LUXEMBOURG GREEN EXCHANGE

Global Landscapes Forum

How can Green Bonds catalyse investments in biodiversity and sustainable land-use projects?

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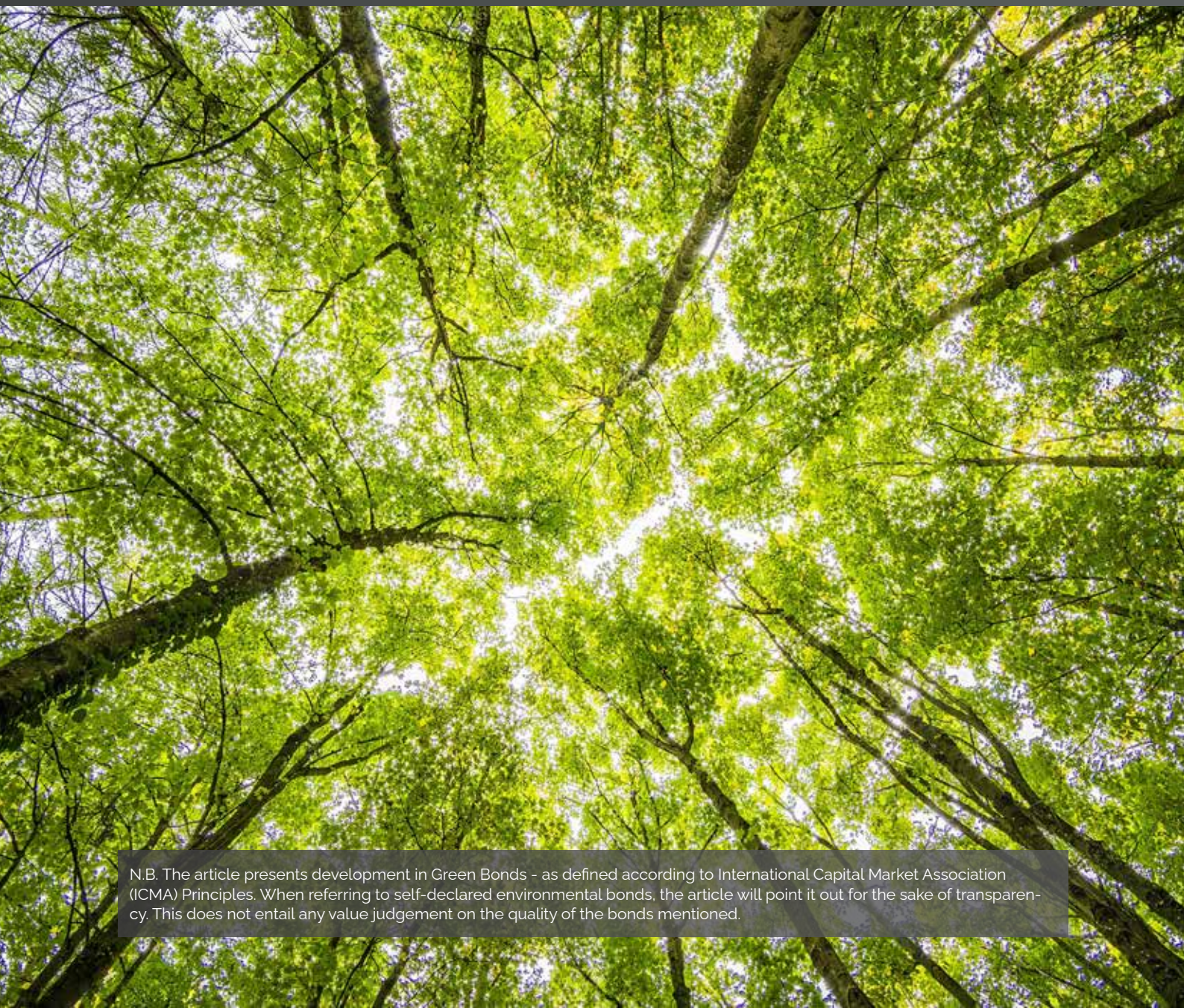

N.B. The article presents development in Green Bonds - as defined according to International Capital Market Association (ICMA) Principles. When referring to self-declared environmental bonds, the article will point it out for the sake of transparency. This does not entail any value judgement on the quality of the bonds mentioned.

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Key messages, facts and figures

- At the time of writing, sustainable land use represent about 3 percent of Green Bonds' proceeds allocation.
- Significant increase in Green Bond issuance for biodiversity and sustainable land use could take place under specific conditions, such as more clarity on proven business models, risk mitigation instruments and impact reporting metrics.
- Sovereign entities and municipalities, as well as private organizations, could consider issuing Green Bonds that are focused on biodiversity and sustainable land use, especially in jurisdictions that are known for their natural capital and ecosystems.
- Capacities must be developed to unlock business models and projects for the use of Green Bonds' proceeds that benefit biodiversity and sustainable land use.
- More technical assistance programs are needed to support Green Bond issuers and to mainstream biodiversity and sustainable land use in Green Bonds standards. This may include assistance to local agencies and private organizations playing a landscape coordination role.
- The European Union (EU) Sustainable Finance Taxonomy and its future adoption by investors and financial institutions may represent a significant driver for biodiversity and sustainable land use projects once the Taxonomy is completed to cover all its six environmental objectives, including the final objective on protection and restoration of biodiversity and ecosystems.
- The EU Green Bonds Standards (GBS) will soon enter the EU market to provide more detailed and clear definitions that will be directly aligned with the EU Sustainable Finance Taxonomy.

