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GREEN EXCHANGE
by Luxembourg Stock Exchange

Mastering the Due Diligence Cycle for Green, Social, and Sustainability (GSS) Bonds

July 10-11, 2025

Abidjan, Côte d’Ivoire

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SESSION 1: Pre-issuance

Understanding the foundations of GSSS bonds and Opportunities for participants

Green, social & sustainability (GSS) bonds

Green bonds

A **green bond** is a **debt instrument** that is issued to raise capital specifically to support **climate-related/environmental projects or activities**

Social bonds

A **social bond** is a **debt instrument** that is issued to **raise capital** specifically to support projects or activities with a **social benefit**

Sustainability bonds

A **sustainability bond** is a **debt instrument** that is issued to **raise capital** to support projects or activities with **environmental and social benefits**

Source: ICMA adapted by LGX

New instruments

Sustainability-linked Bonds (SLBs)

An **SLB** is any type of debt instrument for which the **financial and/or structural characteristics can vary** depending on whether the **issuer achieves predefined sustainability/ESG objectives**

A NEW NON-USE OF PROCEEDS INSTRUMENT

Drivers of sustainable finance

- **Paris Climate Agreement (2015)**
  - Nationally Determined Contributions (government emissions reduction targets)
  - Goal: Limit warming to 2°C, carbon neutral by 2050
  - Foundation for climate finance
  - Minimum investment required: $100bn annually
- **Sustainable Development Goals (2016)**
  - 17 environmental and social goals, targets for each
  - Designed to be universal for developed and developing countries
  - Investment requirements projected: $5-7tn annually
- **Policy developments/regulators**
  - EU Emissions Trading System
  - Green Covered Bond Law (Luxembourg)
  - EU Action Plan on Sustainable Finance

International Agreements

Policy & Regulatory Developments

Drivers of sustainable finance

Market opportunities

Investor interest

Civil society values

» **Market Opportunities**

- Developing extra-financial impact instruments to cater to a wider investor base
- Establishing long-term competitive advantage by considering environmental & social risks and opportunities

» **Investor interest**

- Steadily increasing interest in ESG-oriented investment over the last decade

» **Civil society values**

- Shifting attitudes to acceptability of technologies (e.g. Diesel scandal estimated cost: $35bn)
- Increasing acceptance of the need to address environmental challenges (e.g. plastics, climate impacts such as forest fires, flooding, water shortage etc.)
- Millennials twice as likely to invest in companies targeting social or environmental goals

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GSS Bonds Principles

Core Principles

Use of Proceeds	Process for Project Evaluation and Selection	Management of Proceeds	Reporting
• Green bonds finance projects with clear environmental benefits, like renewable energy, energy efficiency, or pollution prevention. • Social bonds fund projects with positive social outcomes, such as affordable housing, healthcare, or education. • Sustainability bonds combine both green and social objectives, addressing broader environmental and social challenges. • The issuer must clearly identify and describe the eligible projects in the bond documentation.	• Issuers should have a clear and transparent process for identifying and selecting projects that align with the bond's objectives. • This process should involve internal expertise and potentially external reviews to ensure alignment with established principles. • The process should also outline how the issuer will manage potential negative social or environmental impacts of the projects.	• Proceeds from GSS bonds should be tracked and managed separately from the issuer's general funds. • Issuers should establish a system for tracking the allocation of funds to specific projects and monitor their progress. • This ensures that the funds are used as intended and that the environmental or social benefits are realized.	• Issuers are required to provide regular updates on the use of proceeds, project progress, and the achieved impact. • This reporting should be transparent and readily available to investors and other stakeholders. • Annual reports should include a list of projects, their descriptions, and the amounts allocated.

Source: ICMA adapted by LGX

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GSS Bonds (Use of Proceeds bonds)

Green, social and sustainability bond procedures

I Use of Proceeds → **Eligible Activities/Taxonomy (The "What"?)**

II Project Evaluation & Selection Process

III Management of Proceeds

IIII Reporting

→ **Process and Procedures (The "How"?)**

External reviewer

The Green Bond Principles

The Social Bond Principles

The Sustainability Bond Guidelines

Source: ICMA

The wider world of use of proceeds bonds

Gender bonds

Rhino bonds

Green bonds

- Climate bonds
- Forest bonds
- Blue bonds

Social bonds

- Affordable housing bonds

Sustainability bonds

- SDG bonds

Carbon neutral bonds

Green Massala bonds

Source: ICMA

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Green bonds

Eligible Activities financed by green bonds

AS PER ICMA'S GREEN BOND PRINCIPLES (GPBs)

- Renewable energy
- Energy efficiency
- Pollution prevention and control
- Environmentally sustainable management of living natural resources and land use
- Terrestrial and aquatic biodiversity
- Clean transportation
- Sustainable water and wastewater management
- Climate change adaptation
- Circular economy adapted products, production technologies and processes; and/or certified eco-efficient products
- Green buildings

The Green Bond Principles

ICMA

Green Bond Principles

Voluntary Process Guidelines for Issuing Green Bonds

June 2021
(with June 2022 Appendix 1)

Source: ICMA Green Bond Principles (GBP)

Example 1: ABSA BANK LIMITED

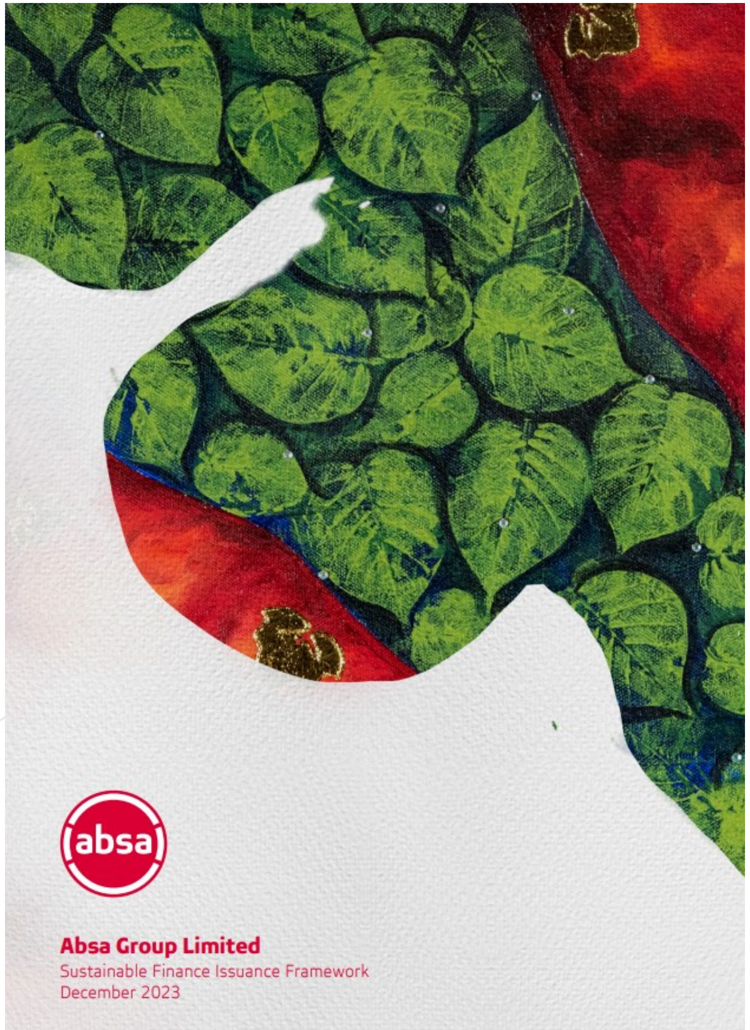
RENEWABLE ENERGY BOND

» Key Figures

- Country: South Africa
- ISIN: ZAG000207267
- Amount issued : 1 260 000 000 ZAR
- Issuance date : 31/07/2024
- Maturity date: 31/07/2031
- Coupon rate : 9,55%

» Use of Proceeds:

- The Issuer will use the net proceeds of the issue of the Notes to fund and/or refinance, in whole or in part, on a portfolio basis, renewable energy assets which may include, without limitation, solar and wind projects. The application of the net proceeds will therefore fall within the 'Renewable energy' category, as set out in the Sustainable Finance Issuance Framework.



absa

Absa Group Limited

Sustainable Finance Issuance Framework

December 2023

Source: ABSA

Example 2: EMERGENCE PLAZA (COSMOS YOPOUGON

FINANCE OR REFINANCE GREEN CERTIFIED RETAIL DEVELOPMENTS

- » Location: Côte d'Ivoire
- » Key Figures
- ISIN: CI0000004784
- Issuance date: 12/08/2021
- Maturity date: 12/08/2028
- Issued amount in local currency: 10 000 000 000 XOF
- Coupon: 7,5%
- Eligible category: Green Buildings

3. Emergence Plaza's Green Bond Approach

Sustainability Approach

Emergence Plaza SA strives to be the leader in Africa in sustainable retail developments, maximizing economical outcome with innovative cutting-edge energy efficient and sustainable building principles and operational excellence.

The Emergence Plaza SA Green Bond Framework follows the ICMA Green Bond Principles 2018 edition, which provides guidelines in four key areas:

1. Use of proceeds
2. Process for project evaluation and selection
3. Management of proceeds
4. Reporting

Use of Proceeds

Emergence Plaza SA intends to allocate the net proceeds of Green Bond issuances to finance or refinance green certified retail developments.

In line with the key focus areas of the IFC EDGE tool, eligible Green Buildings must achieve a minimum 20% reduction in Energy Efficiency, Water Consumption and Materials Efficiency respectively as compared to the baseline in the market.

Emergence Plaza SA seeks IFC EDGE certification for architectural drawings (preliminary certification) and final IFC EDGE certification upon completion of construction.

Process for Project Evaluation and Selection

Projects financed and/or refinanced through Green Bond proceeds are evaluated and selected by Emergence Plaza SA's Green Bond Committee (the "Committee").

The Committee consists of members of the Emergence Plaza SA board of directors and members of the management as well as other parties nominated as subject matter experts. The Committee will manage any future updates to the Framework, including expansions to the list of Eligible Categories, and oversee its implementation.

Emergence Plaza SA's business principles apply minimum environmental and social requirements and all applicable local national environmental and social regulation for all is activities, including those financed or refinanced with the proceeds of the Green Bond.

Management of Proceeds

Emergence Plaza SA intends to allocate the proceeds from the Green Bonds to an Eligible Green Project. Projects will be selected in accordance with the use of proceeds criteria and the evaluation and selection process presented above. Any Green Bond funding raised is reflected and tracked in a separate Emergence Plaza SA account (the "EP Green Bond Account") for use towards financing or refinancing eligible projects. Internal budget/accounting systems or invoices are used to identify costs of projects, which are then marked against funds held in the Green Bond Account.

Reporting

Emergence Plaza SA will make and keep readily available reporting, covering the allocation of net proceeds to the Eligible Green Projects. Reporting will take place a year following the issuance of the applicable Green Bond and will be renewed annually until full allocation of Green Bond net proceeds.

Emergence Plaza SA intends to provide aggregated reporting for all its Green Bonds and other potential green financings outstanding.

COSMOS YOPOUGON

5

Source: [Cosmos Yopougon]

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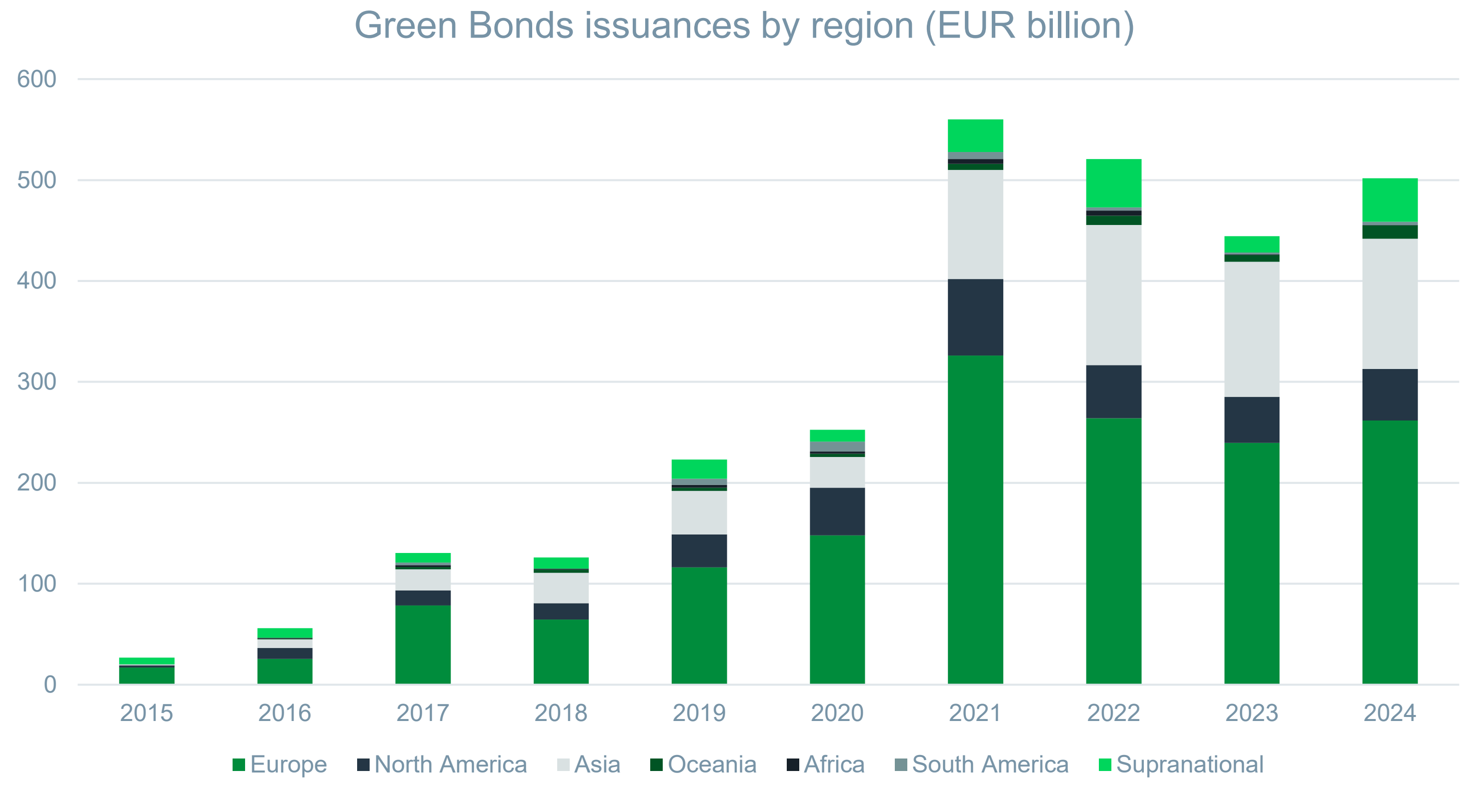
Green bonds market trends

Green bonds issuances by region



Notes: North America includes Mexico

Source: LGX Datahub a universe of 20.000+ worldwide listed sustainable debt instruments as of end 2024

Green bonds market

ISSUANCE AMOUNT

» 2022: EUR 506 billion
» 2023: EUR 444,6 billion
» 2024: EUR 501,59 billion

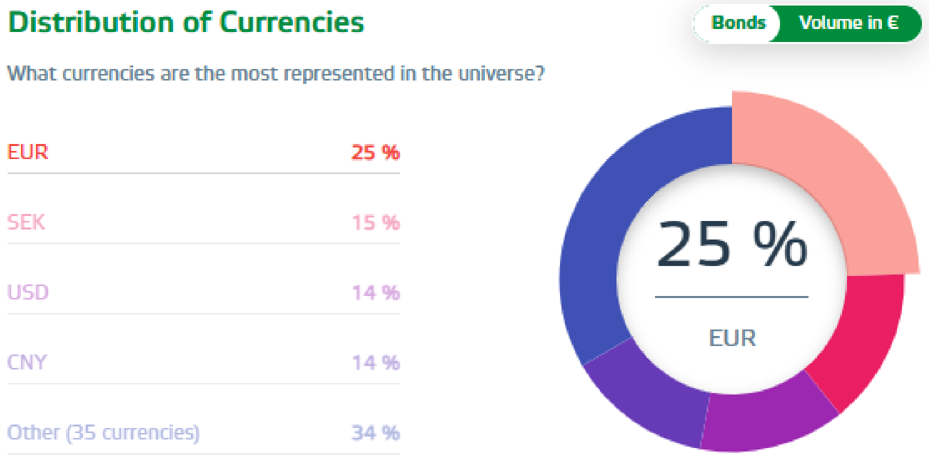
TOP 10 ISSUERS IN 2024

Top 10 Issuers

Which issuers have the most bonds in the selection?

DEUTSCHE BANK AG	27	27
EXIO LOGISTICS SDN BHD	23	23
Japan Housing Finance Agency	19	19
Vasakronan AB	18	18
LANDESBANK BADEN-WÜRTTEMBERG	16	20
ACCIONA Financiacion Filiales SA	14	14
Hemso Fastighets AB	14	14
NATIXIS BEYOND BANKING	13	18
Willhem AB	13	13
Credit Agricole CIB Financial Solutions SA	13	13

For 2024



Distribution of Currencies

What currencies are the most represented in the universe?

EUR	25 %
SEK	15 %
USD	14 %
CNY	14 %
Other (35 currencies)	34 %

Source: LGX Datahub a universe of 20.000+ worldwide listed sustainable debt instruments as of end 2024

Green bonds market in 2024

1 **Europe**
1000 bonds – 427 issuers

2 **Asia**
718 bonds – 383 issuers

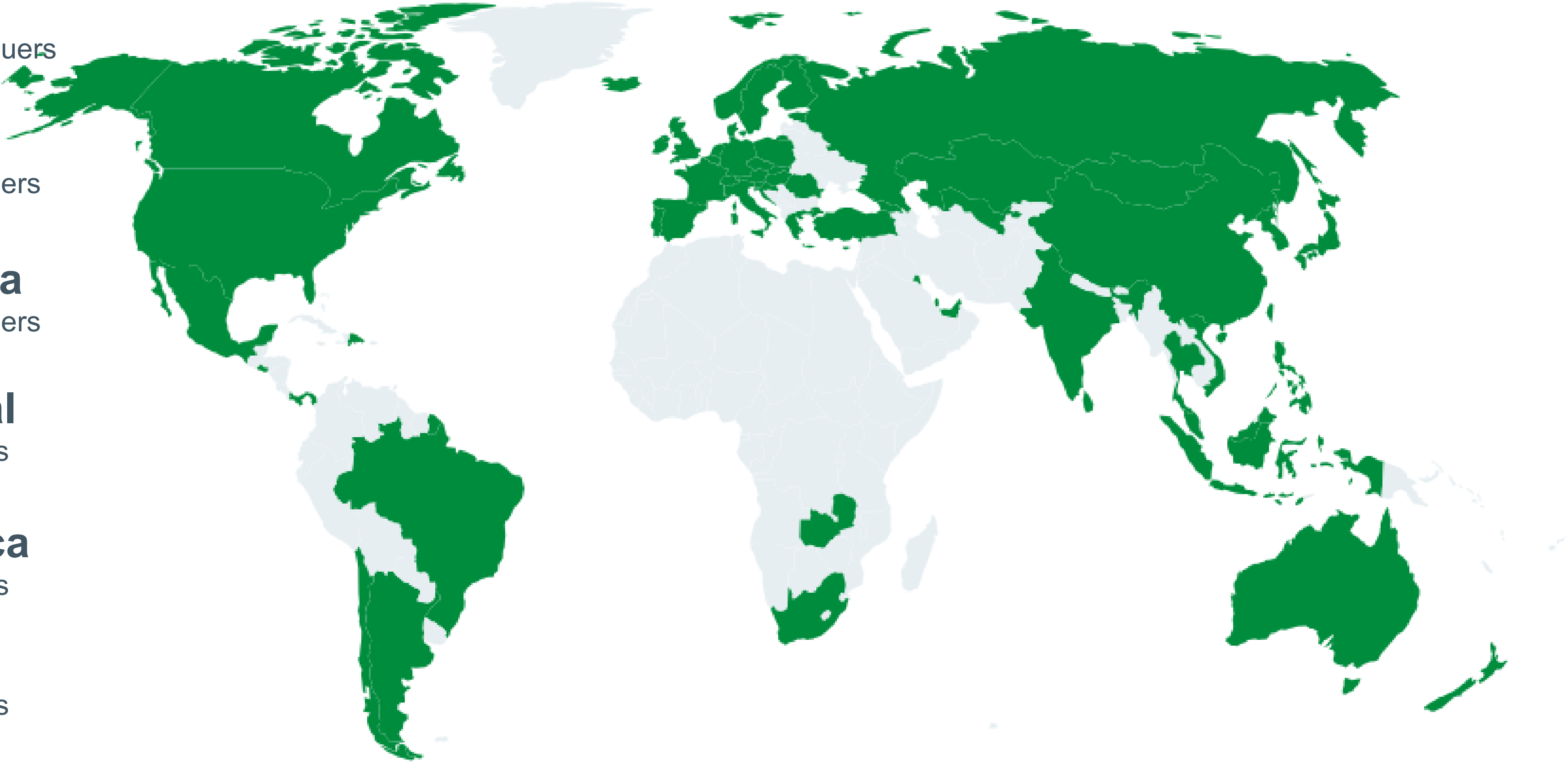
3 **North America**
189 bonds – 101 issuers

