and by recurrent issuers	Cities and provinces with the support of the Ministry of Finance experts on the matter State utility entities with the support of experts on the matter Issuers and BVC Finance Superintendence Finance Superintendence								
11	High issuance costs and complex procedures for the authorization and placement of issuances	Reduce costs and streamline the process of bond issuances to attract more issuers Disclose efforts made for reducing costs and streamlining issuance procedures	Disclose any streamlined processes and continually inform as to future rules on costs and processes. Every information concerning issuance processes and costs must be available on data platforms and other guidelines for green bond markets Create alternative equity funds in view of diversifying the offer for investors, because, to date, there is no demand for current securities rated below AA+.	Finance Superintendence Finance Superintendence								
12	In the country's market of ordinary bonds there is a concentrated demand for securities with high credit ratings and, currency fluctuations may impact the returns for foreign investors	Promote issuances of securities rated below AA+ and smaller issuances through aggregation mechanisms Encourage institutional investors to make investments rated below AA+ Mitigate the impact of currency-related risks for foreign investors	Set a stripe to determine minimum returns may foster investments on high-risk securities Encourage development banks (both domestic and international) and commercial banks, to implement long-term currency swaps. Reduce those securities' weighted average, pursuant to the formula for calculating the entity's technical patrimony.	BVC, Finance Superintendence, Ministry of Trade, Industry and Tourism Finance Superintendence Finance Superintendence Commercial Banks Finance Superintendence								
13	Formulate a strategy to promote the secondary market of private debt issuances	Remove any negative bias vis-à-vis holding private debt securities in financial dealers' portfolios. Reduce any constraints hindering the brokers' entrance to the market Amend compensation schemes for the management of pension portfolios Enhanced follow-up over the market	Permit that financing operations on secured private debt be excluded from the leverage limits set for stock brokers. Include the management of additional returns and management efficiency in connection to pension portfolios Generate transfer indexes for the private debt market, suitable as start point to assess portfolio managers.	Finance Superintendence Finance Superintendence Finance Superintendence BVC								



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