Introduction

Biodiversity loss, rapid deforestation and forest degradation appear to be some of the root causes behind the emergence of zoonotic diseases such as COVID-19[1]. While addressing the challenge of forest and landscape restoration and biodiversity conservation worldwide, reducing health issues and pandemic risks can also be tackled, and it is critical to think about how financing innovations can be part of the solution. While Green Bonds are emerging as sustainable finance instruments, it seems very timely to assess to which extent they can support biodiversity and sustainable land use investments in this current context and in the future.

To address this question, the Luxembourg Green Exchange (LGX) worked with the Global Landscapes Forum (GLF) to develop the following paper. The proposals in this paper will serve to inform: i) the necessary debates on sustainable biodiversity finance in the context of the Post 2020 Global Biodiversity Framework and related negotiations, which will occur between 2020 and 2021 under the Convention on Biological Diversity (CBD); and ii) the resource mobilization efforts required to achieve the UN Decade on Ecosystem Restoration beginning in 2021.

Key definitions

What is a Green Bond?

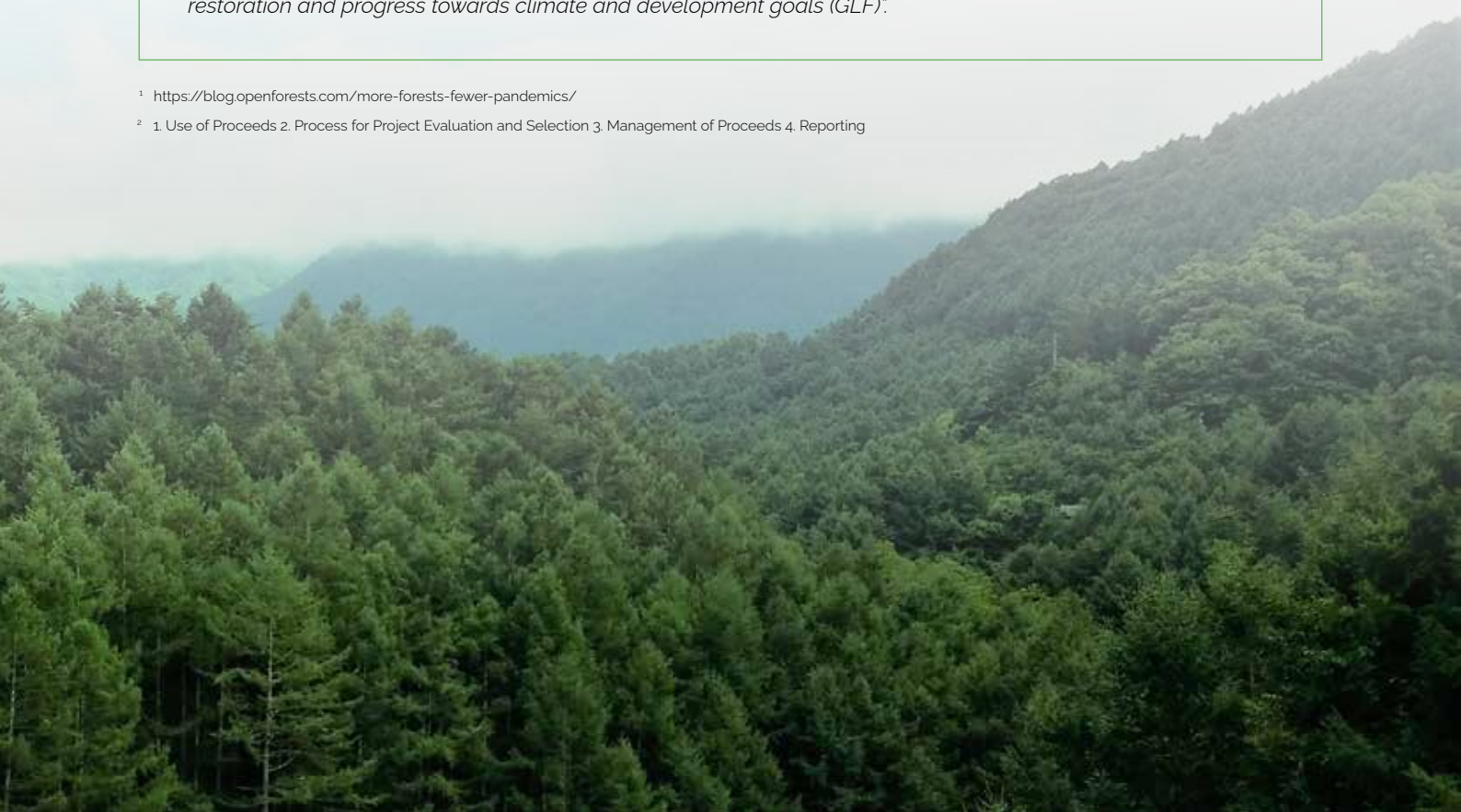
Green Bonds are any type of bond instrument where the proceeds are exclusively applied to finance or re-finance, in part or in full, new and/or existing eligible Green Projects and which are aligned with the four core components of the Green Bonds Principles (GBPs)[2].