4 **Supranational**
53 bonds – 15 issuers

5 **South America**
40 bonds – 23 issuers

6 **Oceania**
29 bonds – 21 issuers

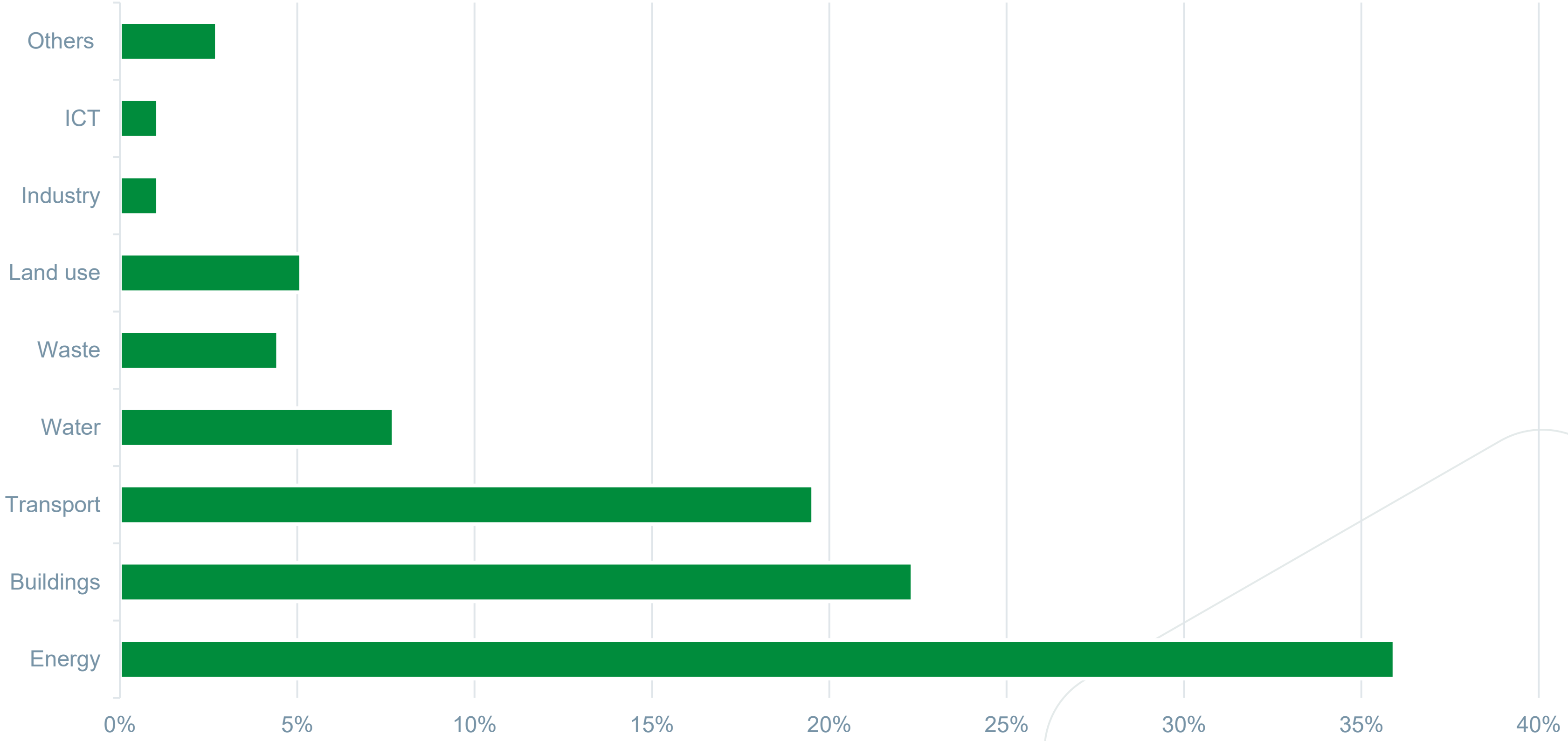
7 **Africa**
11 bonds – 6 issuers



Source: LGX Datahub a universe of 20.000+ worldwide listed sustainable debt instruments as of end 2024

Green bonds use of proceeds breakdown

Sector allocation of green bonds proceeds



78% of Green Bonds proceeds went to energy related investments

Source: [CBI 2024]

Green bonds contribution to UN SDGs in 2024

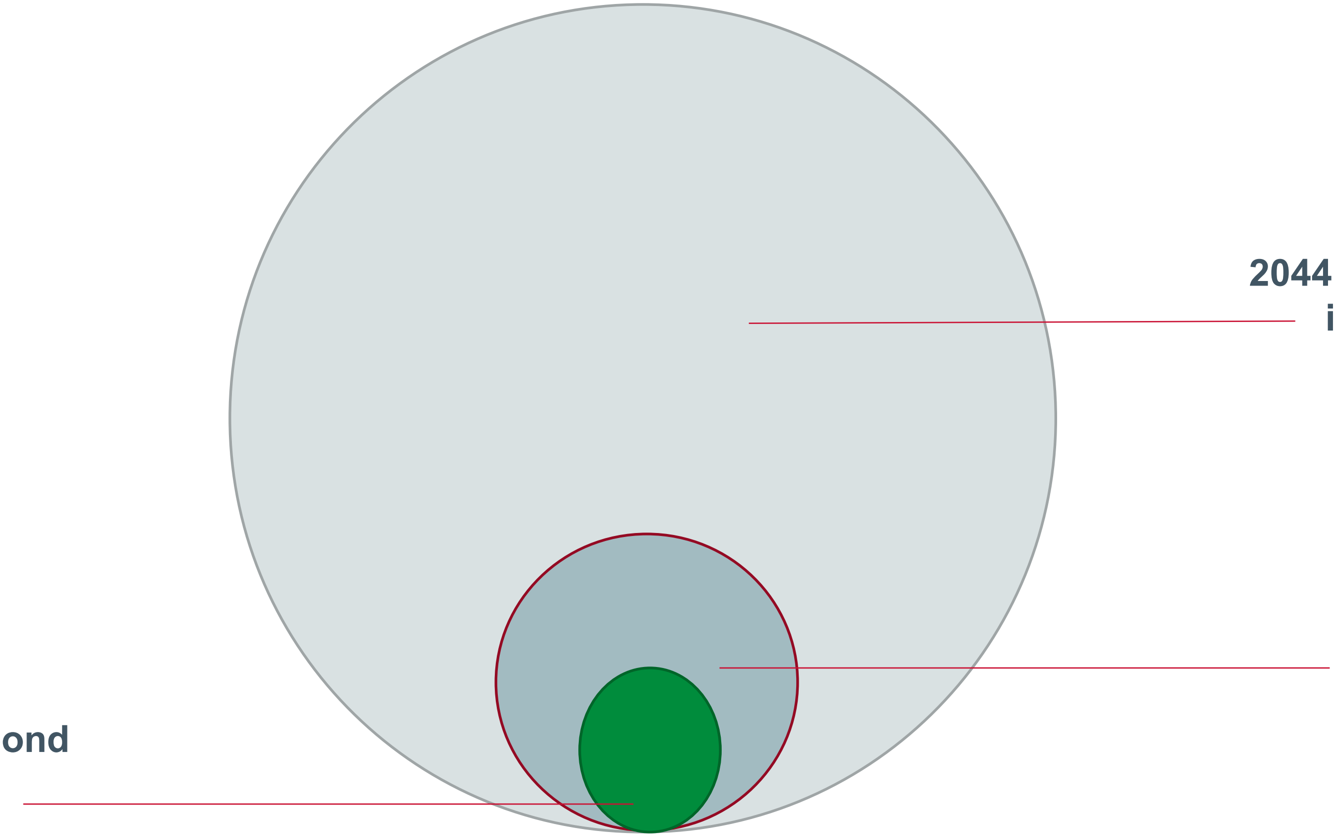
Intended Contribution to SDGs

To what SDGs are the bonds contributing the most (intendedly)

Source: LGX Datahub a universe of 20.000+ worldwide listed sustainable debt instruments as of end 2024

The untapped potential of green bonds

LOW-CARBON INVESTMENT NEEDS: NEW BOND ISSUANCE AND GREEN BOND ISSUANCE (USD, ANNUAL)



USD 12,3 trillion
2044 annual total bond issuance in China, Japan, EU, US

USD 2.26 trillion
2035 annual low-carbon investment needs in China, Japan, EU, US

USD 571 billion
2024 global green bond issuance

Source: Various sources adapted by LGX: OECD, ENA-WAM, Bloomberg, FT, Reuters, S&P Global, FI DESK

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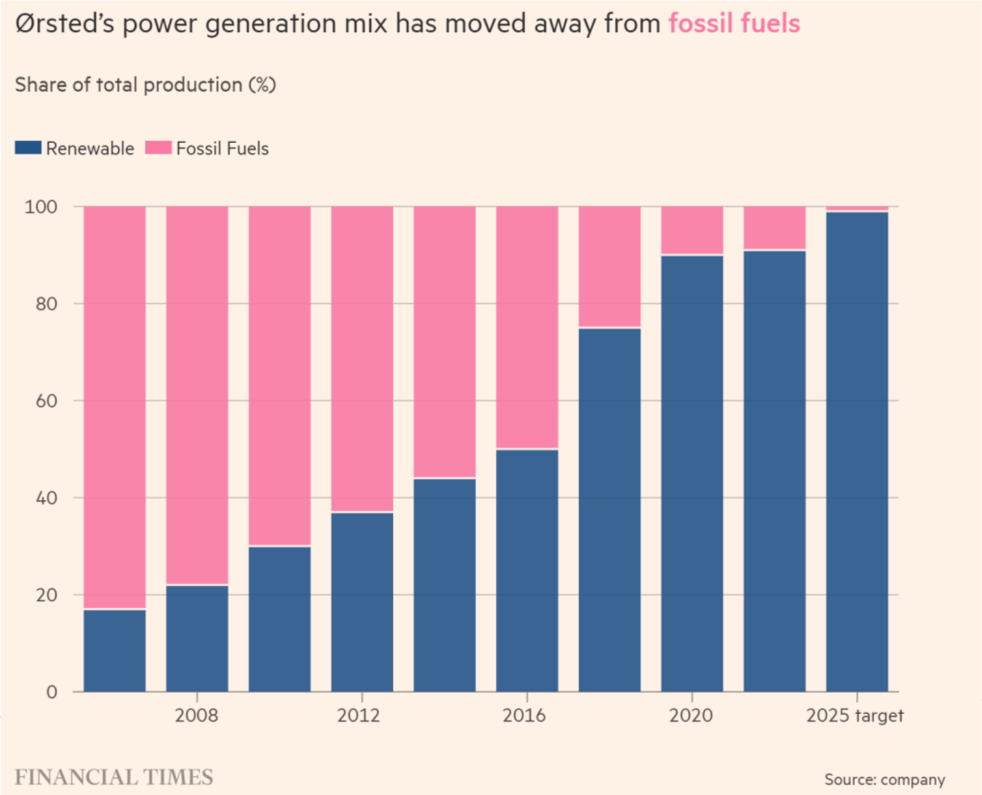
Green bonds case studies

Case study 1: Ørsted – transitioning through green bonds

KEY HIGHLIGHTS

- The Danish power company Ørsted issued a green bond whose proceeds were exclusively allocated to offshore wind projects in the North Sea, called “Hornsea 1 & 2”. Both projects are located in the UK.
- Since the bond was issued, both projects are in operation. Hornsea 2 became the world’s largest windfarm with a capacity of renewable energy of 1.320 GW and providing power to more than 1.4m homes. This project comprises 165 wind turbines, situated alongside its sister project Hornsea 1, which together can power 2.5m homes and make a significant contribution to the UK Government’s ambition of having 50 GW offshore wind in operation by 2023.
- The bond targets SDG 7 Renewable Energy and SDG 13 Climate Action and is fully aligned with the EU Taxonomy (climate change mitigation objective).



Ørsted’s power generation mix has moved away from fossil fuels

Share of total production (%)

Source: company

Source: Financial Times

Case study 2: EIB-Group and Enpal boost residential solar market

HIGHLIGHTS OF THE GREEN BOND

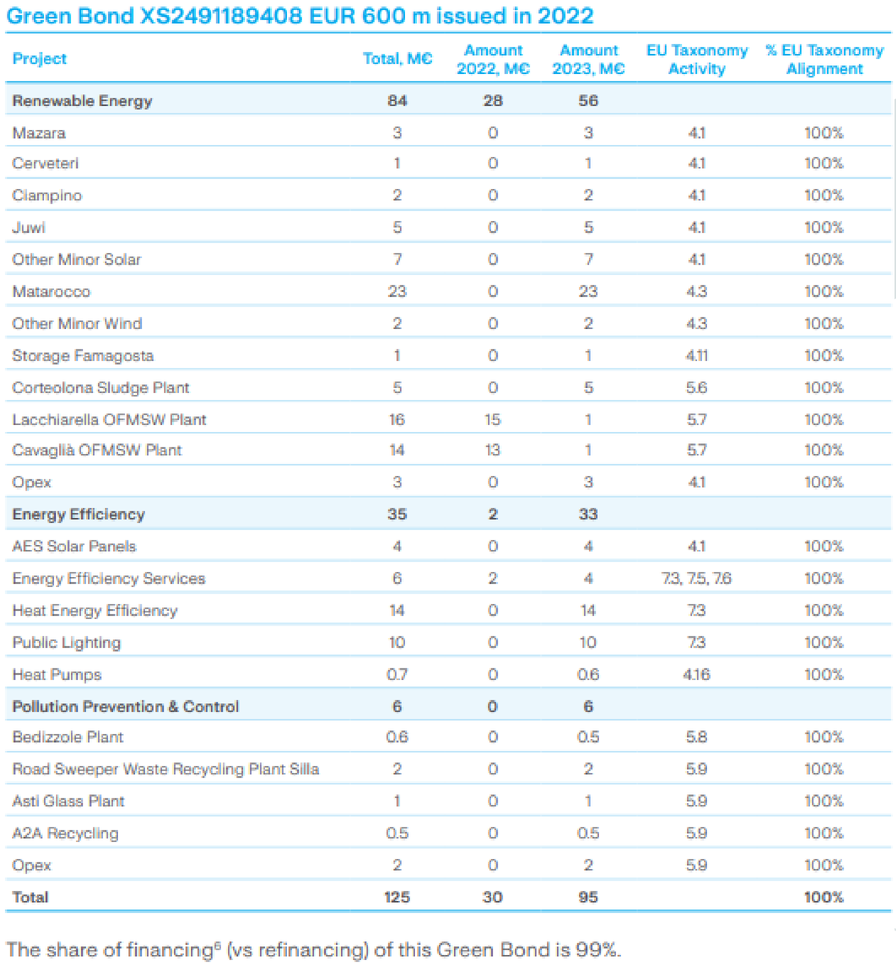
- ISIN: XS2915435452
- The EIB-Group supports Europe's first public solar ABS (asset-backed security) transaction with €100 million
- With the participation of the EIB Group, German green tech unicorn Enpal will refinance residential solar loans offered to customers buying renewable energy solutions
- The transaction establishes a new securitisation asset class in Europe, fostering the EU's Capital Markets Union for securitisation.

Source: LGX DataHub, EIB GROUP

Case study 3: A2A financing wind and solar plants in Italy

HIGHLIGHTS OF THE GREEN BOND

- A2A is among the largest electricity generators in Italy, with approximately 9 GW of installed capacity and a production mix geared toward renewable sources. Furthermore, waste-to-energy (WtE) plants account for approximately 2.5 Mt, allowing A2A to be ranked as the first Italian player by electricity and heat production also through WtE plants
- Circular economy and energy transition are the pillars of A2A Strategic Plan.
- Through this integrated Sustainable Finance Framework, A2A can combine the use of proceeds and sustainability-linked formats or use each of these formats independently on a case-by-case basis, retaining full flexibility in terms of specific sustainability objectives and projects that the company intends to support.



Green Bond XS2491189408 EUR 600 m issued in 2022

Project	Total, M€	Amount 2022, M€	Amount 2023, M€	EU Taxonomy Activity	% EU Taxonomy Alignment
Renewable Energy	**84**	**28**	**56**		
Mazara	3	0	3	4.1	100%
Cerveteri	1	0	1	4.1	100%
Ciampino	2	0	2	4.1	100%
Juwi	5	0	5	4.1	100%
Other Minor Solar	7	0	7	4.1	100%
Matarocco	23	0	23	4.3	100%
Other Minor Wind	2	0	2	4.3	100%
Storage Famagosta	1	0	1	4.11	100%
Corteolona Sludge Plant	5	0	5	5.6	100%
Lacchiarella OFMSW Plant	16	15	1	5.7	100%
Cavaglià OFMSW Plant	14	13	1	5.7	100%
Opex	3	0	3	4.1	100%
Energy Efficiency	**35**	**2**	**33**		
AES Solar Panels	4	0	4	4.1	100%
Energy Efficiency Services	6	2	4	7.3, 7.5, 7.6	100%
Heat Energy Efficiency	14	0	14	7.3	100%
Public Lighting	10	0	10	7.3	100%
Heat Pumps	0.7	0	0.6	4.16	100%
Pollution Prevention & Control	**6**	**0**	**6**		
Bedizzole Plant	0.6	0	0.5	5.8	100%
Road Sweeper Waste Recycling Plant Silla	2	0	2	5.9	100%
Asti Glass Plant	1	0	1	5.9	100%
A2A Recycling	0.5	0	0.5	5.9	100%
Opex	2	0	2	5.9	100%
Total	**125**	**30**	**95**		**100%**

The share of financing[6] (vs refinancing) of this Green Bond is 99%.

Source: A2A

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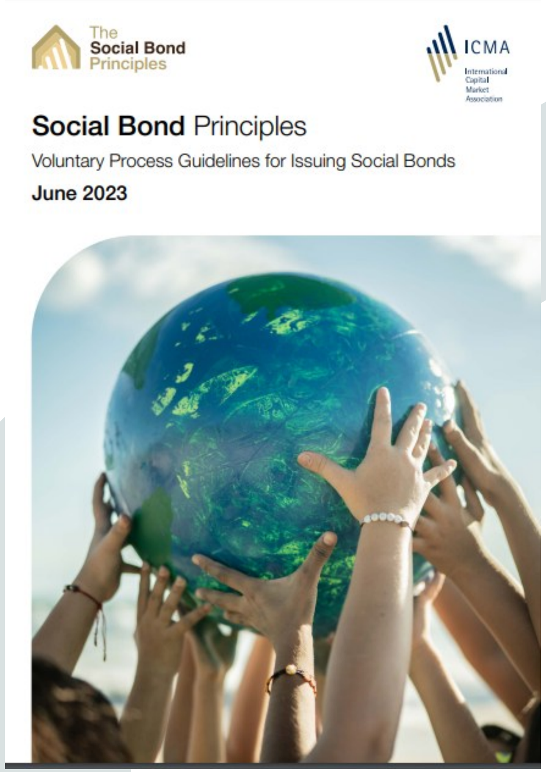
Social bonds

Eligible Activities financed by social bonds

AS PER ICMA'S SOCIAL BOND PRINCIPLES (SPBs)

- Affordable housing
- Employment generation
- Including through the potential effect of SME financing and microfinance
- Affordable basic infrastructure
- Clean drinking water, sewers, sanitation, transport, energy
- Access to essential services
- Health, education, vocational training, healthcare, financing, financial services
- Food security
- Socioeconomic advancement and empowerment



The Social Bond Principles

ICMA

International Capital Market Association

Social Bond Principles

Voluntary Process Guidelines for Issuing Social Bonds

June 2023

Source: [ICMA Social Bond Principles (SBP)]

Target population(s)

AS PER ICMA'S SOCIAL BONDS PRINCIPLES (SBPs):

- Living below the poverty line
- Excluded or marginalised populations and communities
- Aging population and vulnerable youth (new since 2020)
- Unemployed individuals
- People with disabilities
- Migrants and/or displaced persons
- Undereducated
- Women and sexual gender minorities (new since 2020)
- Underserved individuals

Source: ICMA Social Bond Principles (SBP)

Example 1: Bayport Management Ltd

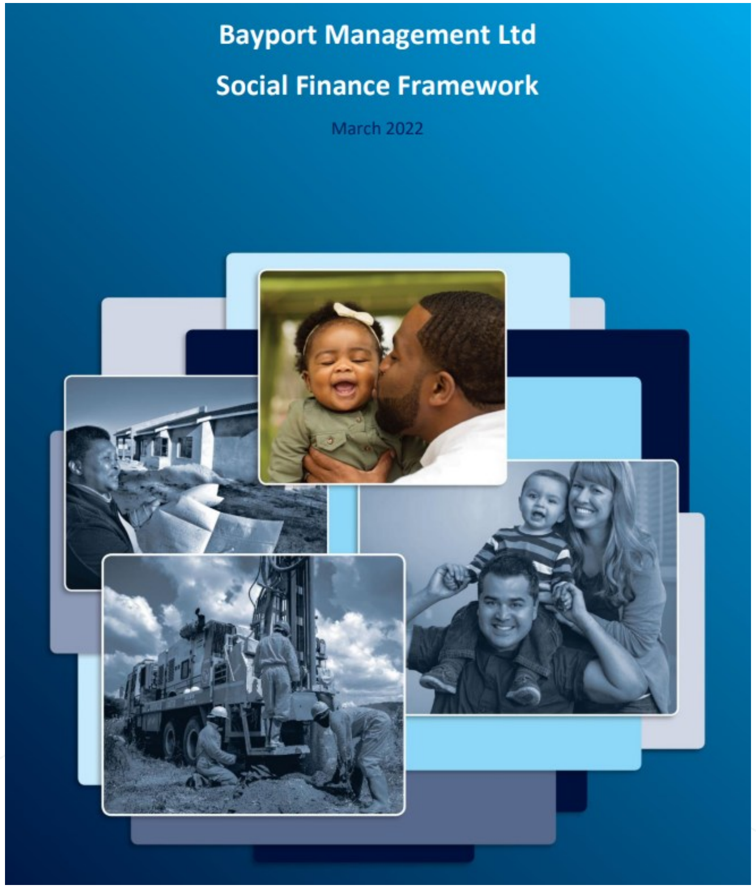
BAYPORT SENIOR BOND

» Key Figures

- Country: Mauritius
- ISIN: NO0012496696
- Amount issued : 50 000 000 USD
- Issuance date : 20/05/2022
- Maturity date: 20/11/2025
- Coupon rate : 15%