What is the landscape approach?

"The Landscape Approach is about balancing competing land use demands in a way that is best for human well-being and the environment. It means creating solutions that consider food and livelihoods, finance, rights, restoration and progress towards climate and development goals (GLF)".

[1] https://blog.openforests.com/more-forests-fewer-pandemics/

[2] 1. Use of Proceeds 2. Process for Project Evaluation and Selection 3. Management of Proceeds 4. Reporting



Why Green Bonds may be relevant for natural capital investments

What are Green Bonds and how can they be issued?

First issued by the European Investment Bank (EIB) in 2007 under the name Climate Awareness Bond (CAB), and the World Bank in 2008, Green Bonds are debt instruments where the proceeds will be exclusively used to finance (or refinance) projects with environmental benefits. For example: renewable energy, energy efficiency, clean transportation, etc. This is what is called a "Use-of-Proceeds" (UoP) bond.

Different standards govern the Green Bond market and provide guidance to issuers. For example, the Green Bond Principles (GBPs) from the International Capital Market Association (ICMA)[3], and the Climate Bonds Standards from the Climate Bonds Initiative (CBI)[4], are the two main standards widely used[5]. The common feature of these standards is their voluntary application by issuers, which leave the market with some uncertainty. The EU Green Bonds Standards (GBS)[6], also voluntary in nature, will soon enter the EU market to provide more detailed and clear definitions. This is linked to the EU Taxonomy on Sustainable Finance, and will therefore become the most stringent set of standards in the market.

Each set of standards covers almost all the same eligible green projects categories in which the proceeds of the bonds can be invested: renewable energy, energy efficiency, clean transportation, water management and waste management, land use, climate change adaptation, etc.

Issuers of Green Bonds are generally sovereigns, local governments/authorities, financial and non-financial corporates, supranational and development agencies/banks.

As per CBI's reporting, the global Green Bond market has seen rapid growth since its inception in 2007. Over the last three years, total issuance increased from USD 87.2 billion in 2016 to USD 257.7 billion in 2019 (CBI, 2017; 2019d). The United States, China and France accounted for the majority of these issuances. A lot of this growth has been captured by different stock exchanges where Green Bonds are listed, notably the Luxembourg Stock Exchange (LuxSE), which established the first dedicated Green Exchange (LGX) to list green, social and sustainability securities in 2016.[7]

Type of financing needed for investments in biodiversity and sustainable land-use

Investments in biodiversity and sustainable land use are a rather long-term investment, and they encompass multiple investment types in sustainable forestry and agriculture, nature conservation, sustainable tourism, among others. They fit well with the landscape approach fostering multi-sectoral types of projects at the territorial level.

With multiple value chains involved, such projects can be complex in their coordination and governance. Nonetheless, they have the ability to support the development of several interconnected revenue streams and job creation.

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3 https://www.icmagroup.org/
4 https://www.climatebonds.net/
5 China has its own standards. Mainly the PBOS Catalogue. For more information https://greenfinanceplatform.org/financial-measures-database/peoples-bank-china-green-bond-endorsed-project-catalogue
6 https://ec.europa.eu/info/publications/sustainable-finance-teg-green-bond-standard_en
7 https://www.bourse.lu/green

For example, organic farming, forest restoration and the development of wood and non-wood forest products, ecotourism, and clean water production can be interconnected and mutually benefitting sectors at a landscape level.

The World Resources Institute (WRI) assesses the stock of land that needs to be restored at 2 billion hectares[8] globally, with a land degradation rate of about 12 million hectares annually (UNCCD)[9]. The challenge for forest and landscape restoration is therefore huge, and the Food and Agriculture Organization of the United Nations (FAO) and the United Nations Convention to Combat Desertification (UNCCD) (2015) estimate that more than USD 40 billion per year is needed to achieve restoration commitments (Bonn Challenge, Initiative 20x20, AFR100, ECCA30, New York Declaration on Forests, etc) by 2030.

A diverse range of funding sources and instruments will certainly be needed, and Green Bonds could have a key role to play in achieving this goal.

A number of revenue generating sustainable land use projects types have been identified, as highlighted in Table 1. In the examples below, the role of public institutions to put the right legal and institutional frameworks and incentives in place is critical to valorize ecosystem services.

Table 1 | Examples of natural capital based revenue generating activities (adapted from SSIR, 2016)

Revenue type	Description	Examples
Sustainable Commodity Production	Commodities produced on the land that have an existing value in the market, such as sustainable wood and non-wood forest products, organic agricultural products, etc	Organic agricultural products, timber, non-timber forest products
Recreation & Ecotourism	Revenue generated from land use by recreational users or tourists, through visitor fees (entrance fees in protected areas) or concessions	Recreation fees, ecotourism concessions, for example in protected areas such as National Parks, and their peripheric zones
Tax Revenues	Tax and regulatory frameworks that associate sustainable land use and conservation projects with quantifiable tax benefits	Green and environmental taxes, earmarked taxes for biodiversity, real estate transfer taxes, etc
Credits for Ecosystem Services	Value of Environmental Services or Resources in markets where these services or resources have agreed-upon prices	Water credits, carbon credits, river quality credits
Risk Mitigation & Avoided Costs	Projects whose environmental benefits help the borrower avoid costs that would otherwise be incurred. Development of Nature-based Solutions and Ecosystem-based Adaptation	Municipality or corporation weighing costs of green vs grey infrastructure investment, e.g. upstream riverside land conservation to reduce the need for downstream water filtration infrastructure investments; green walls to mitigate flooding risks
Access and Benefit Sharing (ABS) agreements	ABS is part of the Nagoya Protocol (negotiated under the CBD umbrella) and plans for a sharing of benefits from the commercial use of genetic and biological resources from endemic species	ABS agreements between private companies and states/local communities (in ideal situations, backed by national laws and decrees)

[8] https://www.wri.org/resources/maps/atlas-forest-and-landscape-restoration-opportunities
[9] https://www.unccd.int/issues/land-and-human-security

How can bonds match such financing needs?

Bonds, which are usually long-term debt instruments, can match the long-term nature of biodiversity and sustainable land use investments. They can be easily developed by or in developing countries where almost all development projects take place in areas that, in most cases, overlap in biodiverse regions of these countries.

Several biodiversity and sustainable land use project types or financing needs can potentially be met or financed/covered by bonds, including activities detailed in Table 2 below.

Table 2 | Potential project types supported by bonds (adapted from SSIR, 2016)

Project type	Activities examples
Conservation easement purchase (purchase of development rights at the benefit of conservation)	Extinguishment of development rights to increase natural wetland buffering; control of agricultural land use rights in upstream land holdings to increase sustainable practices and reduce run-off
Land purchase[a]	Purchase of land holding to convert into land conservation and/or restoration (e.g.; grassland conservation, forest restoration, post-fire regeneration, etc), or to establish more sustainable land use operation (e.g., transition from conventional to sustainable and climate-smart agriculture and /or forest management)
Establishment of a sustainable forestry or organic agricultural production operation	Construction of a timber mill for certified sustainable wood or set up a plantation of sustainably produced and certified agriculture product (e.g. cocoa, coffee, tea, etc)
Establishment of a recreation or ecotourism operation	Construction of the physical structures and infrastructure required to operate a recreation area or an ecotourism operation
Payments for ecosystem services	Establishment of a framework for payment for ecosystem services (e.g. payments for watershed services); fund-based payments for ecosystem services; establishment of carbon finance projects to protect standing forests, REDD+ projects, etc
Mitigation banking and off-setting	Development of biodiversity offsets to compensate for the residual biodiversity impacts of project development
Green infrastructures and Nature-based Solutions	Development of biological corridors, e.g. fauna bridges, wildlife crossings systems; and investment in green infrastructures (green walls, green roofs, ecosystem-based infrastructures, etc)

[a] Land grabbing risks should be always avoided and the "Voluntary guidelines on the responsible governance of tenure of land, fisheries and forests in the context of national food security" should be implemented : http://www.fao.org/cfs/home/activities/vggt/en/

In relation to Green Bonds, some challenges are still very acute in mobilizing such instruments for biodiversity and sustainable land use/landscape projects, for instance:

- What seems to be currently missing are types of use-of-proceeds projects serving multiple value chains with a landscape approach.
- The relatively small size of projects. The Green Bond Market shows the average size of a Green Bond is USD 150 million (CBI report 2019). In general, land use and biodiversity projects are unlikely to reach such a scale, unless they are bundled into larger investment opportunities.

Innovations needed to support multi-sectoral investment projects through Green Bonds

Support for multiple sectors and related value chains is core to the landscape approach. As previously mentioned, impactful landscape projects often require coordination and governance efforts which local stakeholders such as local governments, public agencies, private companies and NGOs may be well positioned to lead on.

But what would it take for these local organizations to be ready to play this coordination role? What capacities would be required? What types of investment vehicles would be needed as a bridge between investors and multiple value chains?

For local stakeholders to play such a key role in building more bankable landscape projects that fit the requirements for the use of Green Bonds' proceeds, it is critical to plan for adequate technical support and capacity development. To this end, assistance from international partners may be needed, for example in the framework of ongoing and future technical cooperation programs on forest and landscape restoration.

What is the state of the art of the Green Bond market towards biodiversity and sustainable land use investments?

How much financing does it currently represent?