» Use of Proceeds:

- Bayport will allocate the proceeds of all bonds and loans issued under this framework within the Eligible Use of Proceeds categories indicated below:
  - Access to financial services where traditional financial services do not exist or do not serve this target population as well as financial inclusion. Financial services include Credit, Insurance, Savings


Bayport Management Ltd

Social Finance Framework

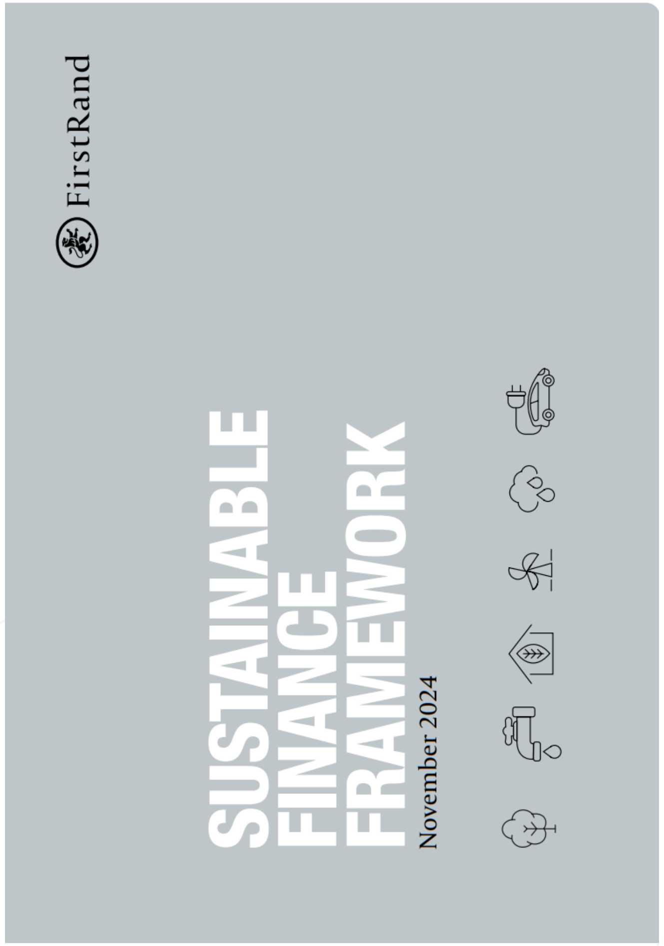
March 2022

Source: Bayport

Example 2: FIRSTRAND BANK LIMITED

RENEWABLE ENERGY BOND

- » Key Figures
- Country: South Africa
- ISIN: ZAG000210592
- Amount issued : 890 000 000 ZAR
- Issuance date : 11/11/2024
- Maturity date: 21/11/2029
- Coupon rate : 9,015%
- » Use of Proceeds:
- Affordable basic infrastructure
- Social infrastructure
- Affordable housing
- Financial inclusion
- Women in the economy
- Food security and sustainable food systems



FirstRand

SUSTAINABLE
FINANCE
FRAMEWORK

November 2024

Source: FirstRand

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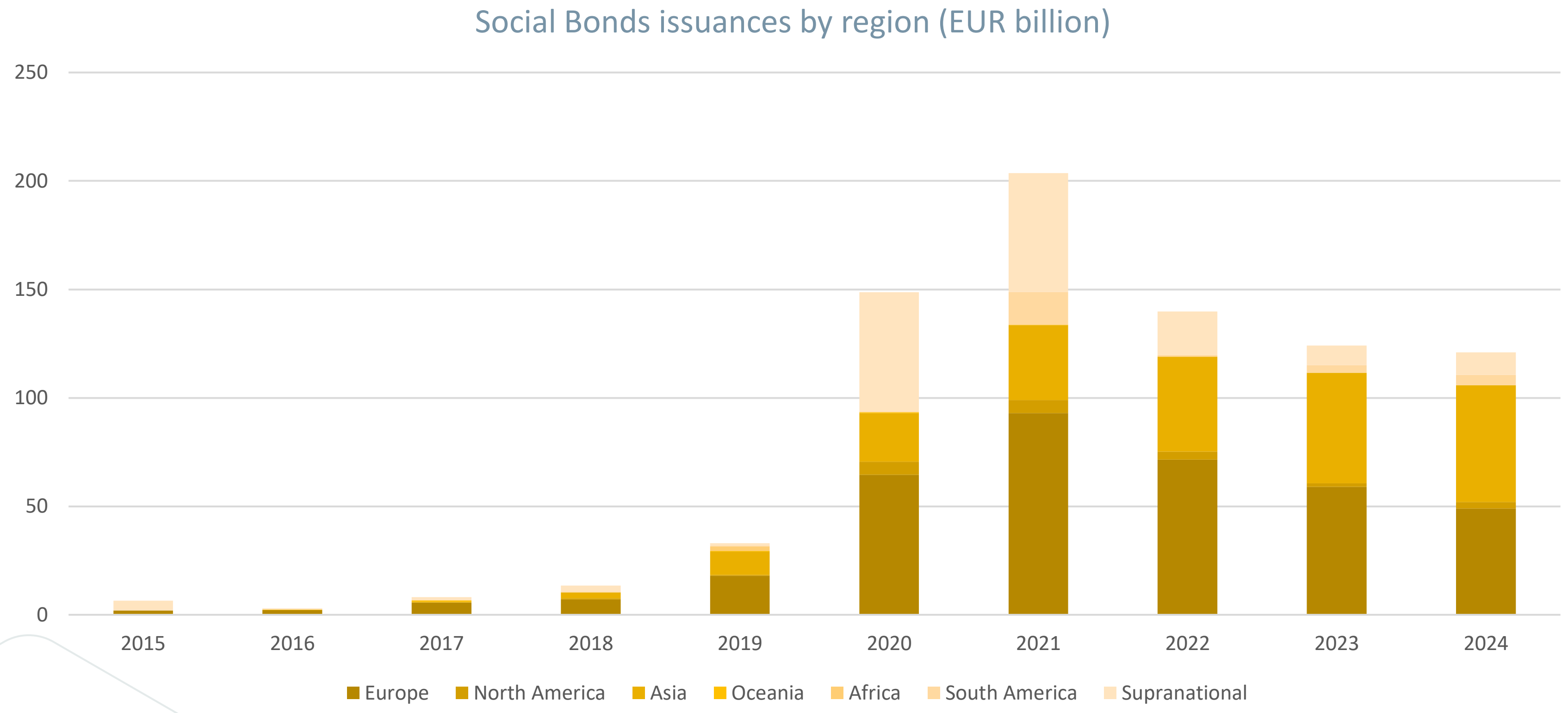
Social bonds market trends

Social bonds market by region



Source: LGX Datahub a universe of 20.000+ worldwide listed sustainable debt instruments as of end 2024

Social bonds market

ISSUANCE

- 2022: EUR 131,6 billion
- 2023: EUR 124 billion
- 2024: EUR 121,01 billion

TOP 10 ISSUERS IN 2024

KOREA HOUSING FINANCE CORPORATION
67
67 👥

Sinbo Securitization Specialty Co Ltd
54
54 👥

JAPAN EXPRESSWAY HOLDING AND DEBT REPAYMENT AGENCY
49
49 👥

Korea SMEs and Startups Agency
38
38 👥

INDUSTRIAL BANK OF KOREA
29
29 👥

KOREA ASSET MANAGEMENT CORP
27
27 👥

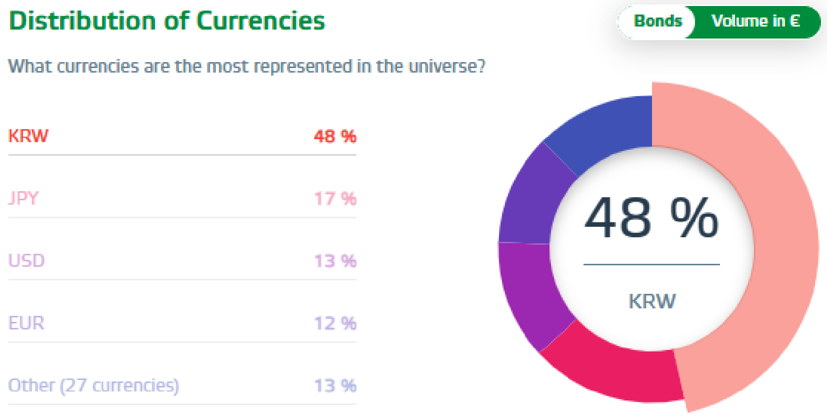
Korea Student Aid Foundation
26
26 👥

Woori Card Co Ltd
23
23 👥

KOSME Scale-up Securitization Specialty Co Ltd
21
21 👥

West Nippon Expressway Co Ltd
16
16 👥

For the period Jan to Dec 2024



Distribution of Currencies

Bonds | Volume in €

What currencies are the most represented in the universe?

KRW	48 %
JPY	17 %
USD	13 %
EUR	12 %
Other (27 currencies)	13 %

Source: LGX Datahub a universe of 20.000+ worldwide listed sustainable debt instruments as of end 2024

Social bonds market in 2024

1 **Asia**
518 bonds – 82 issuers

2 **Europe**
108 bonds – 53 issuers

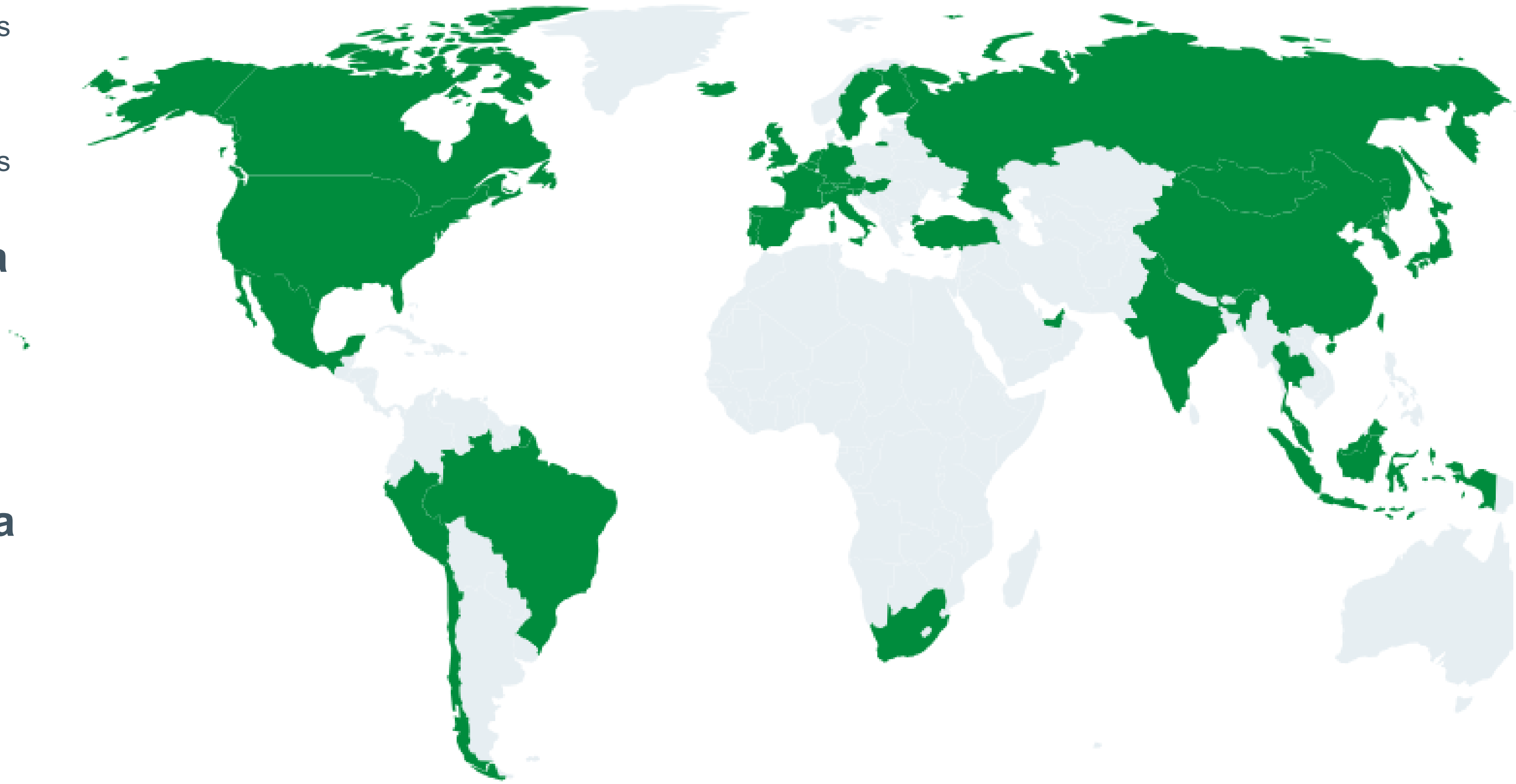
3 **North America**
43 bonds – 14 issuers

4 **Supranational**
22 bonds – 6 issuers

5 **South America**
9 bonds – 6 issuers

6 **Africa**
3 bonds – 2 issuers

7 **Oceania**
0 bond – 0 issuer



Source: LGX Datahub a universe of 20.000+ worldwide listed sustainable debt instruments as of end 2024

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Social bonds case studie(s)

Case study 1: A Social Bond from a commercial Bank in Tanzania, NMB Bank: Financing women-owned businesses

Key characteristics	
Issuer	National Microfinance Bank (NMB Bank)
Location	Dar es Salaam, Tanzania
Amount issued	TZS 74 bn (approx. EUR 29m)
Issuance date	2 April 2022 and 8 March 2023 (dual listing)
Maturity date	28 March 2025
Coupon rate	+850 bps
Listing (Display)	DSE (Tanzania) and LuxSE (LGX)
Target Population	Women
Gender considerations in the use of proceeds	Gender inclusion: Proceeds in this category as defined by NMB Bank can support Micro, Small & Medium Enterprises (MSMEs) owned and/or controlled by women and boost the advent of new female entrepreneurs
Links	ICMA- Social Bond Principles, Framework (2022), Second party opinion (2022),

- **Issuer overview**
  NMB Bank is a commercial bank partly owned by the Government of Tanzania with operations in all districts of the country. The bank serves retail, corporate and government clients

- **Gender bond overview**
  This gender-focused bond is the last tranche of its programme which started in 2016 to contribute to Tanzania's economic and social development. Over 2,000 women MSMEs in Tanzania will benefit from the funding of the bond. NMB Bank's bond targets gender empowerment through extending affordable financing for women-owned/controlled enterprises and/or businesses whose products or services directly impact women

- **Investors' reaction**
  The April 2022 issuance tied to the programme was oversubscribed by 197% and the largest global development institution focused on the private sector in developing countries reported to be oversubscribed by 297% by FSD Africa at the same time

Source: IFC, NMB, Post-issuance reporting (Q3 2023 allocation only)

Case study 2: ADB issuing a gender thematic bond programme

MAIN FEATURES OF THE PROGRAMME

- ADB has raised over USD 3.655bn as of March 2022,through its Gender Thematic Bond programme.
- The issuer's first gender bond was issued in November 2017.
- ADB has issued 14 gender bonds as of 1st April 2023.

FIVE AREAS OF GENDER EQUALITY AND EMPOWERMENT

1. Women's economic empowerment
2. Gender equality in human development.
3. Reduced time poverty of women
4. Participation in decision-making and leadership
5. Women's resilience against risks and shocks including climate change and disaster impacts.

Source: UN Women

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Sustainability bonds

Eligible activities for Sustainability Bonds

AS PER ICMA'S SOCIAL BOND PRINCIPLES (SPBs)

- Affordable housing
- Employment generation
- Including through the potential effect of SME financing and microfinance
- Affordable basic infrastructure
- Clean drinking water, sewers, sanitation, transport, energy
- Access to essential services
- Health, education, vocational training, healthcare, financing, financial services
- Food security
- Socioeconomic advancement and empowerment

The Sustainability Bond Guidelines

ICMA

Sustainability Bond Guidelines

June 2021

AS PER ICMA'S GREEN BOND PRINCIPLES (GBPs)

- Renewable energy
- Energy efficiency
- Pollution prevention and control
- Environmentally sustainable management of living natural resources and land use
- Clean transportation
- Sustainable water and wastewater management
- Climate change adaptation
- Eco-efficient and/or circular economy adapted products, production technologies and processes
- Green buildings

Source: [ICMA Sustainability Bond Guidelines (SBG)]

Example 1 : Sustainability bond of Benin Republic

KEY CHARACTERISTICS OF THE ISSUANCE

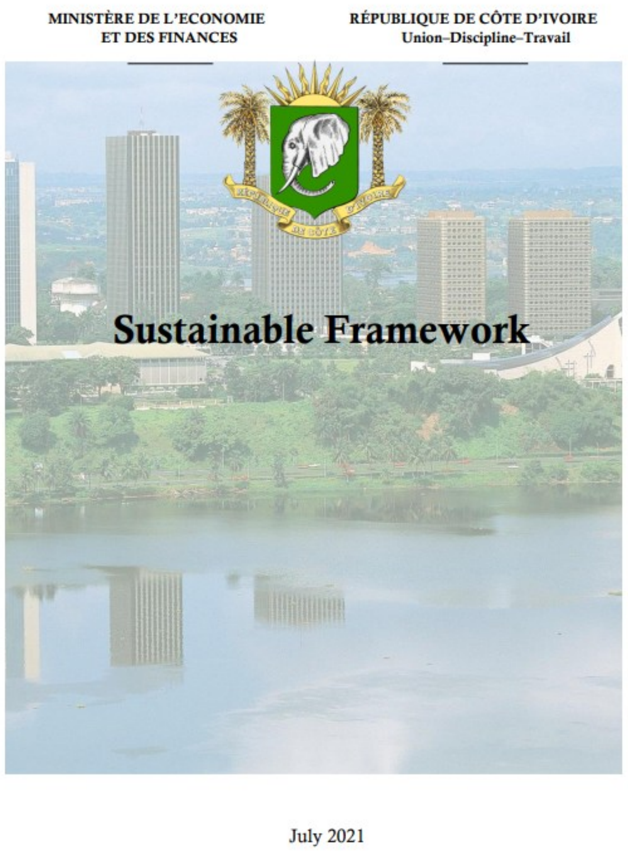
Issuer	**Benin Government**
ISIN	XS2366832496
Type of Bond	Sustainability (SDG Eurobond)
Amount issued	EUR 500m
Issuance date	22/07/2021
Maturity date	22/01/2035
Coupon rate	4.95%
Use of Proceeds	12 project categories articulated around 4 pillars (**Population**, **Prosperity**, **Planet** and **Partnerships**). Project categories include, for example: • Development of sustainable and productive agriculture • Access to low-carbon, reliable and affordable energy
Target Population	Include youth, farmers, women, sick, healthcare personnel, etc.
Links	[Framework (July 2021)](), [External Review (July 2021)](), [Video overview]()

Ministry of Economy and Finance(Benin)'s video is about Benin's Sustainability bond (in French, subtitles in English)

Example 2 : Sustainability bond of Ivory Coast

KEY CHARACTERISTICS OF THE ISSUANCE

Issuer	**Ivory Coast Government**
ISIN	US221625AT38
Type of Bond	Sustainability (SDG Eurobond)
Amount issued	1 100 000 000 USD
Issuance date	30/01/2024
Maturity date	30/01/2033
Coupon rate	7.625%
Use of Proceeds	An amount equivalent to the net proceeds will be used exclusively to finance: • Expenditures specifically included in the annual Finance Law of a given year; • Expenditures compliant with the “Sustainability Bond Guidelines”; • Expenditures compliant with Côte d’Ivoire’s commitments pursuant to the United Nations’ Sustainable Development Goals (SDGs) or Paris Agreement. In addition, the ESG Instruments issued will be used primarily to finance or refinance expenditures included in the Finance Law for the current year (Year N). If necessary, a smaller portion of the funds may be used to refinance expenditures included in the Finance Law for the two last years (N-2) or to finance expenditures included in the Finance Law for the following year (N+1) or subsequent years.
Target Population	Include youth, farmers, women, sick, healthcare personnel, etc.
Links	[Framework (July 2021)](), [Second Party Opinion (July 2021)]()