In 2019, issuance of Green Bonds reached a global record of USD 259 billion with a 50 percent growth from 2018 (USD 171.2billion)[10]. The United States, China and France remain the main issuers of Green Bonds with 44 percent of global issuance in 2019. Issuers from the United States contributed USD 51.3 billion to this total, whereas their Chinese and French counterparts brought USD 31.3 billion and USD 30.1 billion, respectively, to market. This shows the strong demand of investors, including governments, as they increasingly turn their attention to Green Bonds to finance a broad range of eligible categories including natural assets such as water, soil, biodiversity and sustainable land use. Therefore, one could say that theoretically, Green Bonds can represent a potential tool to finance biodiversity and sustainable land use projects. However, the reality of the market is a bit different.

According to CBI reports on the state of the Green Bond Market (2017-2019), energy (including buildings) and transport projects dominated Green Bonds allocation. The three sectors represented almost 80 percent of the allocation of proceeds in the last three years. While all the remaining sectors shared the remaining 20 percent. Although the share of land use allocation increased in the last three years, it currently represents only 3 percent in best cases of proceeds allocation[11].

While Green Bonds are rapidly scaling up, they focus primarily on climate change mitigation and rarely include biodiversity and sustainable land use relevant finance as their relative proportion in UoP is still quite low. In the context of scarce data disaggregated for biodiversity specifically, one wonders what the actual proportion of biodiversity-relevant bonds is, as a fraction of Green Bonds.

It is logical to say that some sectors are much more advanced than others. Renewable energy, energy efficiency and transport, for example, have been the centre of national and regional policies towards reaching the CO2 reductions targets and the transition to a low carbon economy. Results in these fields are much easier to measure and the impact is quicker to see. Therefore, some other sectors (although vital for the transition) such as biodiversity and sustainable land use received less attention and are less developed in terms of regulations, measurements and impact metrics, and stands at the bottom of the list of asset managers for investors targeting.

But improvements in this field are in development: ICMA's Impact Reporting Working Group, in its key document, *"Suggested Impact reporting Metrics for Biodiversity Projects"* (published in April 2020), has proposed a set of indicators for Protected areas and Other Effective Area-based Conservation Measures, for landscape conservation/degradation together with sub-indicators and benchmarks mirroring the related international standards[12].

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[10] www.climatebonds.net/system/tdf/reports/cbi_sotm_2019_vol1_04c_0.pdf?file=1&type=node&id=47577&force=0

[11] It is not clear, though, that biodiversity is formally included in this land use category.

[12] Such as the IUCN Red List of Threatened Species.

How biodiversity and sustainable land use is embedded in current Green Bonds' categories

Biodiversity and sustainable land use are addressed under two Green Bonds Principles' (GBP) categories:

- Terrestrial and aquatic biodiversity conservation (including the protection of coastal, marine and watershed environments)
- Environmentally sustainable management of living natural resources and land use

ICMA has established different working groups to address different challenges in the Green Bond Market and to provide further guidance. One of these working groups, previously mentioned, is the Impact Reporting Working Group, which has the mission of developing reporting impact metrics. The group has proposed a harmonized framework for impact reporting to capture and illustrate the environmental and sustainability benefits of projects relating to biodiversity, which are recognized by the GBP for Green Projects under one of the ten broad categories of eligibility for Green Projects:

"Terrestrial and aquatic biodiversity conservation (including the protection of coastal, marine and watershed environments)". [13]

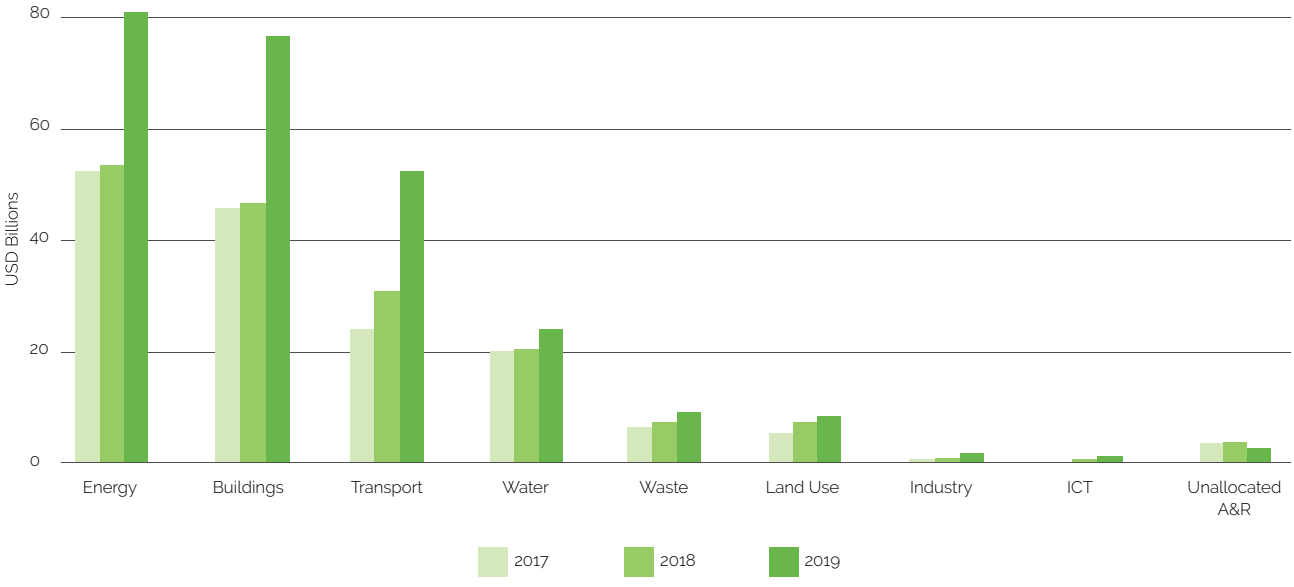
As per that document, which was issued in April 2020[14], biodiversity should be the primary or secondary goal of any project or portfolio of projects reported under this GBP category. For example, projects which are focused on safeguarding and/or developing protected terrestrial and marine areas and systems, forest conservation, or such programs as Reducing Emissions from Deforestation and Forest Degradation (REDD) and typically require a preliminary analysis and inventory of core species that need protection.

Projects that focus primarily on other targets and approach biodiversity from the perspective of minimizing damage, or managing biodiversity risks in projects, should not fall under the biodiversity project category. The GBP/ICMA suggested impact reporting metrics[15] for biodiversity investments will surely be a driver for more UoP to the benefit of ecosystems conservation and restoration.

What are success stories and good cases?

Despite the small share, several examples of Green Bonds financing biodiversity and sustainable land use projects exist. LGX, the dedicated platform for Green finance at the Luxembourg Stock Exchange displays several issuances of Green Bonds where issuers claim to finance biodiversity and sustainable land use related projects. Table 3, seen below, gives a couple of these examples along with their environmental impact.

Figure 1 | Land Use share of UoP in 2019[b]



[13] This is one of the ten broad categories of eligibility for Green Projects under the GBP 2018. Other harmonized frameworks for impact reporting are: sustainable water and wastewater management projects (June 2017), sustainable waste management and resource-efficiency projects (February 2018), clean transportation projects (June 2018), and green buildings (March 2019).

[14,b] Authors of the Impact Reporting Working Group acknowledge that this document only partially covers biodiversity in agricultural production systems, e.g. the transfer of unsustainable agricultural production into biodiverse food systems (agroecology) or biodiversity in urban environments. The authors acknowledge the importance of developing harmonized indicators for such projects as well, which predominantly fall under the separate GBP project category of "environmentally sustainable management of living natural resources and land use".

[15] https://www.icmagroup.org/green-social-and-sustainability-bonds/impact-reporting/

Table 3 | Examples of natural capital relevant Green Bonds, listed on LGX[c]

Issuer	Project	Amount	Carbon benefit	Sustainable land use/biodiversity indicator
African Development Bank (Green Bonds portfolio) *MDB Green Bond*	Farm Income Enhancement and Forestry Conservation Programme - Project 2 - Uganda	Amount allocated USD 12 million	reduced or avoided (in tons CO_2e) : 10,276	3,400 ha of irrigated land 4,200 ha of degraded forest rehabilitated
RBF *Corporate Green Bond*	Sustainable forest management in Brazil	Cost of the project: R$ 35,620,744		31,802 ha is the Renewable Forest area[d]
World Bank *MDB Green Bond*	Coral Reef Rehabilitation and Management Program- protect and sustainably manage unique coral ecosystems in selected districts and provinces in Indonesia			1.4 million ha of marine areas brought under biodiversity protection.
Klabin[e] *Corporate Green Bond*	The two following items are included : Restoration of Native Forests and Conservation of Biodiversity Sustainable Forest Management Brazil	USD 350 million		Not yet available
MICRO, SMALL & MEDIUM ENTERPRISES BONDS S.A *Corporate Green Bond*	Agriculture, forestry and land use Sustainable agriculture - Sustainable animal husbandry - Climate smart farm inputs (e.g. biological crop protection, drip irrigation) - Sustainable fishery and aquaculture - Sustainable forestry (afforestation, reforestation, forest rehabilitation/ restoration, existing forest management) - Preservation or restoration of natural landscapes Sri Lanka	Not yet available	Not yet available	Not yet available

Other examples of bonds to learn from may include some of the list specified in Table 4. As a word of caution, these bonds are self-declared as environmental bonds. They may nonetheless be sources of inspiration for models of future Green Bonds[16].

[c] The table presents examples of Green Bonds which include biodiversity and sustainable land use but also consider other categories.
[d] The issuer has used this term for its sustainable forest management program
[e] Klabin was one of the first companies to adopt mosaic forestry management, which mixes planted forests and preserved native forests. Ecological corridors allow the transit of animals in large areas, contributing to the preservation of fauna and flora and the conservation of water resources
[16] N.B. Other types of bonds can be relevant for biodiversity and sustainable land use, such as Sustainability bonds, environmental bonds and impact bonds. SDG linked bonds could also play a big role as biodiversity elements can be found in all SDGs goals

Table 4 | Other potentially relevant environmental bonds[f]