MINISTÈRE DE L’ECONOMIE
ET DES FINANCES

RÉPUBLIQUE DE CÔTE D’IVOIRE
Union–Discipline–Travail

Sustainable Framework

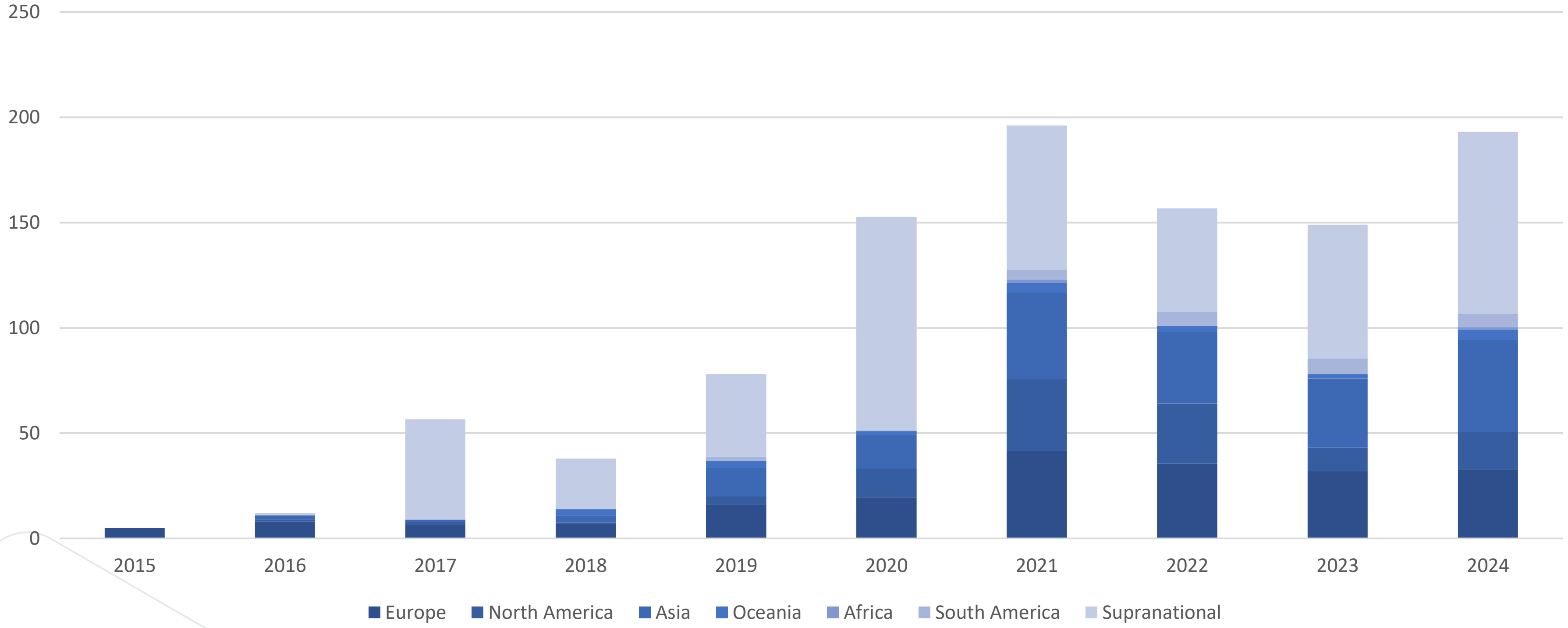
July 2021

LUXEMBOURG
GREEN EXCHANGE
by Luxembourg Stock Exchange

Sustainability bonds market trends

Sustainability bonds market

Sustainability bonds issuances by region (EUR billion)



Source: LGX Datahub a universe of 20.000+ worldwide listed sustainable debt instruments as of end 2024

Sustainability bonds market

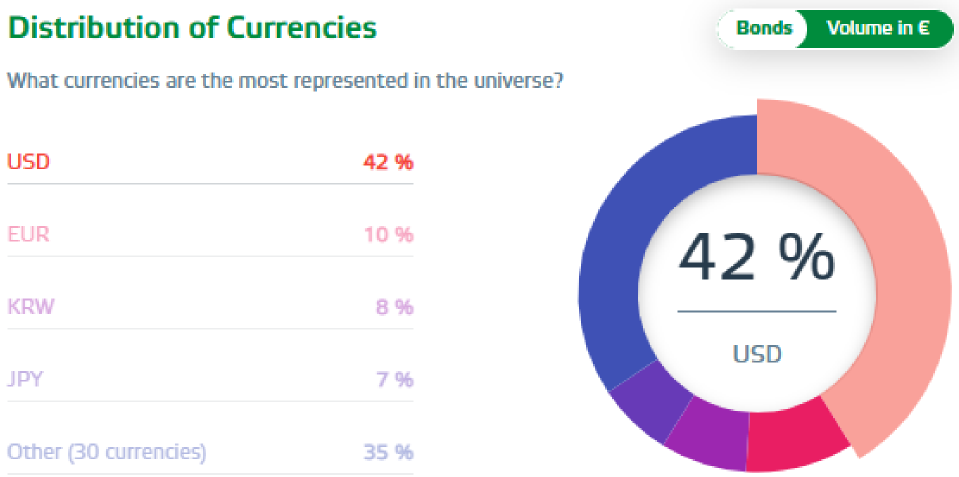
ISSUANCE

- 2022: EUR 152 billion
- 2023: EUR 149,2 billion
- 2024: EUR 193,12 billion

TOP 10 ISSUERS IN 2024

THE WORLD BANK	283	283
STANDARD CHARTERED BANK	47	47
HYUNDAI AUTO FUNDING ESG FIRST ASSET SECURITIZATION SPECIALTY CO	41	41
ASIAN INFRASTRUCTURE INVESTMENT BANK	28	28
BERAPIT MOBILITY SDN BHD	16	16
INTER-AMERICAN DEVELOPMENT BANK	13	13
SEP RESOURCES M SDN BHD	12	12
INTERNATIONAL DEVELOPMENT ASSOCIATION	11	11
BANGKOK EXPRESSWAY & METRO PCL	9	9
TÜRKIYE VAKIFLAR BANKASI T.A.O.	8	8

For the period from Jan to Dec 2024



Distribution of Currencies

What currencies are the most represented in the universe?

USD	42 %
EUR	10 %
KRW	8 %
JPY	7 %
Other (30 currencies)	35 %

Source: LGX Datahub a universe of 20.000+ worldwide listed sustainable debt instruments as of end 2024

Sustainability bonds market in 2024

1 **Supranational**
354 bonds – 10 issuers

2 **Asia**
331 bonds – 132 issuers

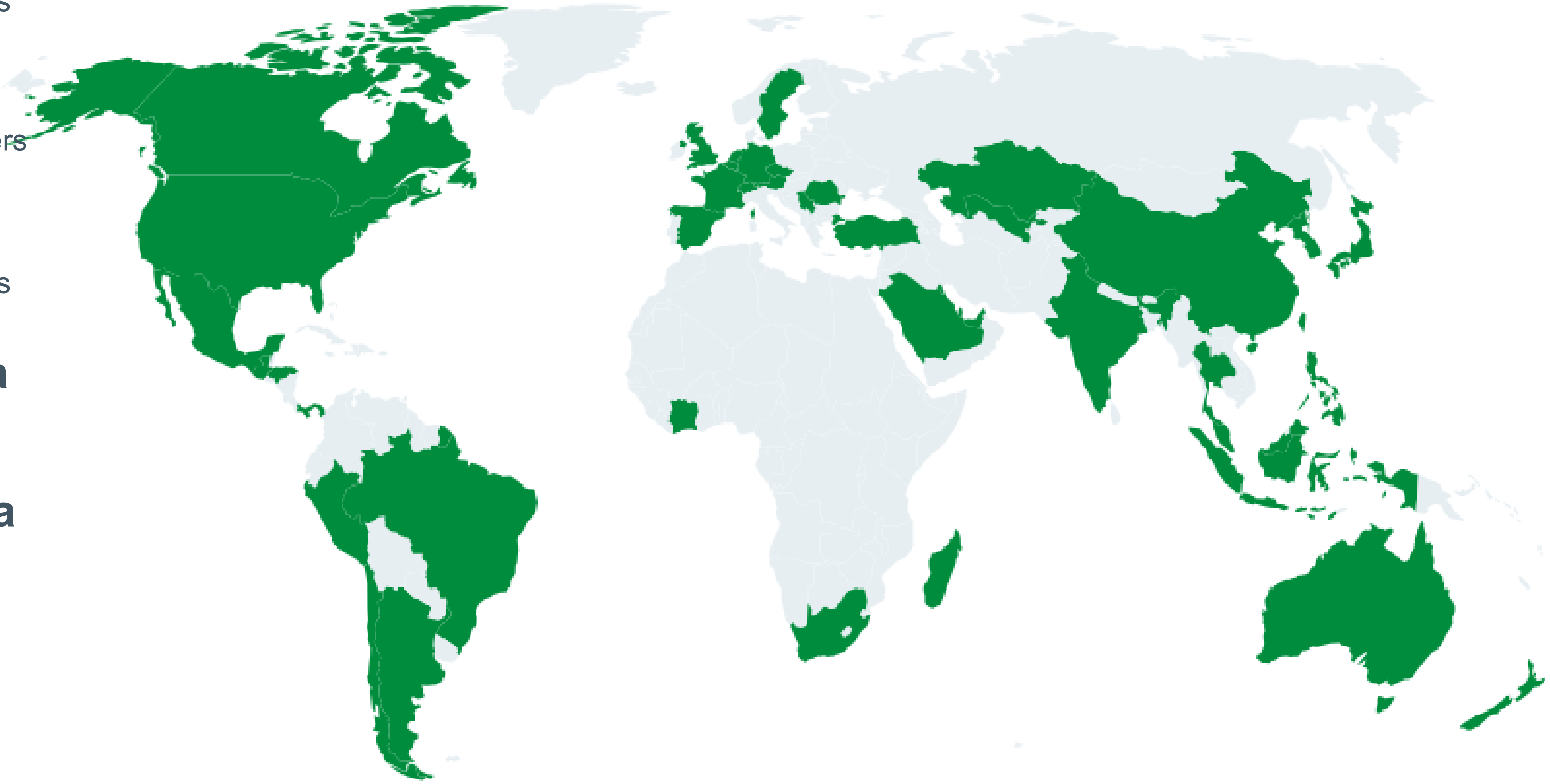
3 **Europe**
132 bonds – 51 issuers

4 **North America**
56 bonds – 30 issuers

5 **South America**
9 bonds – 6 issuers

6 **Africa**
5 bonds – 4 issuers

7 **Oceania**
4 bonds – 3 issuers



Source: LGX Datahub a universe of 20.000+ worldwide listed sustainable debt instruments as of end 2024

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GSS Bonds Challenges and opportunities

Opportunities

- Growing Investor Demand for ESG Assets
  - There is a rapidly **increasing appetite among institutional and retail investors** for environmental, social, and governance (ESG) aligned investments. This drives **strong demand for GSS bonds** as a way to invest sustainably while seeking financial returns.
- Supportive Regulatory Environment
  - **Governments and regulators worldwide** are promoting green and social finance through tax incentives, disclosure mandates, and green bond standards, which encourage issuance and investment.
- Portfolio Diversification Benefits
  - GSS bonds offer diversification benefits due to their focus on sustainable projects, potentially lowering portfolio risk and enhancing long-term resilience.
- Innovation and Market Growth
  - The GSS bond market is **innovating with new structures** (e.g., transition bonds, sustainability-linked bonds) and **expanding rapidly**, creating new opportunities for issuers and investors alike.
- Alignment with Global Goals
  - GSS bonds help channel capital toward **achieving UN Sustainable Development Goals (SDGs)**, offering investors a way to **support global sustainability agendas** while generating financial returns.

Source: Morning Star ESG Investing Report, EC Sustainable Finance, HBR on ESG investing, CBI Market Overview, UN SDG Impact Finance

Challenges

- Greenwashing
  - Without stringent standards, there is a risk that projects or bonds labeled as "green" or "social" may not truly have a significant environmental or social impact, a practice known as greenwashing. This undermines investor confidence and the credibility of the market.
- Verification and Reporting Challenges
  - Ensuring the accuracy of environmental/social impact claims can be challenging, particularly for large and complex projects. Independent verification can be resource-intensive and costly. Issuers may struggle to provide clear, consistent, and verifiable information on how the bond proceeds are used and the actual impact of the funded projects.
- Secondary Market Liquidity
  - Compared to traditional bonds, some GSS bonds may have lower trading volumes in the secondary market, making it harder for investors to buy or sell them quickly due to higher trading costs and less flexibility for investors.

Source: Aberdeen Investments, Global Solutions Initiative, PwC

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Sustainability Linked Bonds - SLBs

A new non-UoP instrument

LUXEMBOURG GREEN EXCHANGE
by Luxembourg Stock Exchange

INSPIRED BY ENEL SUSTAINABILITY-LINKED BOND (NOVEMBER 2019)

- » SLBs are not use of proceeds (UoP) instruments, but are "general corporate purpose" instruments
- » The focus lies on the issuer's sustainability strategy, its Sustainability Performance Targets (SPTs) and Key Performance Indicators (KPIs)
- » Increasing issuances since ICMA's Sustainability-linked Bond Principles (SLBPs) launched such as from Novartis, Chanel, Suzano, Ocea

No obligation to invest/report on specific projects

Commitment to a pre-defined impact target

Sustainability-linked Bonds (SLBs)

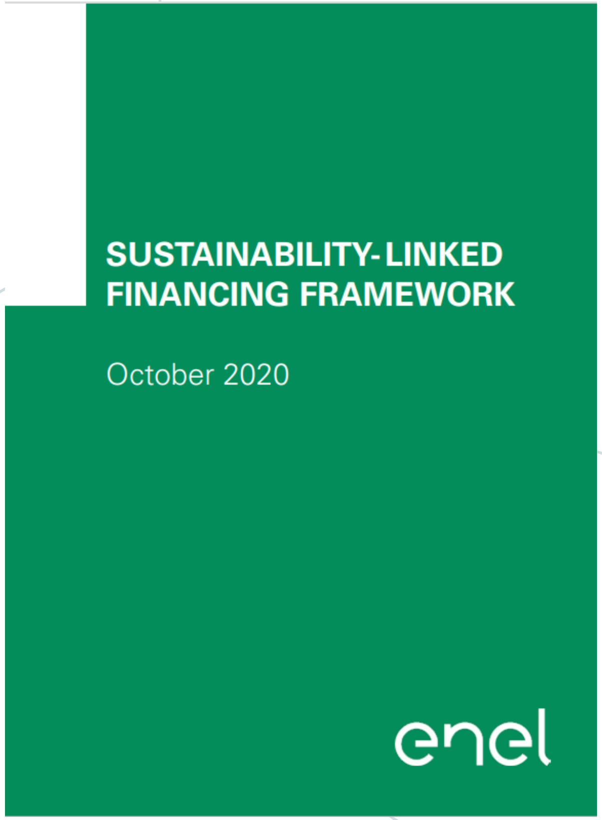
An **SLB** is any type of debt instrument for which the **financial and/or structural characteristics can vary** depending on whether the **issuer achieves predefined sustainability/ESG objectives**

Source: ICMA - The Sustainability-linked Bond Principles

It all started with Enel in 2019

THE WORLD'S FIRST "GENERAL PURPOSES SDG LINKED BOND"

- » Issue date: 10 September 2019
- » Volume: USD 1.5 billion
- » Tenor: 2024
- » Interest rate: 2.65%
- » Oversubscribed 3 times
- » Contributes/linked to:
- SDG 7: "Affordable and clean energy", with over 11.6 GW of additional capacity
- SDG 9: "Industry, innovation and infrastructure", with over 46.9 million smart metres installed and 5.4 billion euros of investment in innovation and digitalisation
- SDG 11: "Sustainable cities and communities", with retail investment and new electrification-oriented energy services to achieve, among others, 9.9 GW of demand response capacity and 455,000 charging points for electric mobility
- SDG 13: "Climate action", with a commitment to reduce carbon dioxide emissions to below 0.350 kg/kWheq in 2020 and full decarbonisation by 2050



SUSTAINABILITY-LINKED FINANCING FRAMEWORK

October 2020

enel

Source: Enel

ENEL's Sustainability Performance Targets (SPTs) and Trigger Event

ENEL DEFINED SUSTAINABILITY PERFORMANCE TARGET (SPT)

Renewable energy capacity installed

SPT

By 31 December 2021, the percentage of installed renewable generation capacity (on a consolidated basis) equal to or greater than 55% of total consolidated installed capacity (as of 30 June 2019, the figure was already equal to 45.9%)

» The interest rate will remain unchanged to maturity subject to achievement of the sustainability target indicated above as of 31 December 2021

» If that target is not achieved, a step-up mechanism will be applied, increasing the rate by 25 bps starting from the first interest period after the publication of the assurance report of the auditor

Source: Enel

ENEL: Reporting 2022/2023

- Enel announced in April 2022 that it hits its sustainability performance target for end-2021
- The group has increased its installed renewable energy capacity beyond 55% of total capacity, meaning it will not have to pay an additional 25 basis points (bp) a year on each of three different tranches of SLBs
- A second target was awaited by end of 2023: renewable electricity generation capacity to raise to 60%. The group reached 65%
- Were these target ambitious enough?

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(This independent auditors' report has been translated into English solely for the convenience of international readers. Accordingly, only the original Italian version is authoritative.)

Independent auditors' report on the Green Bond Report

To the board of directors of
Enel S.p.A.

We have been engaged to perform a limited assurance engagement on the 2023 Green Bond Report (the "report") of Enel S.p.A. (the "company"), which comprises the summary table of emissions, table A "Financial indicators", table B "ESG indicators", table C "Further ESG indicators", table D "Overall information" and notes thereto and has been prepared on the basis of the Enel Group's green bond framework (the "framework"). This report is included in the Enel Group's 2023 sustainability report.

Responsibilities of the company's directors and board of statutory auditors ("Collegio Sindacale") for the Report

The directors are responsible for the preparation of the report in accordance with the framework described in the "Introduction and reporting criteria" note to the report.

They are also responsible for such internal control as they determine is necessary to enable the preparation of a report that is free from material misstatement, whether due to fraud or error.

Moreover, the directors are responsible for identifying the content of the report, selecting and applying policies and making judgements and estimates that are reasonable in the circumstances.

Auditors' independence and quality control

We are independent in compliance with the independence and all other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour. Our company applies International Standard on Quality Control 1 (ISQC Italia 1) and, accordingly, maintains a system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Auditors' responsibility

Our responsibility is to express a conclusion, based on the procedures performed, about the compliance of the report with the frameworks described in the "Introduction and reporting criteria" note to the report. We carried out our work in accordance with the criteria established by "International Standard on Assurance Engagements 3000 (revised) - Assurance Engagements other than Audits or Reviews of Historical Financial Information" ("ISAE 3000 revised"), issued by the International Auditing and Assurance Standards Board applicable to limited assurance engagements. This standard requires that we plan and perform the engagement to obtain limited assurance about whether the report is free from material misstatement. A limited assurance engagement is less in scope than a reasonable assurance engagement carried out in accordance with ISAE 3000 revised, and consequently does not enable us to

Source: [Capital Monitor]() and [Enel]()

SLB issuance: General overview

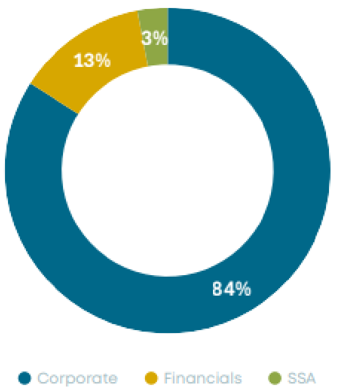
Source: LGX Datahub a universe of 20.000+ worldwide listed sustainable debt instruments as of end 2024

SLB issuance: General overview

Corporate dominance in the SLB market: Key sectors driving the transition

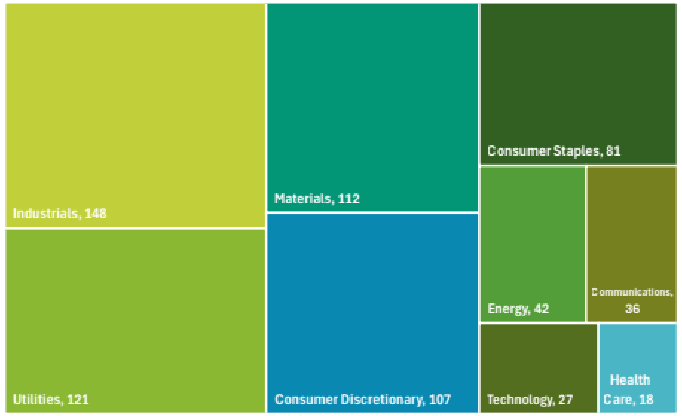
ISSUER CATEGORY

(Number of SLBs, total = 823)



CORPORATE ISSUERS: BREAKDOWN BY INDUSTRY

(Number of SLBs, total = 692)

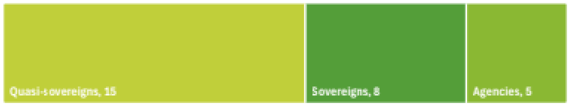


FINANCIAL ISSUERS: BREAKDOWN BY INDUSTRY

(Number of SLBs, total = 103)

SSA CATEGORY

(Number of SLBs, total = 28)



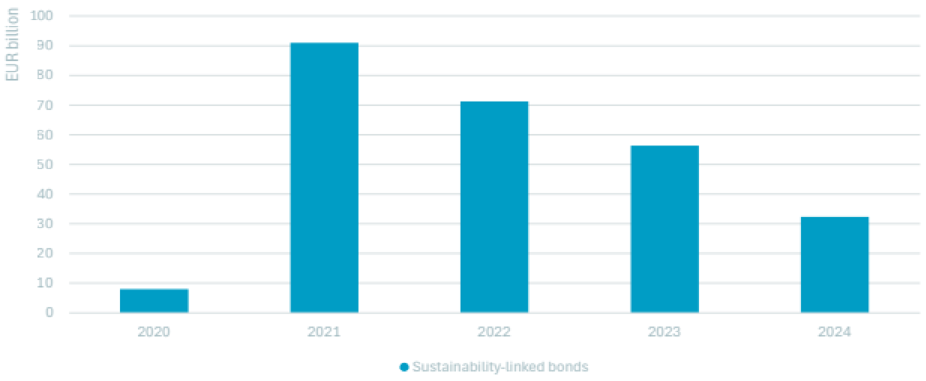
- Corporates make up an overwhelming share of SLB issuances, including key sectors critical to the transition. Transition finance has emerged as a central focus in sustainable finance, as it not only encompasses a wider range of sectors and companies than traditional "green" investments but also holds the potential to drive more significant, impactful change.
- The share of SLB issuances from hard-to-abate and fossil fuel sectors is well above other sustainable bonds, highlighting the critical need for a robust target-setting system and effective monitoring. While financing the transition of high-emitting companies raises concerns about reputation and greenwashing, these are exactly the industries that require substantial investment to successfully transform their business models.