Instrument	Issuer	Quick description
Forest Resilience Bond (FRB)	Blue Forest Conservation	The FRB is an environmental impact bond that deploys private capital to make national forests in the US more resilient to a changing climate. By investing in restoration projects that protect forest health, the FRB mitigates the risk of catastrophic wildfire while also protecting water resources, avoiding carbon emissions, and creating rural jobs. These impacts protect communities near and far while also benefiting public and private stakeholders such as the US Forest Service, water and electric utilities, private water-dependent companies, and state governments. The FRB contracts with the beneficiaries to share in the costs of forest restoration while providing modest returns to investors. https://www.blueforestconservation.com/frb/
Rainforest Impact Bond	ADM Capital	A USD 1 billion bond program to provide needed finance for forest conservation and development. The Rainforest Impact Bond would support a finance mechanism to protect forests, offering investors the means to help countries cut deforestation and reduce global carbon emissions. https://www.globenewswire.com/news-release/2015/04/28/1236765/0/en/Innovative-Rainforest-Bond-Structure-Unveiled-at-Indonesia-Tropical-Landscapes-Summit.html
Althelia Conservation Notes	Crédit Suisse	"The Nature Conservation Notes issued by Credit Suisse and Althelia Ecosphere were an impact investing product designed to help reduce carbon emissions from deforestation and promote sustainable agriculture. They were developed jointly by the bank and the environmental investment specialist Althelia, and the proceeds were to be channelled to the Althelia Climate Fund. Though modest in size – €15 million ($16 million) – the issue innovatively combines two tools of environmental finance: carbon credits and green bonds". https://www.environmental-finance.com/content/deals-of-the-year/sustainable-forestry-credit-suisse-althelia-ecosphere.html
Rural Prosperity Bond	WRI	The Rural Prosperity Bond will allow small and medium enterprises (SMEs) to work in sustainable agriculture to sell their products to smallholder farmers on financially reliable credit. This bond will help tens of thousands of farmers adopt regenerative practices that are currently beyond their reach. Examples of services and products that could be supported by the Rural Prosperity Bond include drip irrigation, organic land amendments, agroforestry planning, tree planting services, and sapling purchases, among additional technologies. The proponent estimates that, once fully operational, the Bond could furnish over USD 35 million in new lending toward restoring degraded landscapes and sustainable agriculture, while supporting hundreds of SMEs. https://www.climatefinancelab.org/project/rural-prosperity-bond
Environmental Impact Bond for Green Infrastructure (blueprint, in development)[g]	CPIC	Environmental Impact Bonds (EIBs) can serve a host of project-based conservation efforts. With financial returns tied to environmental outcomes, impact investors can share the risk and reward of conservation investments in new and innovative ways.

[f] Not necessarily labelled as Green Bonds according to the GBP principles.
[g] More information on EIBs: http://cpicfinance.com/wp-content/uploads/2019/01/CPIC-Blueprint-Environmental-Impact-Bond-for-Green-Infrastructure.pdf

What are the main limitations for Green Bonds as an instrument for biodiversity and land use finance?

There is a lack of **suitable data** by which to measure an investment's impact, especially in biodiversity and sustainable land use, and could be one of the areas that might deter investors from investing in such projects.[17] The effort to harmonize reporting and risks management approaches on natural capital (as supported by the Task-Force on Nature-related Financial Disclosures (TNFD)[18] initiative) to foster transparency and application of the 'do no harm' principle may be part of the equation to increase attractiveness for investors.

Further **additionality** of Green Bonds is sometimes brought into question. Would a normal bond finance the same types of projects as Green Bonds? Is the green label mostly supporting marketing for the bond issuers? Such questions continue to be asked and that is why definitions within standards and impact reporting are critical to prove the additionality of Green Bonds. Indeed one of the challenges is the lack of unified definitions of what is 'Green'. This is not strictly a Biodiversity bond issue. Rather, it is a Green Bond Market issue. However, some investors who might be interested in investing in sustainable land management and biodiversity conservation will be reluctant to invest in such sectors where the risk of greenwashing is high due to the lack of clear definitions.

More importantly, the perceived **low returns** of sustainable land use investments, and a significant **risk** level could lead to Green Bonds for biodiversity and sustainable land use projects appearing as not very attractive to traditional investors. Therefore, **risks sharing and guarantees mechanisms** are very much needed to enhance investors' interest in such Green Bonds, and sharing success stories of Green Bonds, backed by risk mitigation mechanisms, will be critical. This is where national and local governments may be able to play a role in unlocking the potential of Green Bonds.

[17] Important to say that some useful data sources on biodiversity are already available, such as the IBAT (Integrated Biodiversity Assessment Tool) which assesses whether a proposed project is located in an area of high biodiversity value, if potentially there are endangered species recorded in proximity, as well as identifying protected areas or natural reserves. If one or more such risks are identified, it triggers additional studies and evaluations.

[18] More information : https://tnfd.info/

The way ahead

National and local jurisdictions taking the lead in creating an enabling environment

In the past, some biodiversity conservation efforts have tended to focus on individual, local environmental challenges on smaller land areas; on specific sites, or specific populations, and often taking an opportunistic approach without an eye to the broader landscape.

Today, local and national jurisdictions have to address challenges related to biodiversity conservation, sustainable resource management and restoration of degraded habitats with solutions best suited when using an ecosystem and landscape-based approach.