Source: LGX Study: Targeting Transition: Exploring the Evolution of Sustainability-Linked Bonds (Jan 2025)

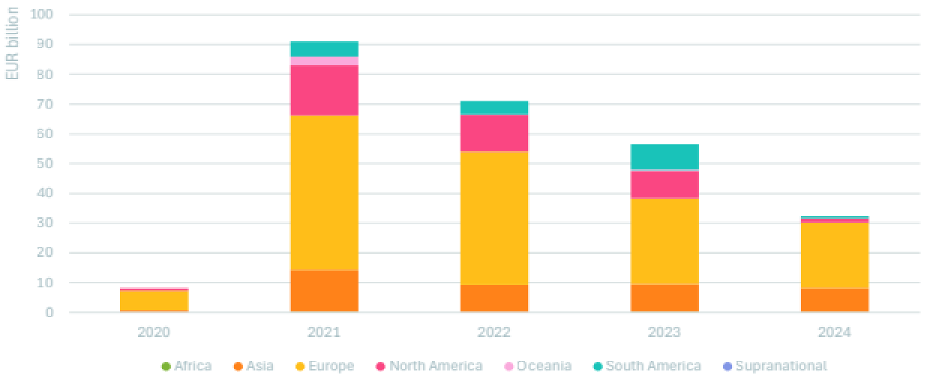
SLB issuance: Focus 2020-2024

Sustainability-Linked Bonds (SLBs) Navigate Turbulent Waters

SLB ISSUANCES (EUR bn)*



SLB ISSUANCES BY REGION (EUR bn)*



Source: [LGX Datahub]

SLBs emerged as a sustainable bond category in 2020 and saw strong growth in 2021 with the entry of prominent issuers. However, the number of SLB issuances and the total amounts issued have steadily declined since 2022. In 2024, the market had only 141 issuances. Issuers from South and North America largely withdrew from the market, with issued amounts dropping from EUR 18 billion in 2023 to EUR 2 billion in 2024 for these two regions. Furthermore, there have been no issuances by supranational entities to date and only a few issuances from sovereign issuers, which contrasts with the other sustainable bond types.

SLB issuers and issuances by region in 2024

1 **Asia**
70 bonds – 47 issuers

2 **Europe**
65 bonds – 36 issuers

3 **North America**
7 bonds – 4 issuers

4 **South America**
5 bonds – 3 issuers

5 **Africa**
3 bonds – 3 issuers

Global repartition of sustainability-linked bonds

Source: LGX Datahub a universe of 20.000+ worldwide listed sustainable debt instruments as of end 2024

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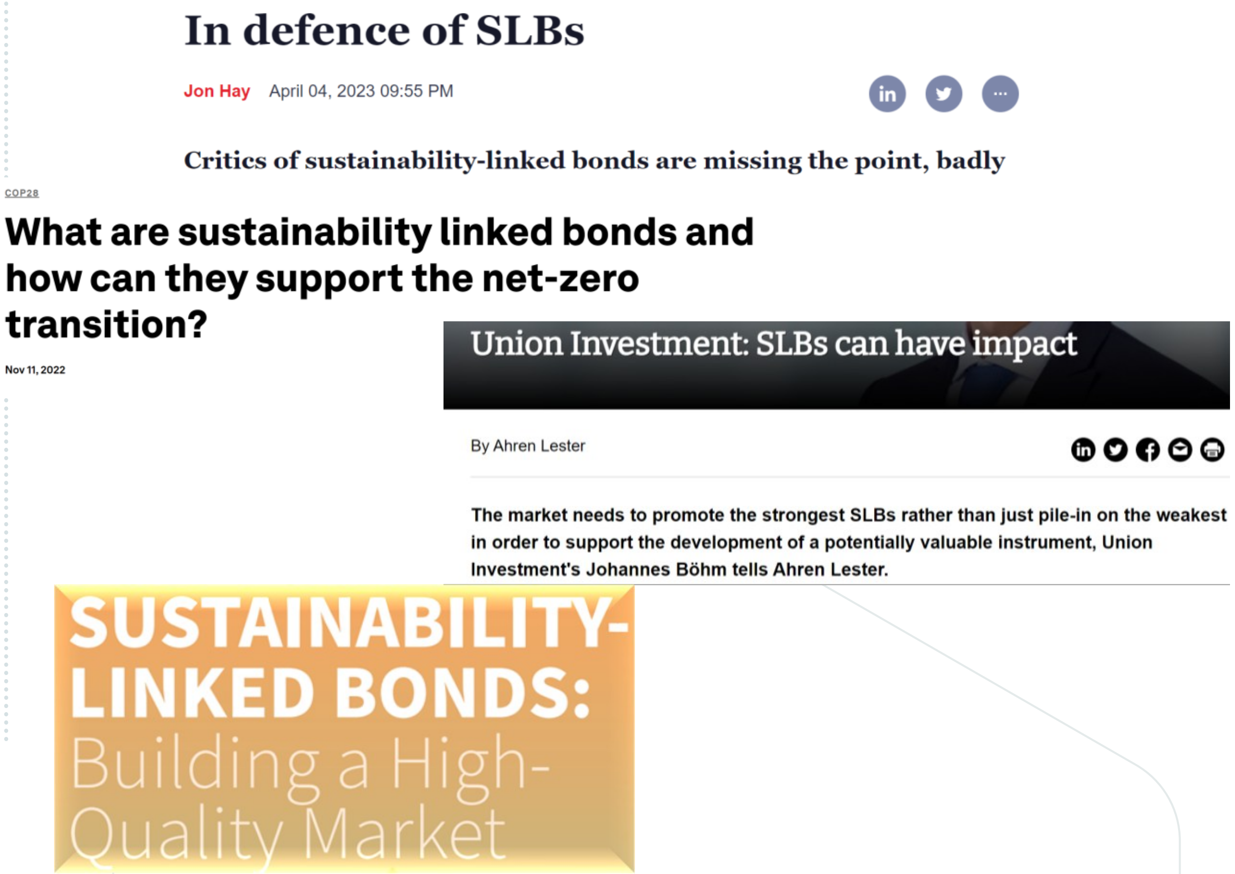
Recent debates on SLBs

Opportunities brought by SLBs

ADVANTAGES OF SLBS

- Targets are tied to an **improvement of the issuer as a whole.**
- SLBs are suited for **different types issuers and sectors.**
- SLBs are **still new** and have the possibility to be adjusted, to mature and grow.
- The instrument is **flexible** (i.e., different coupon step-up).
- The link between **sustainability performance** and **financial outcomes** can make **sustainability impacts financially material**, potentially correcting externalities of economic activities.
- As in the private sector, SLBs offer **several benefits** for **public sector entities** (i.e. diversifying funding sources, accessing a broader pool of domestic and foreign investors etc.)

MARKET VIEW



In defence of SLBs

Jon Hay April 04, 2023 09:55 PM

Critics of sustainability-linked bonds are missing the point, badly

COP28

What are sustainability linked bonds and how can they support the net-zero transition?

Nov 11, 2022

Union Investment: SLBs can have impact

By Ahren Lester

The market needs to promote the strongest SLBs rather than just pile-in on the weakest in order to support the development of a potentially valuable instrument, Union Investment's Johannes Böhm tells Ahren Lester.

SUSTAINABILITY-LINKED BONDS:
Building a High-Quality Market

Source: Environmental Finance, Global Capital, World Economic Forum, CBI

RECENT DEBATES ON SLBS

Greenwashing risks

EXAMPLES OF GREENWASHING RISKS IN SLBS

- **Low level of ambition** (i.e., relative to sector peers).
- **Irrelevant KPIs and corresponding SPTs** (i.e., Scope 1& 2 only rather than Scope 3 emission).
- **Weak or no penalty for failing to meeting SPTs** (i.e., early call option, inappropriate coupon step-up).
- **Absence of a link to broader entity-level sustainability strategy**.
- **Lack of granularity on post-issuance reporting** (i.e., portfolio approach)
- **Inconsistent Metrics:** Among **Sustainability-Linked Bonds (SLBs)**, 73% of KPIs focus on climate-related targets, while social impact KPIs remain underutilized.

MARKET VIEW

Banks flag greenwashing worries over sustainability-linked debt

With investors pushing back on what they see as weak or immaterial claims by issuers of sustainability-linked debt, banks are now citing similar concerns – though they are still arranging deals seen as questionable.

Structural Loopholes in Sustainability-Linked Bonds

Imtiaz Ul Haq
Djeneba Doumbia

Greenwashing Risks in the Sustainable Bond Market

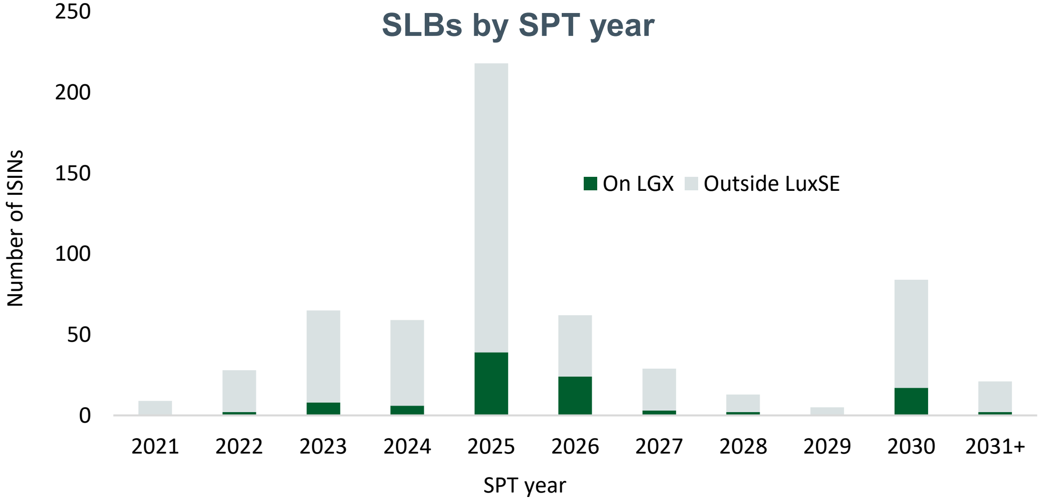
How regulatory oversight and industry accountability can combat misleading sustainability claims in the green bond market.

Source: Capital Monitor, ESMA, World Bank, E+ELeader adapted by LGX

SLBs failing targets

OVERVIEW

- Since 2021, only 3 issuers have failed their targets. The targets mainly concerned GHG emissions reductions.
- However, most SLBs will have their targets due end of 2025 and will have to report on them in 2026.



EXAMPLE

A2A (Post-issuance) **Failed target**

Displayed on LGX, listed on BDL MARKET

Instrument: Sustainability-linked bond
ISIN: XS2457496359
Outstanding amount: EUR 500,000,000
Issuance date: 16/3/2022
Maturity: 16/3/2028
Issuer profile: Corporate

Key highlights

During its AGM on April, A2A confirmed that it had missed its target associated with its SLB issued in 2022. The bond is listed on the LuxSE and displayed on LGX. You may recall that in January 2025, A2A became the first issuer of a EU GBS bond.

The 2022 SLB included a target linked to the company's installed renewable energy capacity, which was set at 3 GW. A2A's installed capacity stood at 2.6 GW, falling short of the target. This underperformance has triggered a 25 basis point (bps) step-up in the bond's coupon rate.

Interestingly, investor behavior leading up to the announcement indicates a shift in how SLBs are being priced by the market. According to Josephine Richardson, Research Director at the AFII, the bond was already trading tight to the curve before the target miss was confirmed. "Investors were pricing in a probability of receiving the step-up," she noted, "suggesting that markets are becoming more efficient at pricing SLBs." This contrasts to the way the market has worked in previous instances when KPIs have been missed: "In previous cases where SLB targets have been missed, there have been sudden market re-pricing once the miss is confirmed, or after Bloomberg adjusts the bond structure".

LGX does not intend to remove the bond from its platform following the missed target. In fact, a missed target can sometimes reflect positively — it may signal that the issuer set ambitious and meaningful goals, as opposed to pursuing only easily achievable ones. Encouraging ambition is essential to preserving the integrity and impact of the SLB market.
(Removal from display is rather forseen in case of a lack of transparency, for instance where the issuer fails to report on progress against the target.)

Source: LGX Datahub (*SLBs are counted multiple times when they are linked to multiple targets over the years.*) as at July 2023, [Net Zero Investor]

But failing is not necessarily negative

HOW IS FAILING AN SLB TARGET NOT NEGATIVE?

- The 2022 SLB included a target linked to the company's installed renewable energy capacity, which was set at 3 GW. A2A's installed capacity stood at 2.6 GW, falling short of the target. This underperformance has triggered **a 25-basis point (bps) step-up** in the bond's coupon rate.
- Interestingly**, investor behaviour** leading up to the announcement indicates **a shift** in how SLBs are being priced by the market.
- As the SLB market matures and attracts corporates and investors alike, **its awareness and efficiency is evolving too**.

EXAMPLE

A2A

- According to Josephine Richardson, Research Director at the AFII, the bond was already trading tight to the curve before the target miss was confirmed. "Investors were pricing in a probability of receiving the step-up," she noted, "suggesting that markets are becoming more efficient at pricing SLBs." This contrasts to the way the market has worked in previous instances when KPIs have been missed: "In previous cases where SLB targets have been missed, there have been sudden market re-pricing once the miss is confirmed, or after Bloomberg adjusts the bond structure".

- A2A's missed target also offers insights into how markets price in such events. The pricing in of missed targets and the imposition of costs on the company is arguably linked to the credibility of SLB targets and their ambition.

Source: Net Zero Investor

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SESSION 2: Pre-issuance (continued) - Regulatory requirements and Frameworks

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Regulatory framework/principles & Green Taxonomies

2007/2008 – The first green bonds

In 2007 the European Investment Bank issued the first labelled Climate Awareness Bond (CAB).

In November 2008, the World Bank issued a green bond, raising funds from fixed-income investors to support lending for eligible climate-focused projects.

- **Green bonds are debt instruments issued to fund projects that have a positive environmental or climate impact. Proceeds from these bonds are typically earmarked for green projects and are backed by the issuer's entire balance sheet.**
- These Bonds were listed in Luxembourg at LuxSE the same year.

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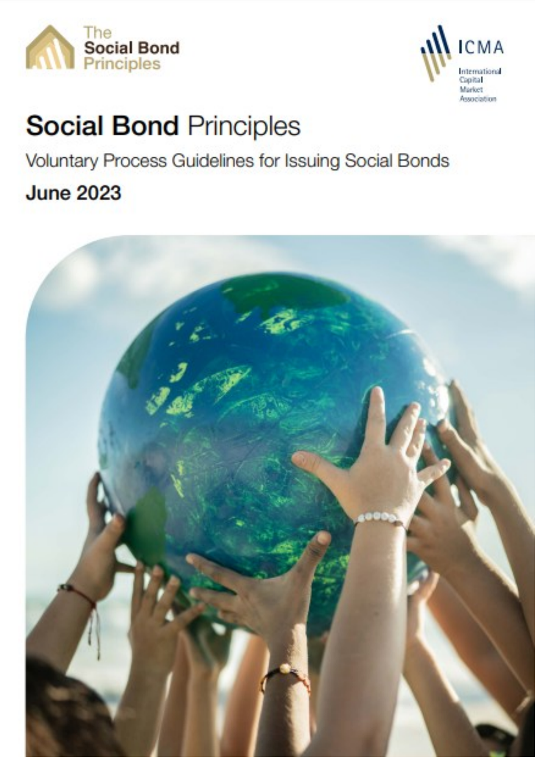
ICMA Green, Social, Sustainability bonds Principles/Guidelines

ICMA GREEN, SOCIAL, SUSTAINABILITY BONDS PRINCIPLES

ICMA GBP – the start of product codification


The Green Bond Principles
ICMA

Green Bond Principles
Voluntary Process Guidelines for Issuing Green Bonds
June 2021


The Social Bond Principles
ICMA
International Capital Market Association

Social Bond Principles
Voluntary Process Guidelines for Issuing Social Bonds
June 2023


The Sustainability Bond Guidelines
ICMA

Sustainability Bond Guidelines
June 2021

Source: [ICMA - Green/Social Bond Principles]

Use of proceeds concept

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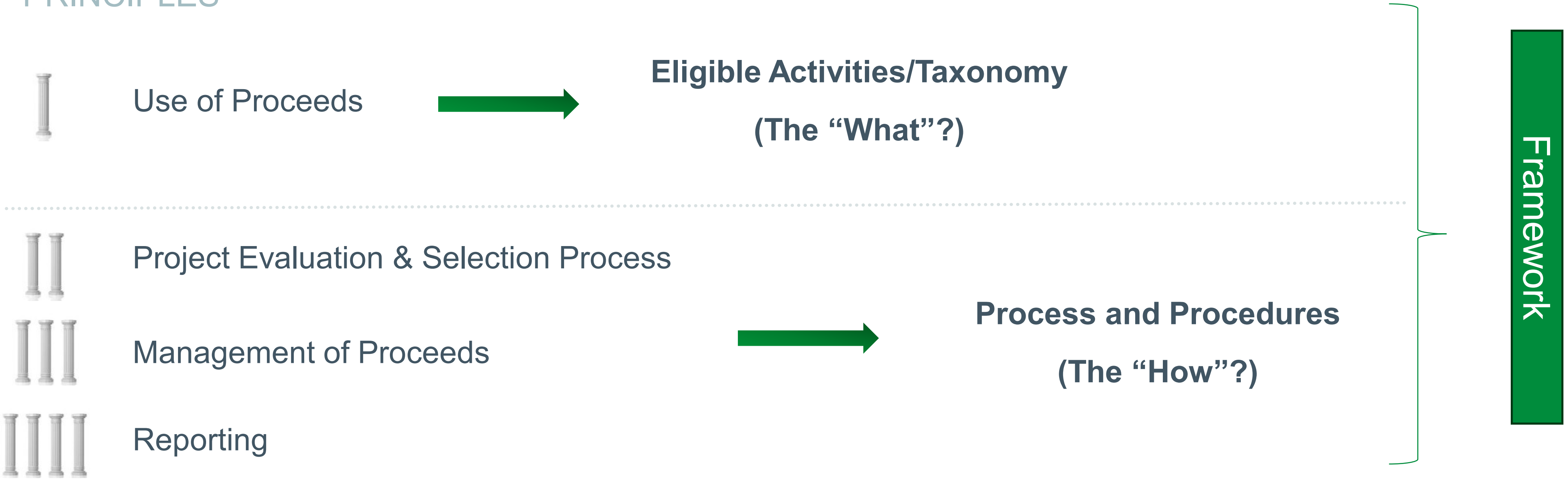
by Luxembourg Stock Exchange

ICMA GREEN, SOCIAL, SUSTAINABILITY BONDS PRINCIPLES



Use of Proceeds → **Eligible Activities/Taxonomy (The "What"?)**

Project Evaluation & Selection Process

Management of Proceeds → **Process and Procedures (The "How"?)**

Reporting

Framework

The Green Bond Principles

The Social Bond Principles

The Sustainability Bond Guidelines

Source: [ICMA - Green/Social Bond Principles]

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by Luxembourg Stock Exchange

Sustainability-Linked Bond Principles

The Sustainability-Linked Bond Principles (SLBPs)

SLBs HAVE 5 COMPONENTS DEFINED UNDER ICMA'S SLBPs (JUNE 2020)

- Selection of Key Performance Indicators (KPIs): Material to the issuer's core sustainability and business strategy and address relevant ESG challenges of the industry sector
- Calibration of Sustainability Performance Targets (SPTs): Express the level of ambition the issuer is ready to commit to
- Bond characteristics: The cornerstone of an SLB is that the bond's financial and/or structural characteristics can vary depending on whether the selected KPI(s) reach (or not) the predefined SPT(s)
- Reporting: Up to date information on KPIs, verification assurance report relative to the performance against SPTs, and structural characteristics of bonds, any info enabling investors to monitor the level of ambition of the SPTs and/or KPIs
- Verification: Issuers should seek independent and external verification on their performance level against each SPT for each KPI a least once a year

The Sustainability-Linked Bond Principles

ICMA

Sustainability-Linked Bond Principles

Voluntary Process Guidelines

June 2020

Source: ICMA - The Sustainability-Linked Bond Principles

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GREEN EXCHANGE
by Luxembourg Stock Exchange

Green Taxonomies

What is a Taxonomy?

GREEN TAXONOMIES

In the context of sustainable finance, a Taxonomy is a classification tool or system meant to help investors and companies to make informed investment decisions on sustainable economic activities. It aims at establishing market clarity on what is robustly and consensually “sustainable” when it comes environmental or social issues

✓

A TAXONOMOY IS …

- » A list of projects/ technologies/ products/ activities exhibiting a set of green or social patterns, benefits or performance criteria
- » A framework supporting product structuration & integrity safeguards
- » A classification tool fit for different investment styles and strategies
- » Anchored into latest scientific findings & industry experience
- » Dynamic, responding to technological and scientific knowledge changes

✗

A TAXONOMOY IS NOT …

- » A rating of companies
- » A mandatory list of “potential”
- » investments
- » Judgmental on the financial
- » performance of an investment (i.e. only about environmental performance)
- » Inflexible or static

Source: Natixis

How do you choose which taxonomy to align with?

FOR A GREEN BOND ISSUER:

- All taxonomies are voluntary in principle
- Chinese issuers align with the PBOC catalogue
- MDBs follow their own climate finance methodology when it comes to climate finance tracking
  - For their sustainable issuances, they follow ICMA's principles
  - EIB is currently aligning with the EU Taxonomy
- The EU Taxonomy is the most stringent
  - Avoid greenwashing
- To align with the ASEAN GB standards:
  - An issuer should be from ASEAN region
  - Projects financed by the proceeds to be located in the ASEAN region

Back to basics: what is generally regarded as "green"?

Climate Awareness Bonds of EIB

- Pioneer with use of proceeds bonds: 2007 Climate Awareness Bond (CAB)
- **Renewable Energy & Energy Efficiency**
- Expanded in 2020 to
    - Research, Development and deployment of innovative low carbon technologies
    - Electric rail infrastructure and rolling stock and electric buses
    - Projects inside and outside Europe
    - 1,000 MW WIND FARM GULF OF SUEZ

Climate
Awareness
Bonds

Source: EIB CAB

European
Investment
Bank
The EU bank

ICMA GBPs green project categories

- » Green bonds issuers should finance green projects: who can say what green projects are eligible for such finance?
- » ICMA's GBPs provide high-level classification for green projects categories since 2014
- » **Examples**
- Renewable Energy: Including production, transmission, appliances and products
- Energy Efficiency: Such as in new and refurbished buildings, energy storage, district heating, smart grids, appliances and products
  - Pollution prevention and control: Including reduction of air emissions, greenhouse gas control, soil remediation, waste prevention, waste reduction, waste recycling and energy/ emission-efficient waste to energy
  - Environmentally sustainable management of living natural resources and land use: Including environmentally sustainable agriculture, environmentally sustainable animal husbandry, climate smart farm inputs such as biological crop protection or drip-irrigation, environmentally sustainable

The Green Bond Principles

Green Bond Principles

Voluntary Process Guidelines for Issuing Green Bo

June 2021

Source: ICMA

Green categories according to CBI

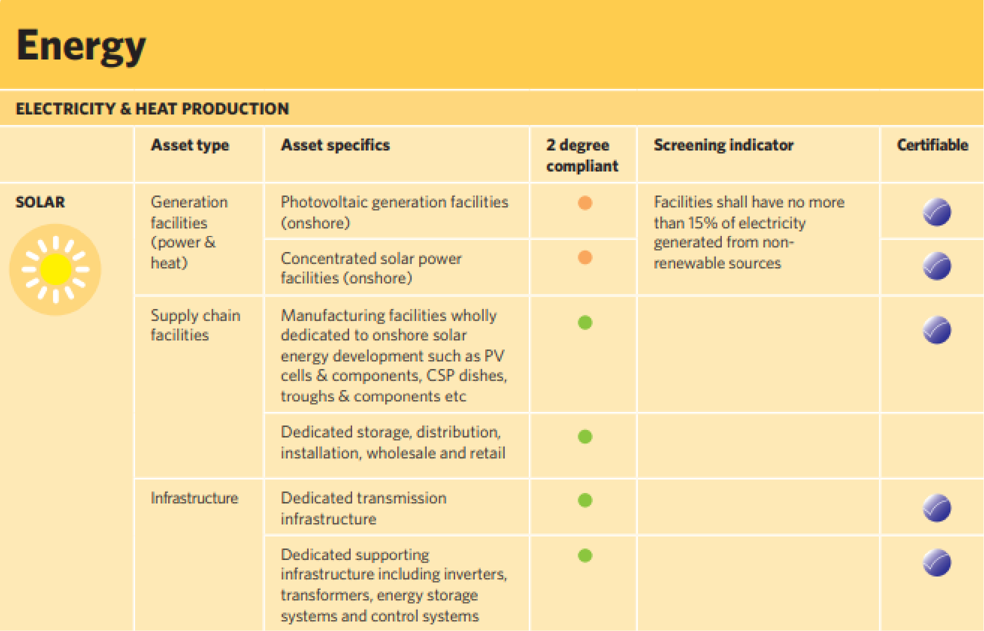
Climate Bonds

CLIMATE BONDS STANDARD CERTIFIED

Climate Bonds Standard
Version 3.0

International best practice for labelling green investments

CERTIFICATION



Energy

ELECTRICITY & HEAT PRODUCTION

	Asset type	Asset specifics	2 degree compliant	Screening indicator	Certifiable
SOLAR	Generation facilities (power & heat)	Photovoltaic generation facilities (onshore)	●	Facilities shall have no more than 15% of electricity generated from non-renewable sources	✓
		Concentrated solar power facilities (onshore)	●		✓
	Supply chain facilities	Manufacturing facilities wholly dedicated to onshore solar energy development such as PV cells & components, CSP dishes, troughs & components etc	●		✓
		Dedicated storage, distribution, installation, wholesale and retail	●		
	Infrastructure	Dedicated transmission infrastructure	●		✓
		Dedicated supporting infrastructure including inverters, transformers, energy storage systems and control systems	●		✓

Source: CBI

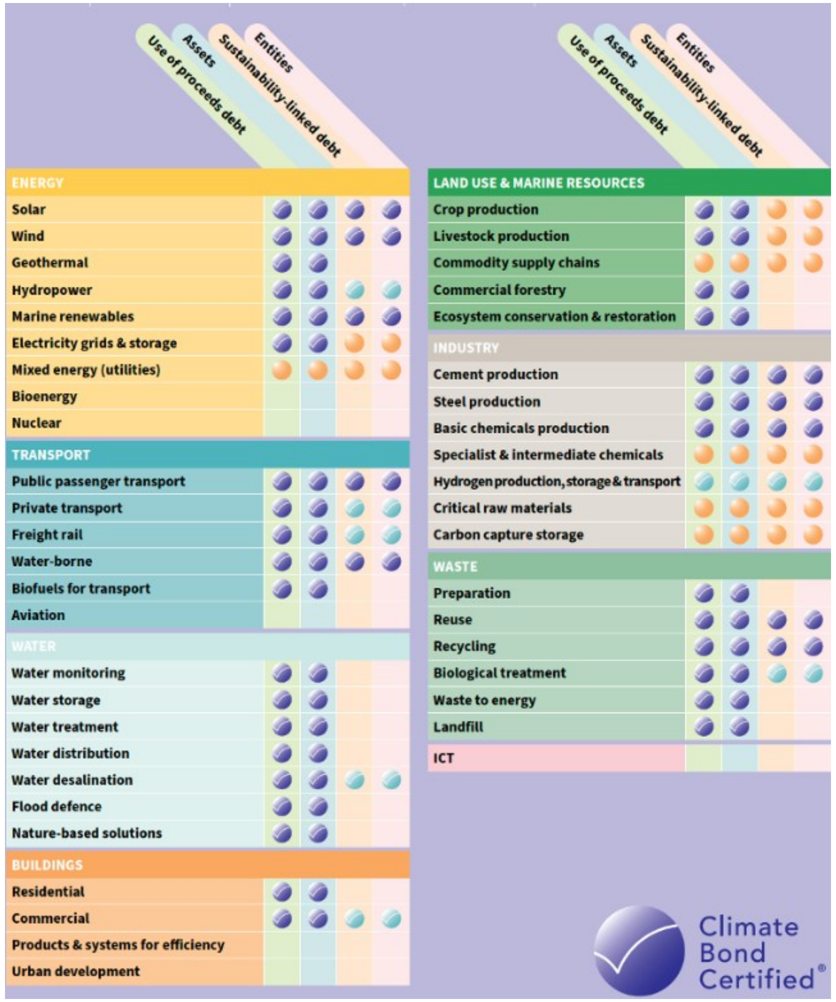
CBI extended certification scheme

» Following market development, CBI extended its certification services to cover:
  - Use of proceeds debt (Green bonds)
  - Assets
  - Sustainability linked debt (SLBs)
  - Entities

Climate Bonds Certification

CRITERIA STATUS	🟣 Certification available	🔵 Certification for part of the sector only	🟠 Certification pending 2023

Source: CBI



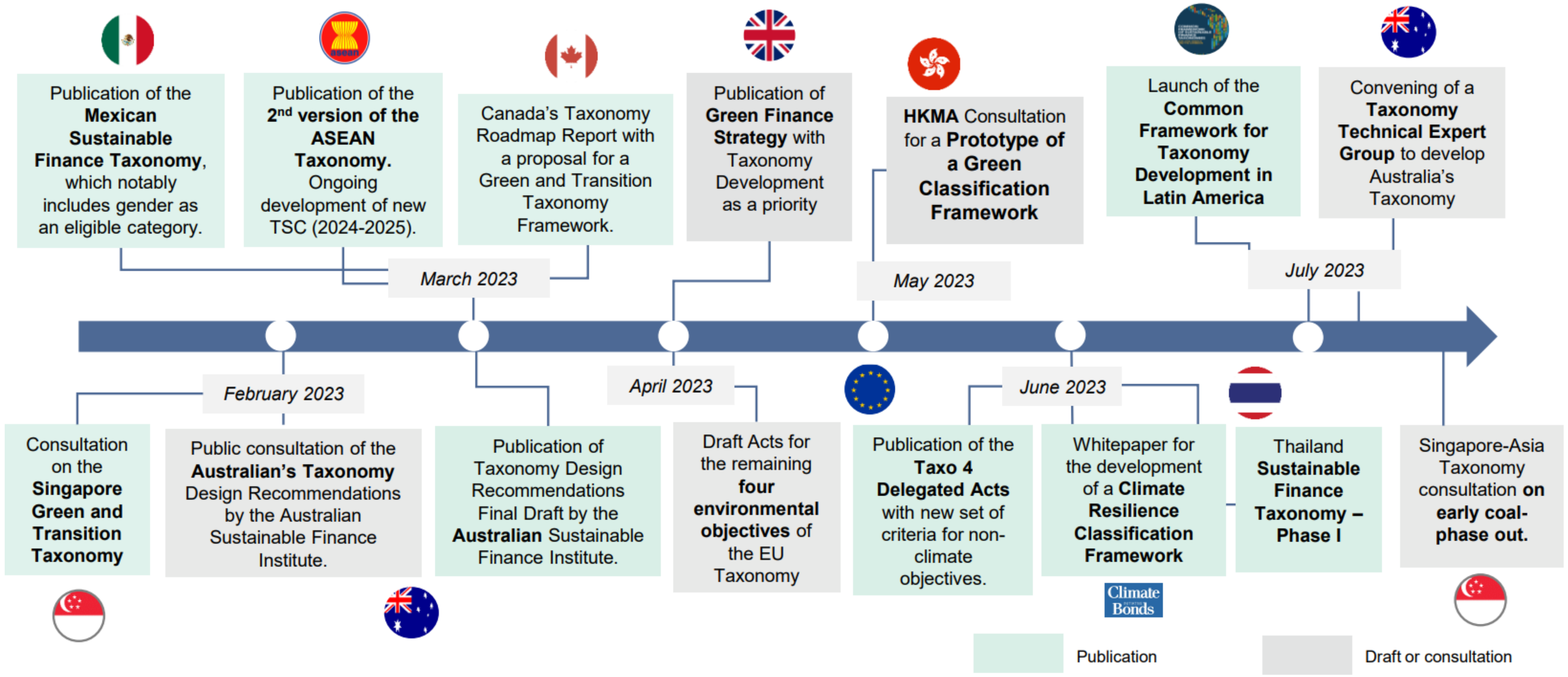
	Use of proceeds debt	Assets	Sustainability-linked debt	Entities
ENERGY				
Solar	🟣	🟣	🟣	🟣
Wind	🟣	🟣	🟣	🟣
Geothermal	🟣	🟣		
Hydropower	🟣	🟣	🔵	🔵
Marine renewables	🟣	🟣	🟣	🟣
Electricity grids & storage	🟣	🟣	🟠	🟠
Mixed energy (utilities)	🟠	🟠	🟠	🟠
Bioenergy				
Nuclear				
TRANSPORT				
Public passenger transport	🟣	🟣	🟣	🟣
Private transport	🟣	🟣	🔵	🔵
Freight rail	🟣	🟣	🔵	🔵
Water-borne	🟣	🟣	🟣	🟣
Biofuels for transport	🟣	🟣		
Aviation				
WATER				
Water monitoring	🟣	🟣		
Water storage	🟣	🟣		
Water treatment	🟣	🟣		
Water distribution	🟣	🟣		
Water desalination	🟣	🟣	🔵	🔵
Flood defence	🟣	🟣		
Nature-based solutions	🟣	🟣		
BUILDINGS				
Residential	🟣	🟣		
Commercial	🟣	🟣	🔵	🔵
Products & systems for efficiency				
Urban development				

	Use of proceeds debt	Assets	Sustainability-linked debt	Entities
LAND USE & MARINE RESOURCES				
Crop production	🟣	🟣	🟠	🟠
Livestock production	🟣	🟣	🟠	🟠
Commodity supply chains	🟠	🟠	🟠	🟠
Commercial forestry	🟣	🟣		
Ecosystem conservation & restoration	🟣	🟣		
INDUSTRY				
Cement production	🟣	🟣	🟣	🟣
Steel production	🟣	🟣	🟣	🟣
Basic chemicals production	🟣	🟣	🟣	🟣
Specialist & intermediate chemicals	🟠	🟠	🟠	🟠
Hydrogen production, storage & transport	🔵	🔵	🔵	🔵
Critical raw materials	🟠	🟠	🟠	🟠
Carbon capture storage	🟠	🟠	🟠	🟠
WASTE				
Preparation	🟣	🟣		
Reuse	🟣	🟣	🟣	🟣
Recycling	🟣	🟣	🟣	🟣
Biological treatment	🟣	🟣	🔵	🔵
Waste to energy	🟣	🟣		
Landfill	🟣	🟣		
ICT				

Climate Bond Certified®

Taxonomies progress status: 2023

The timeline of taxonomy development worldwide



Publication of the **Mexican Sustainable Finance Taxonomy**, which notably includes gender as an eligible category.

Publication of the **2nd version of the ASEAN Taxonomy.** Ongoing development of new TSC (2024-2025).

Canada's Taxonomy Roadmap Report with a proposal for a Green and Transition Taxonomy Framework.

Publication of **Green Finance Strategy** with Taxonomy Development as a priority

HKMA Consultation for a **Prototype of a Green Classification Framework**

Launch of the **Common Framework for Taxonomy Development in Latin America**

Convening of a **Taxonomy Technical Expert Group** to develop Australia's Taxonomy

March 2023

May 2023

July 2023

February 2023

April 2023

June 2023

Consultation on the **Singapore Green and Transition Taxonomy**

Public consultation of the **Australian's Taxonomy** Design Recommendations by the Australian Sustainable Finance Institute.

Publication of Taxonomy Design Recommendations Final Draft by the **Australian** Sustainable Finance Institute.

Draft Acts for the remaining **four environmental objectives** of the EU Taxonomy

Publication of the **Taxo 4 Delegated Acts** with new set of criteria for non-climate objectives.

Whitepaper for the development of a **Climate Resilience Classification Framework**

Climate Bonds

Thailand **Sustainable Finance Taxonomy – Phase I**

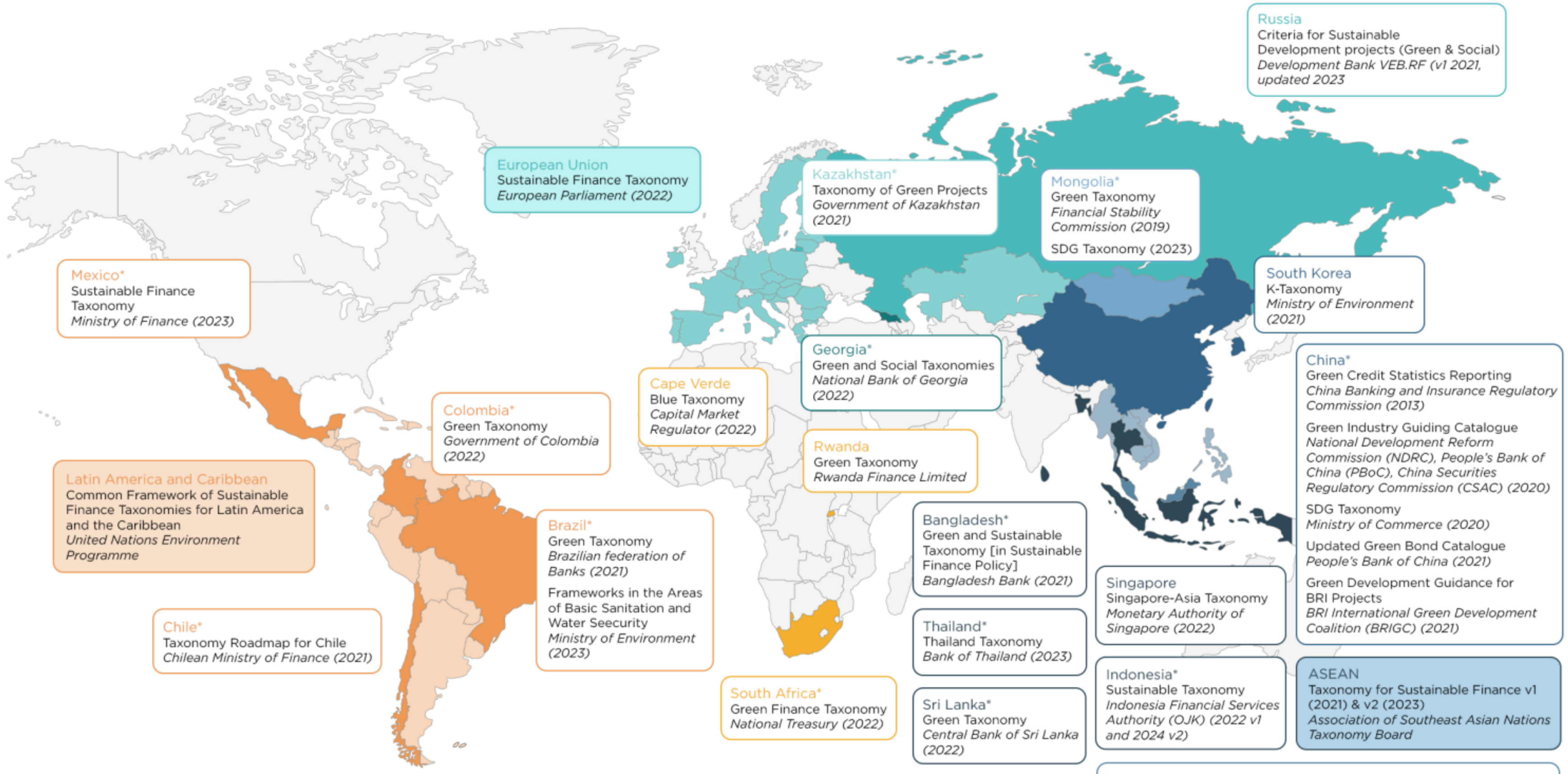
Singapore-Asia Taxonomy consultation **on early coal-phase out.**

🟩 Publication

⬜ Draft or consultation

Source: Natixis

Multiplication of Taxonomies



Russia
Criteria for Sustainable Development projects (Green & Social)
Development Bank VEB.RF (v1 2021, updated 2023

European Union
Sustainable Finance Taxonomy
European Parliament (2022)

Kazakhstan*
Taxonomy of Green Projects
Government of Kazakhstan (2021)

Mongolia*
Green Taxonomy
Financial Stability Commission (2019)
SDG Taxonomy (2023)

Mexico*
Sustainable Finance Taxonomy
Ministry of Finance (2023)

South Korea
K-Taxonomy
Ministry of Environment (2021)

Georgia*
Green and Social Taxonomies
National Bank of Georgia (2022)

Cape Verde
Blue Taxonomy
Capital Market Regulator (2022)

Colombia*
Green Taxonomy
Government of Colombia (2022)

Rwanda
Green Taxonomy
Rwanda Finance Limited

China*
Green Credit Statistics Reporting
China Banking and Insurance Regulatory Commission (2013)

Green Industry Guiding Catalogue
National Development Reform Commission (NDRC), People's Bank of China (PBoC), China Securities Regulatory Commission (CSAC) (2020)