Some countries are showing the way.

- The Netherlands provides us with several successful initiatives where Green Bonds were issued to serve a landscape approach[19]. Success was a result of engagement by several stakeholders such as financial institutions, municipalities and local authorities such as water authorities, together with the financial support of the central government and politicians.

- Parts of Canada are already implementing the landscape approach. For instance, the province of Ontario issued Green Bonds featuring forestry, agriculture and land management among the use-of-proceeds eligible categories[20].

The above examples show us that the governance and coordination of a multi-stakeholder approach, and the credibility degree of the different stakeholders are crucial for the success of land use Green Bonds issuance. In addition, the efforts by national and local institutions to create an enabling environment is critical.

Technical assistance for new Green Bonds issuers, especially in emerging markets and developing countries

Generally speaking, there is still a lack of clear guidance on how to issue a Green Bond. Some issuers – including sovereigns and especially developing countries – might see this as a main blocker when entering the market, as they do not have the qualified human resources to carry out the needed work.

Initiatives fostering education in this field should be encouraged, to support the development of Green Bonds markets for new issuers, and for issuances in new sectors. For instance, the Amundi – Planet emerging Green One (EGO) fund was launched in March 2018, with the support of the Green Bond Technical Assistance Program (GB-TAP), which is managed and administered by IFC. This program aims to enhance the supply of Green Bonds issued by financial institutions in emerging markets. It offers a wide range of support to potential issuers, including executive training on Green Bond issuances, support to enhance reporting by issuers, and knowledge-sharing[21].

Similarly, the Biodiversity Finance Initiative (BIOFIN) by UNDP is supporting countries like Zambia to mainstream biodiversity in Green Bonds guidelines[22].

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[19] Green bonds and integrated landscape management options for innovative financing of landscape initiatives (IUCN National Committee of The Netherlands) - 2018

[20] https://www.ofina.on.ca/greenbonds/greenbonds.htm

[21] The Program is funded by the Swiss State Secretariat for Economic Affairs (SECO), the Swedish International Development Cooperation Agency (Sida) and the Luxembourg Ministry of Finance. As an example, İşbank from Turkey managed to issue its first Green Bond after benefiting from the above mentioned training in 2019. The category "Environmentally Sustainable Management of Living Natural Resources and Land Use" appears among the categories considered eligible for the issued Green Bonds.

[22] https://www.biodiversityfinance.net/zambia

The sustainable finance taxonomy as a driver

The EU Taxonomy on Sustainable Finance is a potential driver for investments in Green Bonds in general, and in the land use/biodiversity sectors in particular. Indeed "protection and restoration of biodiversity and ecosystems" is one of the EU's six key environmental objectives. Other environmental objectives strongly integrate biodiversity issues, such as "sustainable and protection of water and marine resources" and "pollution prevention and control". Further nature-based solutions are promoted as part of the "adaptation to climate change" and "climate change mitigation" objectives.

The role of the Luxembourg Green Exchange (LGX) going forward

While many challenges remain to seize the potential of Green Bonds for biodiversity and sustainable land use projects, LGX is contributing to the development of the sustainable finance market in order to ensure that sustainable finance becomes mainstream. Solutions include the launch of its Academy initiative[23] for professional education in sustainable finance, and the launch of the LGX data hub[24] as a central location for granular and structured data on the green, social and sustainability bonds market.

By guiding investors and issuers to follow the impact of green investments of their Green Bonds, LGX could help in highlighting new sectors and new markets where finance is needed, while also helping to raise awareness among finance experts around Green Bonds and sustainable finance education.

[23] https://lgxhub.bourse.lu/academy
[24] https://www.bourse.lu/lgx-datahub

Further reading

- Green Bonds and Land Conservation: A New Investment Landscape? By Carolyn Mansfield du Pont, James N. Levitt, & Linda J. Bilmes (SSIR) https://ssir.org/articles/entry/green_bonds_and_land_conservation_a_new_investment_landscape
- Green Bonds and Integrated Landscape Management report https://www.government.nl/documents/reports/2018/03/30/green-bonds-and-integrated-landscape-management
- The GBP Impact Reporting Working Group – Suggested Impact Reporting Metrics for Biodiversity Projects, April 2020 : https://www.icmagroup.org/green-social-and-sustainability-bonds/impact-reporting/
- CPIC (2019). Conservation Investment Blueprint: Environmental Impact Bond for Green Infrastructure With Environmental Outcome Based Incentives Developed based on the Case Study for Watershed Protection by Quantified Ventures and on the Case Study for Coastal Resilience by Environmental Defense Fund
- EU taxonomy : EU taxonomy for sustainable activities | European Commission
- ICMA Green Bonds Principles GBP 2018: https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/Green-Bonds-Principles-June-2018-270520.pdf
- CBI reports 2019 : https://www.climatebonds.net/files/reports/2019_annual_highlights-final.pdf
- Video UNDP BIOFIN on Green Bonds : https://www.youtube.com/watch?v=rzLprdYG_1g

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Authors wish to thank Mr Benoit Pauly, former Manager at LGX who helped shape the early stage of this joint LGX-GLF publication.

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