SDG Taxonomy
Ministry of Commerce (2020)

Updated Green Bond Catalogue
People's Bank of China (2021)

Green Development Guidance for BRI Projects
BRI International Green Development Coalition (BRIGC) (2021)

Latin America and Caribbean
Common Framework of Sustainable Finance Taxonomies for Latin America and the Caribbean
United Nations Environment Programme

Brazil*
Green Taxonomy
Brazilian federation of Banks (2021)

Frameworks in the Areas of Basic Sanitation and Water Seecurity
Ministry of Environment (2023)

Bangladesh*
Green and Sustainable Taxonomy [in Sustainable Finance Policy]
Bangladesh Bank (2021)

Singapore
Singapore-Asia Taxonomy
Monetary Authority of Singapore (2022)

Chile*
Taxonomy Roadmap for Chile
Chilean Ministry of Finance (2021)

Thailand*
Thailand Taxonomy
Bank of Thailand (2023)

South Africa*
Green Finance Taxonomy
National Treasury (2022)

Indonesia*
Sustainable Taxonomy
Indonesia Financial Services Authority (OJK) (2022 v1 and 2024 v2)

ASEAN
Taxonomy for Sustainable Finance v1 (2021) & v2 (2023)
Association of Southeast Asian Nations Taxonomy Board

Sri Lanka*
Green Taxonomy
Central Bank of Sri Lanka (2022)

Malaysia
Climate Change and Principle-based Taxonomy
Bank Negara (2021)

Principles-based Sustainable and Responsible Investment Taxonomy for the Malaysian Capital Market (SRI Taxonomy)
Securities Commission Malaysia (2022)

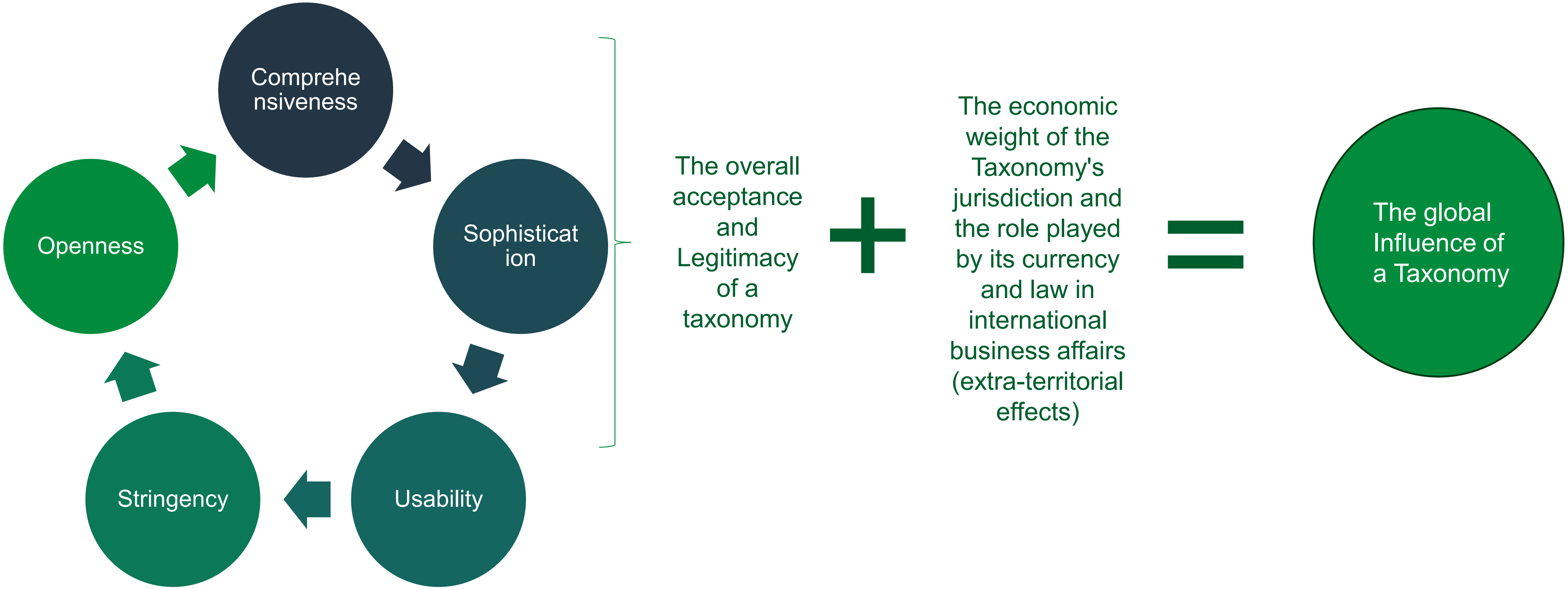
*SBFN member country

Note: Figure depicts taxonomies adopted by different countries/ jurisdictions. In addition, there are a number of countries that are working on taxonomy development. For example, Nepal, India and Uzbekistan

Source: UNDP

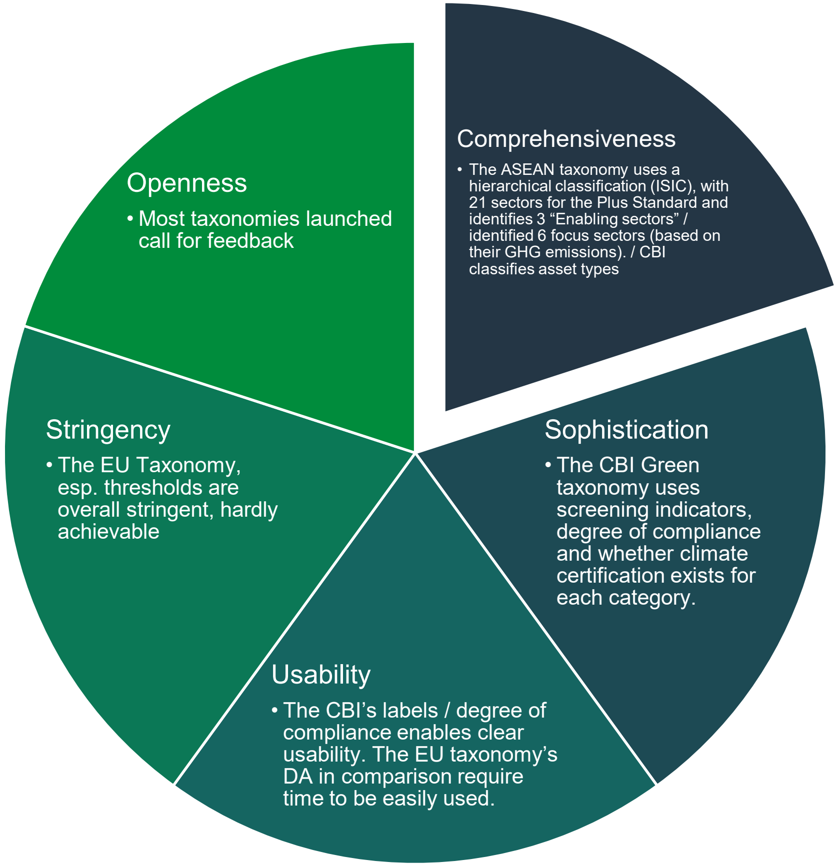
GREEN TAXONOMIES

Why some taxonomies are more influential?



Source: Natixis

Why some taxonomies are more influential?



Openness
- Most taxonomies launched call for feedback

Comprehensiveness
- The ASEAN taxonomy uses a hierarchical classification (ISIC), with 21 sectors for the Plus Standard and identifies 3 “Enabling sectors” / identified 6 focus sectors (based on their GHG emissions). / CBI classifies asset types

Stringency
- The EU Taxonomy, esp. thresholds are overall stringent, hardly achievable

Sophistication
- The CBI Green taxonomy uses screening indicators, degree of compliance and whether climate certification exists for each category.

Usability
- The CBI’s labels / degree of compliance enables clear usability. The EU taxonomy’s DA in comparison require time to be easily used.

The overall acceptance and Legitimacy of a taxonomy

+

The economic weight of the Taxonomy's jurisdiction and the role played by its currency and law in international business affairs (extra-territorial effects)

=

The global Influence of a Taxonomy

EU Taxonomy of sustainable activities

CBI Green Taxonomy

ASEAN Taxonomy

Three of the most influential taxonomies

Source: [Natixis]

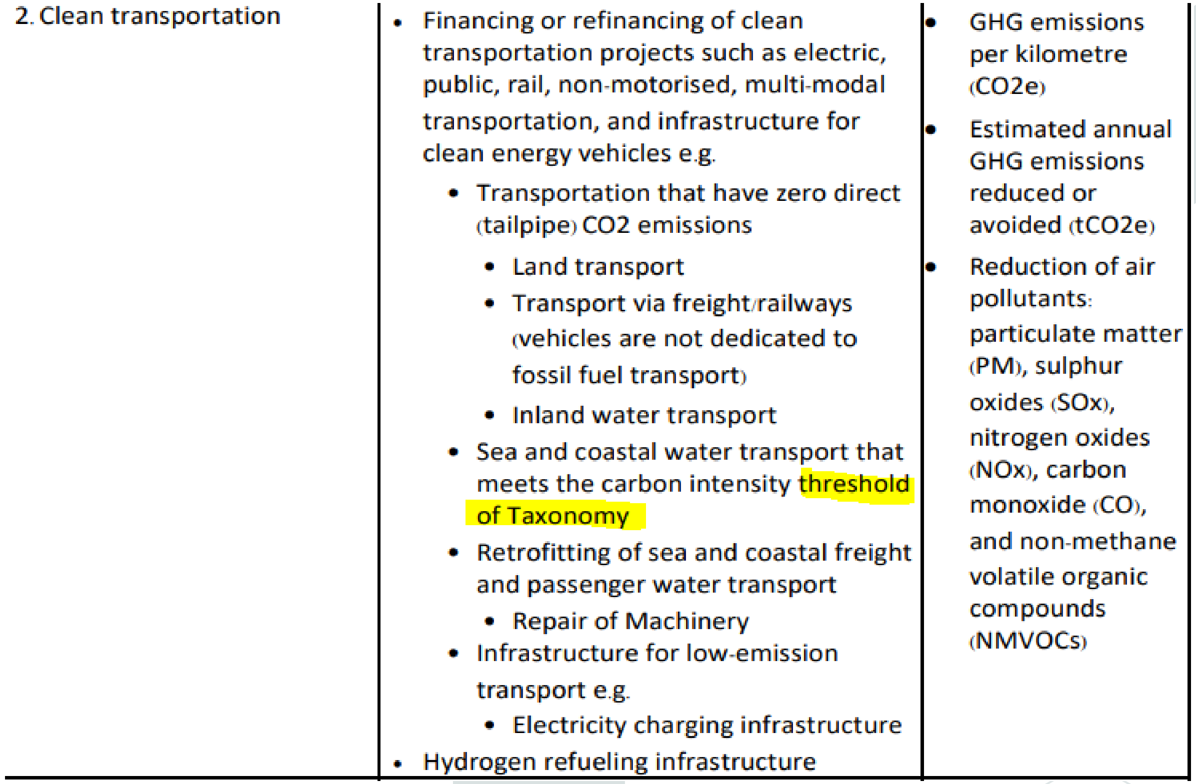
How sustainable bond issuers make use of the Taxonomies?

- By aligning eligible assets with the Taxonomy in the bond framework
- By aligning with the local taxonomy, the framework provides a clear and standardized framework for assessing the sustainability credentials of the assets, thereby enabling investors and stakeholders to make well-informed decisions.

CIMB THAI

SUSTAINABILITY BOND FRAMEWORK

June 2023



2. Clean transportation	• Financing or refinancing of clean transportation projects such as electric, public, rail, non-motorised, multi-modal transportation, and infrastructure for clean energy vehicles e.g.
	  • Transportation that have zero direct (tailpipe) CO2 emissions
	    • Land transport
	    • Transport via freight/railways (vehicles are not dedicated to fossil fuel transport)
	    • Inland water transport
	  • Sea and coastal water transport that meets the carbon intensity threshold of Taxonomy
	  • Retrofitting of sea and coastal freight and passenger water transport
	    • Repair of Machinery
	  • Infrastructure for low-emission transport e.g.
	    • Electricity charging infrastructure
	• Hydrogen refueling infrastructure
		• GHG emissions per kilometre (CO2e)
		• Estimated annual GHG emissions reduced or avoided (tCO2e)
		• Reduction of air pollutants: particulate matter (PM), sulphur oxides (SOx), nitrogen oxides (NOx), carbon monoxide (CO), and non-methane volatile organic compounds (NMVOCs)

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GREEN EXCHANGE
by Luxembourg Stock Exchange

International Harmonisation Efforts

International Platform on Sustainable Finance-IPSF

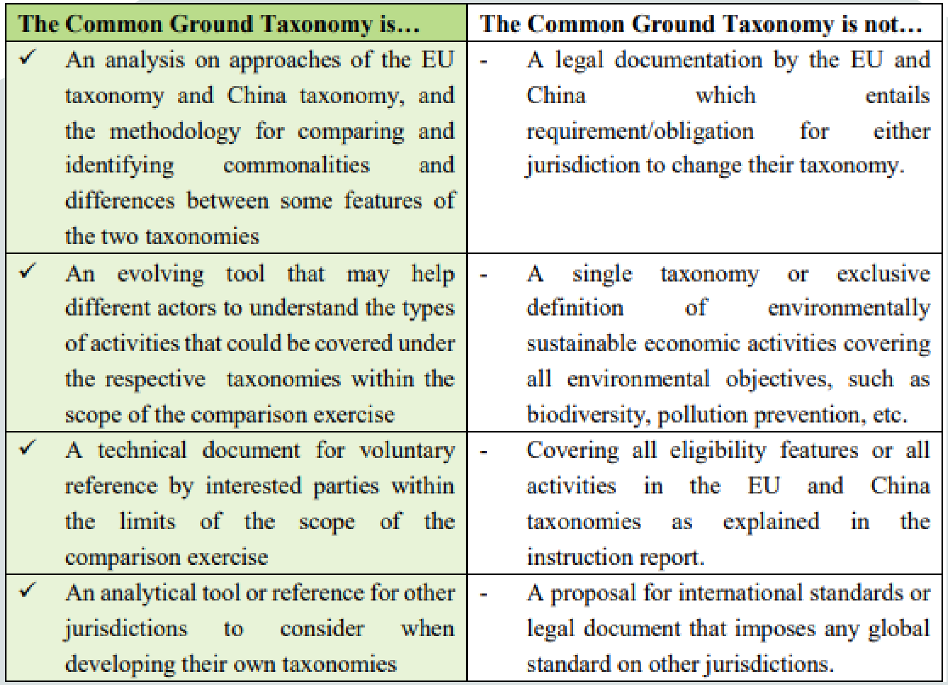
- Launched together by the EU with the relevant authorities in Argentina, Canada, Chile, China, India, Kenya and Morocco
- Since its launch, Indonesia, Japan, the United Kingdom, New Zealand, Norway, Senegal, Singapore, Switzerland also joined the IPSF
- The ultimate objective of the platform is to scale up the mobilisation of private capital towards environmentally sustainable investments
- It offers a multilateral forum of dialogue between policymakers that are in charge of developing sustainable finance regulatory measures to help investors identify and seize sustainable investment opportunities that truly contribute to climate and environmental objectives
- IPSF “Common Ground Taxonomy” published in September 2021

Source: European Commission

IPSF “Common Ground Taxonomy-CGT”

MAIN FEATURES

- The technical screening criteria focus on factors that indicate substantial contribution to climate mitigation (only)
- Different scenarios:
  - Scenario 1: Areas with clear overlaps
  - Scenario 2: EU criteria are more stringent
  - Scenario 3: China criteria are more stringent
  - Scenario 4: Identifiable overlap
  - Scenario 5/6: Unclear overlap or obvious divergence
- Pending activities
- Critics:
  - Partial, only mitigation and not covering all sectors
  - Does not tackle transition
  - EU Taxonomy is not yet complete



The Common Ground Taxonomy is…	**The Common Ground Taxonomy is not…**
✓ An analysis on approaches of the EU taxonomy and China taxonomy, and the methodology for comparing and identifying commonalities and differences between some features of the two taxonomies	- A legal documentation by the EU and China which entails requirement/obligation for either jurisdiction to change their taxonomy.
✓ An evolving tool that may help different actors to understand the types of activities that could be covered under the respective taxonomies within the scope of the comparison exercise	- A single taxonomy or exclusive definition of environmentally sustainable economic activities covering all environmental objectives, such as biodiversity, pollution prevention, etc.
✓ A technical document for voluntary reference by interested parties within the limits of the scope of the comparison exercise	- Covering all eligibility features or all activities in the EU and China taxonomies as explained in the instruction report.
✓ An analytical tool or reference for other jurisdictions to consider when developing their own taxonomies	- A proposal for international standards or legal document that imposes any global standard on other jurisdictions.

Source: European Commission

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by Luxembourg Stock Exchange

The EU Taxonomy Regulation

EU Taxonomy regulation: Structure & delegated acts

2019 | 2020 | 2021 | 2022 | 2023

December 2019

Political Agreement on the Taxonomy Regulation

June 2020

The Taxonomy Regulation was published in the Official Journal of the European Union

December 2020

Publication of Climate Delegated Act with the TSC for the first 2 environmental objectives (CCM & CCA)

July 2021

Publication of Disclosures Delegated Act supplementing Art 8 of the Taxonomy Regulation

January 2022

Climate Delegated Act enters in force for the first 2 environmental objectives

July 2022

Publication of complementary Climate Delegated Act incl. Nuclear and Natural Gas

November 2023

The 4 remaining environmental objectives enter into force with publication of the Environmental Delegated Act

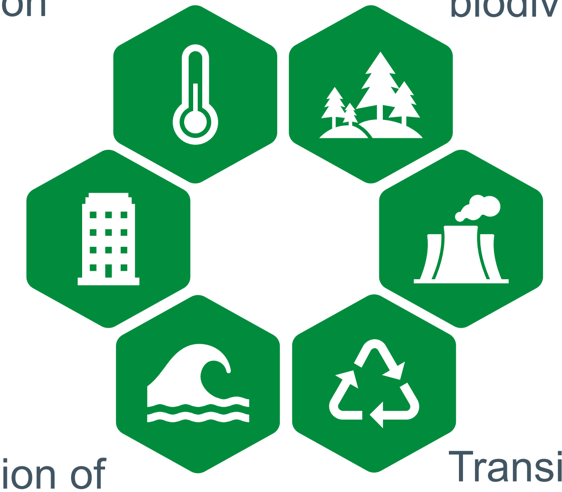
Source: Euractiv CSSF

Purpose and objective of the EU Taxonomy

A common classification of economic activities substantially contributing to environmental objectives (carbon neutrality by 2050) using science-based criteria

» **Purpose:** Establishing economic activity's degree of environmental sustainability

6 ENVIRONMENTAL OBJECTIVES



Climate change mitigation

Protection and restoration of biodiversity and ecosystems

Climate change adaptation

Pollution prevention and control

Sustainable use and protection of water and marine resources

Transition to a circular economy

Source: European Commission adapted by LGX

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by Luxembourg Stock Exchange

Projects Selection

Eligible categories of projects

AS PER ICMA'S GREEN BOND PRINCIPLES (GBPs)

- Renewable energy
- Energy efficiency
- Pollution prevention and control
- Environmentally sustainable management of living natural resources and land use
- Clean transportation
- Sustainable water and wastewater management
- Climate change adaptation
- Eco-efficient and/or circular economy adapted products, production technologies and processes
- Green buildings

AS PER ICMA'S SOCIAL BOND PRINCIPLES (SPBs)

- Affordable housing
- Employment generation
- Including through the potential effect of SME financing and microfinance
- Affordable basic infrastructure
- Clean drinking water, sewers, sanitation, transport, energy
- Access to essential services
- Health, education, vocational training, healthcare, financing, financial services
- Food security
- Socioeconomic advancement and empowerment

Case of Philippines sustainability bond

STATE TREASURY SUPPORTED BY RELEVENT MINISTRIES

» Dedicated Interagency Technical Working Group on Sustainable Finance Development Budget Coordination Committee.

» Senior representatives from the Department of Finance (DOF), Bureau of the Treasury (BTr), National Economic Development Authority (NEDA) and Department of Budget and Management (DBM) aided by sectoral experts from industries and academia.

» Projects can come from other national government agencies (NGAs) whose budgets include programs, activities, and projects (PAPs) which may be considered as Eligible Expenditures:

- Department of Health
- Department of Education
- Department of Energy
- Department of Labor and Employment
- Department of Transportation
- Department of Agriculture / Department of Agrarian Reform
- Department of Social Welfare and Development
- Department of Public Works and Highways
- Department of Environment and Natural Resources

Source: Philippines Sustainability Bond Framework

Case of Fiji

ESTABLISHING THE GOVERNANCE STRUCTURE : THE STEERING COMMITTE

1

The committee was tasked with two distinct roles:

- to facilitate the issuance of a sovereign green bond,
- to work towards the establishment of a green bond program in the country.

2

The Governor of the Reserve Bank of Fiji acted as chair, with extensive cross-government representation, and the IFC and World Bank maintained an observer status as technical advisers. The Reserve Bank of Fiji also provided secretariat support.

3

Meetings were originally scheduled on a monthly basis in the lead up to issuance, then quarterly post issuance.

4

The Committee was responsible for finalizing the Green Bond Policy Framework in advance of the sovereign bond issuance and then were required to develop and publish a strategy for Fiji's ongoing green bond program to guide future public and private issuers.

5

The Committee is also responsible for monitoring other issuers, and is tasked with providing training and awareness raising for prospective issuers

Source: WB guidance for sovereign green bond issuance

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GREEN EXCHANGE
by Luxembourg Stock Exchange

GSSS Bonds External Review

Need for an external review

» **Issuers seek external reviews for the same reasons more traditional external assurance is sought. For example, to demonstrate:**

- Adherence to certain principles and/or standards such as ICMA's Green Bond Principles
  - "Am I following market practices?"
- The environmental and/or social integrity of the financial product
  - "Are the activities I am financing green/social/sustainable?"
- Adequacy of internal controls and procedures
  - "Are my processes aligned with market practices?"
- Adequacy of Key Performance Indicators (KPIs) chosen
  - "Are my reporting indicators descriptive of actual environmental/social performance"?
- Improve overall credibility

GSSS BONDS EXTERNAL REVIEW

External review providers

KPMG

pwc

Deloitte.

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Building a better working world

FIRST ENVIRONMENT

AIFC Astana International Financial Centre

vigeo eiris

SUSTAINALYTICS

CICERO Center for International Climate Research

NSF

ISS ESG

GFC Green Finance Centre

Climate Bond Certified

ISS-oekom

Climate Bonds Initiative

BUREAU VERITAS 1828

TÜV NORD

IBIS

DNV·GL

EVI Sustainable Solutions for the Planet

S&P Global

CARBON TRUST

KESTREL VERIFIERS™

China only

中财绿融
Zhongcai Green Financing

中诚信国际
CCXI

商道融绿
SynTao Green Finance

联合赤道
China Lianhe Equator

瑞景通途
Make Green Achievable

Types of external review

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» **There are a variety of "products" external reviewers can provide to issuers on the environmental and/or social credentials of their bond, or bond framework:**
  - Second Party Opinion (SPO)
  - Certification
  - External verification (Assurance)

Second Party Opinion (SPO)

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by Luxembourg Stock Exchange

- Most widely used form of external review provided by independent organisations
- Usually issued based on a bond framework (validity: n-years)
- It evaluates the bond framework against a specific principle/standard
- Most commonly against the ICMA principles if use of proceeds bond or an SLB
- Generally, includes an assessment of the issuer's overarching objectives, strategy, policy and processes relating to the environmental and social features of the type of projects that the issuer intends to finance with the proceeds

S&P Global

vigeo eiris SUSTAINALYTICS °CICERO Center for International Climate Research DNV·GL ISS-oekom

Certification

- An issuer can have its green bond (or associated framework) certified against CBI standard
- CBI standard defines specific criteria on assets alignment with Paris agreement path
- Alignment with such criteria is normally tested by the standard setter, a qualified third party which verify the consistency of the relevant bond (or framework) with the standard

CLIMATE BONDS STANDARD CERTIFIED

Climate Bonds Standard

Certification

Climate Bond Certified | Aligned
Use of Proceeds: 1.5° aligned

This is to certify that the

Green Bonds in the amount of 15 million US Dollars for a tenor of up to 1 year

Issued by

Development Bank of Kazakhstan JSC

Has met the criteria for certification by the Climate Bonds Standard Board on behalf of the Climate Bonds Initiative

SEAN KIDNEY
C.E.O., Climate Bonds Initiative

21st December 2023

Source: CBI

External verification

WHAT DO WE MEAN BY THIS?

» An external verification is typically made based on an annual green or social of sustainability bond post-issuance report,

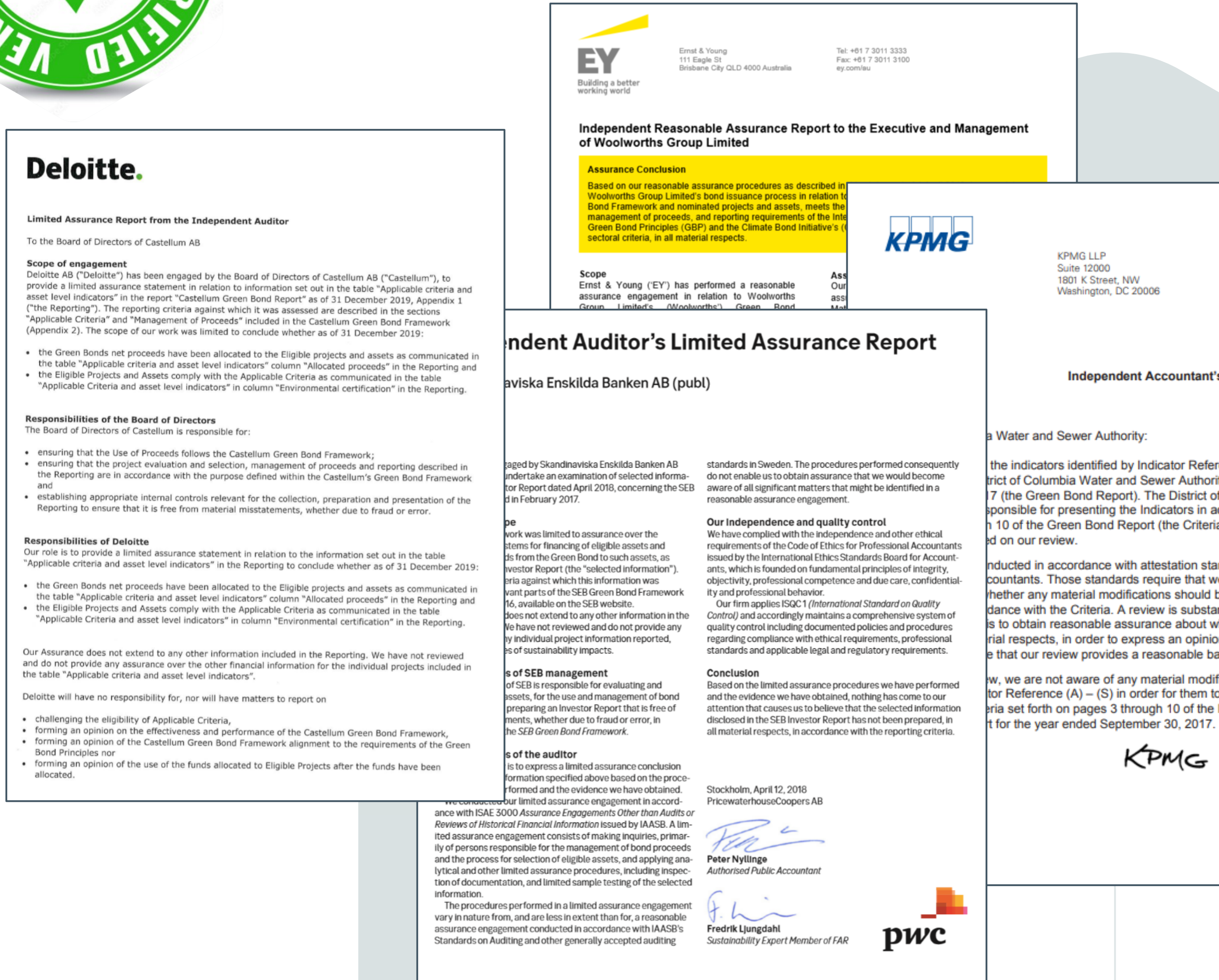
» A few established issuers, such as the EIB, go this route for their post issuance reporting

WHY SEEK AN EXTERNAL VERIFICATION?

» Larger institutions already commit to an audit of the sustainability/green credentials and decision-making

» The audit report will contain the necessary assurances required for green bond issuances, so a separate SPO is not necessary

» For organisations who already have an SPO, external verification provides investors with extra assurance on reporting, for example



Deloitte.

Limited Assurance Report from the Independent Auditor

To the Board of Directors of Castellum AB

Scope of engagement
Deloitte AB ("Deloitte") has been engaged by the Board of Directors of Castellum AB ("Castellum"), to provide a limited assurance statement in relation to information set out in the table "Applicable criteria and asset level indicators" in the report "Castellum Green Bond Report" as of 31 December 2019, Appendix 1 ("the Reporting"). The reporting criteria against which it was assessed are described in the sections "Applicable Criteria" and "Management of Proceeds" included in the Castellum Green Bond Framework (Appendix 2). The scope of our work was limited to conclude whether as of 31 December 2019:

- the Green Bonds net proceeds have been allocated to the Eligible projects and assets as communicated in the table "Applicable criteria and asset level indicators" column "Allocated proceeds" in the Reporting and
- the Eligible Projects and Assets comply with the Applicable Criteria as communicated in the table "Applicable Criteria and asset level indicators" in column "Environmental certification" in the Reporting.

Responsibilities of the Board of Directors
The Board of Directors of Castellum is responsible for:

- ensuring that the Use of Proceeds follows the Castellum Green Bond Framework;
- ensuring that the project evaluation and selection, management of proceeds and reporting described in the Reporting are in accordance with the purpose defined within the Castellum's Green Bond Framework and
- establishing appropriate internal controls relevant for the collection, preparation and presentation of the Reporting to ensure that it is free from material misstatements, whether due to fraud or error.

Responsibilities of Deloitte
Our role is to provide a limited assurance statement in relation to the information set out in the table "Applicable criteria and asset level indicators" in the Reporting to conclude whether as of 31 December 2019:

- the Green Bonds net proceeds have been allocated to the Eligible projects and assets as communicated in the table "Applicable criteria and asset level indicators" column "Allocated proceeds" in the Reporting and
- the Eligible Projects and Assets comply with the Applicable Criteria as communicated in the table "Applicable Criteria and asset level indicators" in column "Environmental certification" in the Reporting.

Our Assurance does not extend to any other information included in the Reporting. We have not reviewed and do not provide any assurance over the other financial information for the individual projects included in the table "Applicable criteria and asset level indicators".

Deloitte will have no responsibility for, nor will have matters to report on

- challenging the eligibility of Applicable Criteria,
- forming an opinion on the effectiveness and performance of the Castellum Green Bond Framework,
- forming an opinion of the Castellum Green Bond Framework alignment to the requirements of the Green Bond Principles nor
- forming an opinion of the use of the funds allocated to Eligible Projects after the funds have been allocated.

EY
Building a better working world

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Brisbane City QLD 4000 Australia

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ey.com/au

Independent Reasonable Assurance Report to the Executive and Management of Woolworths Group Limited

Assurance Conclusion

Based on our reasonable assurance procedures as described in
Woolworths Group Limited's bond issuance process in relation to
Bond Framework and nominated projects and assets, meets the
management of proceeds, and reporting requirements of the Inte
Green Bond Principles (GBP) and the Climate Bond Initiative's (
sectoral criteria, in all material respects.

Scope
Ernst & Young ('EY') has performed a reasonable assurance engagement in relation to Woolworths

Ass
Our
ass

KPMG

KPMG LLP
Suite 12000
1801 K Street, NW
Washington, DC 20006

Independent Accountant's

a Water and Sewer Authority:

the indicators identified by Indicator Refer
trict of Columbia Water and Sewer Authori
7 (the Green Bond Report). The District of
sponsible for presenting the Indicators in a
n 10 of the Green Bond Report (the Criteria
ed on our review.

nducted in accordance with attestation sta
countants. Those standards require that w
hether any material modifications should b
dance with the Criteria. A review is substa
is to obtain reasonable assurance about w
rial respects, in order to express an opinio
e that our review provides a reasonable ba

w, we are not aware of any material modif
tor Reference (A) – (S) in order for them to
eria set forth on pages 3 through 10 of the
t for the year ended September 30, 2017.

KPMG

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ndent Auditor's Limited Assurance Report

aviska Enskilda Banken AB (publ)

gaged by Skandinaviska Enskilda Banken AB
undertake an examination of selected informa-
tor Report dated April 2018, concerning the SEB
d in February 2017.

pe
work was limited to assurance over the
stems for financing of eligible assets and
ds from the Green Bond to such assets, as
nvestor Report (the "selected information").
eria against which this information was
vant parts of the SEB Green Bond Framework
16, available on the SEB website.
does not extend to any other information in the
We have not reviewed and do not provide any
ny individual project information reported,
es of sustainability impacts.

s of SEB management
of SEB is responsible for evaluating and
assets, for the use and management of bond
preparing an Investor Report that is free of
ments, whether due to fraud or error, in
the *SEB Green Bond Framework*.

s of the auditor
is to express a limited assurance conclusion
formation specified above based on the proce-
rformed and the evidence we have obtained.
our limited assurance engagement in accordance with ISAE 3000 *Assurance Engagements Other than Audits or Reviews of Historical Financial Information* issued by IAASB. A limited assurance engagement consists of making inquiries, primarily of persons responsible for the management of bond proceeds and the process for selection of eligible assets, and applying analytical and other limited assurance procedures, including inspection of documentation, and limited sample testing of the selected information.

The procedures performed in a limited assurance engagement vary in nature from, and are less in extent than for, a reasonable assurance engagement conducted in accordance with IAASB's Standards on Auditing and other generally accepted auditing standards in Sweden. The procedures performed consequently do not enable us to obtain assurance that we would become aware of all significant matters that might be identified in a reasonable assurance engagement.

Our independence and quality control
We have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

Our firm applies ISQC 1 *(International Standard on Quality Control)* and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Conclusion
Based on the limited assurance procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that the selected information disclosed in the SEB Investor Report has not been prepared, in all material respects, in accordance with the reporting criteria.

Stockholm, April 12, 2018
PricewaterhouseCoopers AB

Peter Nyllinge
Authorised Public Accountant

Fredrik Ljungdahl
Sustainability Expert Member of FAR

pwc

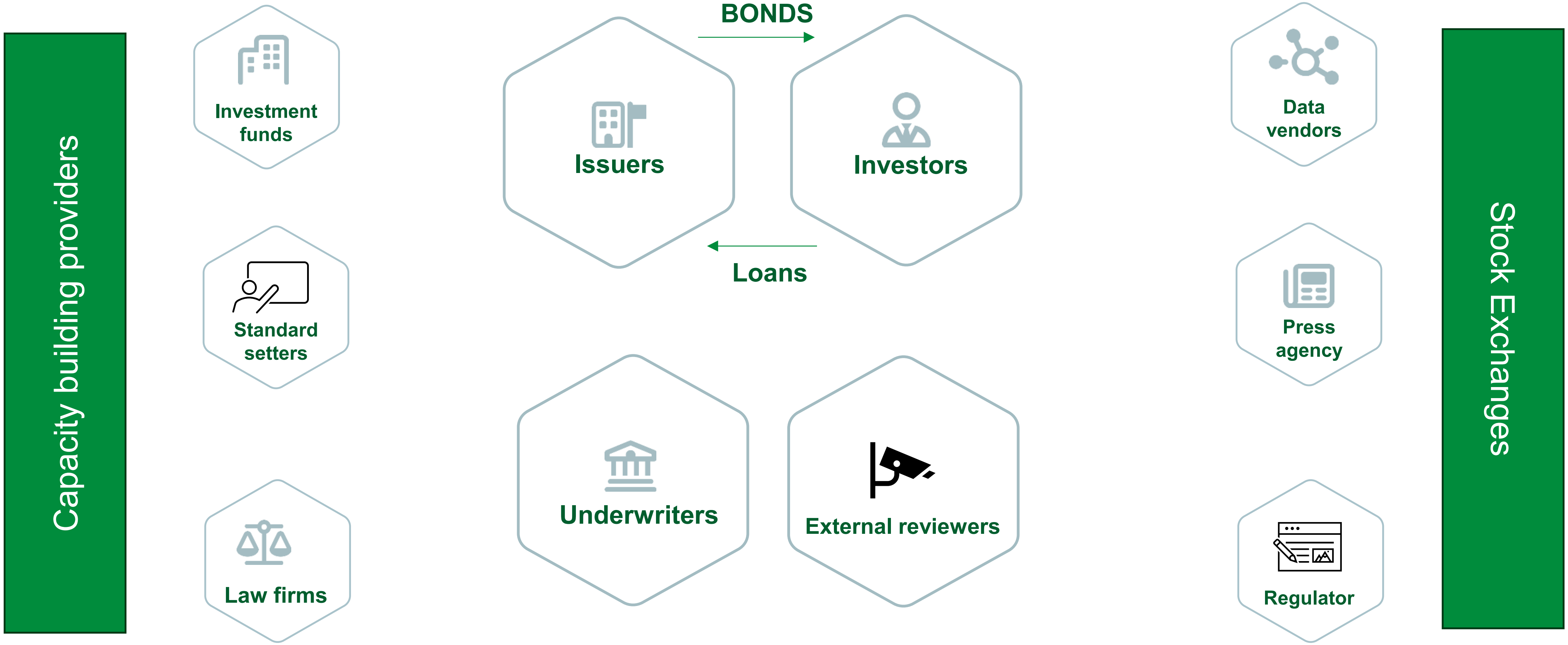
LUXEMBOURG
GREEN EXCHANGE
by Luxembourg Stock Exchange

SESSION 3: Issuance Phase - Structuring and Placing GSSS Bonds Successfully

LUXEMBOURG
GREEN EXCHANGE
by Luxembourg Stock Exchange

Stakeholders Engagement

External players involved in the GSSS bonds issuance



Capacity building providers

Investment funds

Standard setters

Law firms

BONDS

Issuers

Investors

Loans

Underwriters

External reviewers

They organise the issuance

Provide the external review / SPO

Data vendors

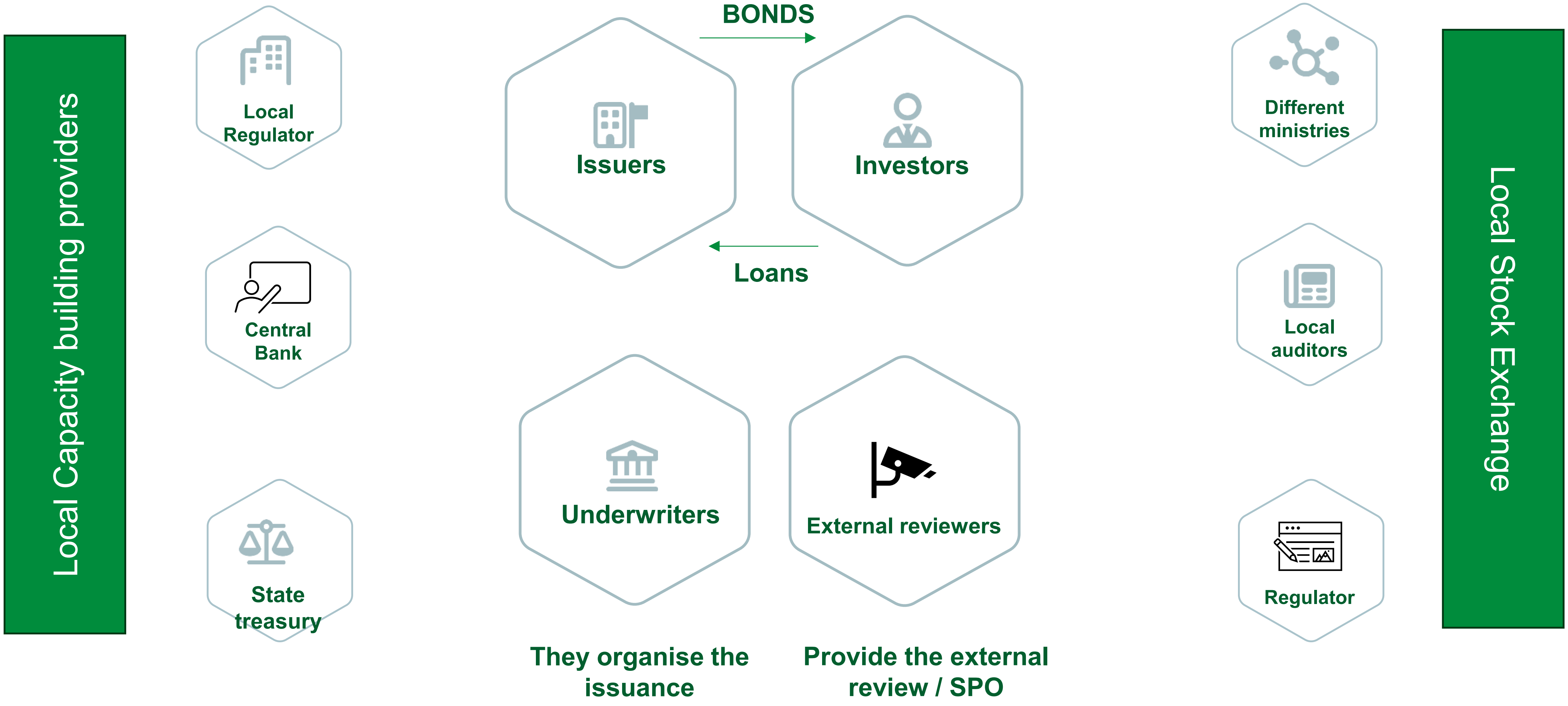
Press agency

Regulator

Stock Exchanges

Internal players involved in the GSSS bonds issuance

» Highly important to ensure accountability, consistency and transparency across government departments and sectors



Local Capacity building providers

Local Regulator

Central Bank

State treasury

BONDS

Issuers

Investors

Loans

Underwriters

External reviewers

They organise the issuance

Provide the external review / SPO

Different ministries

Local auditors

Regulator

Local Stock Exchange

LUXEMBOURG
GREEN EXCHANGE
by Luxembourg Stock Exchange

Sustainable Bonds Issuance

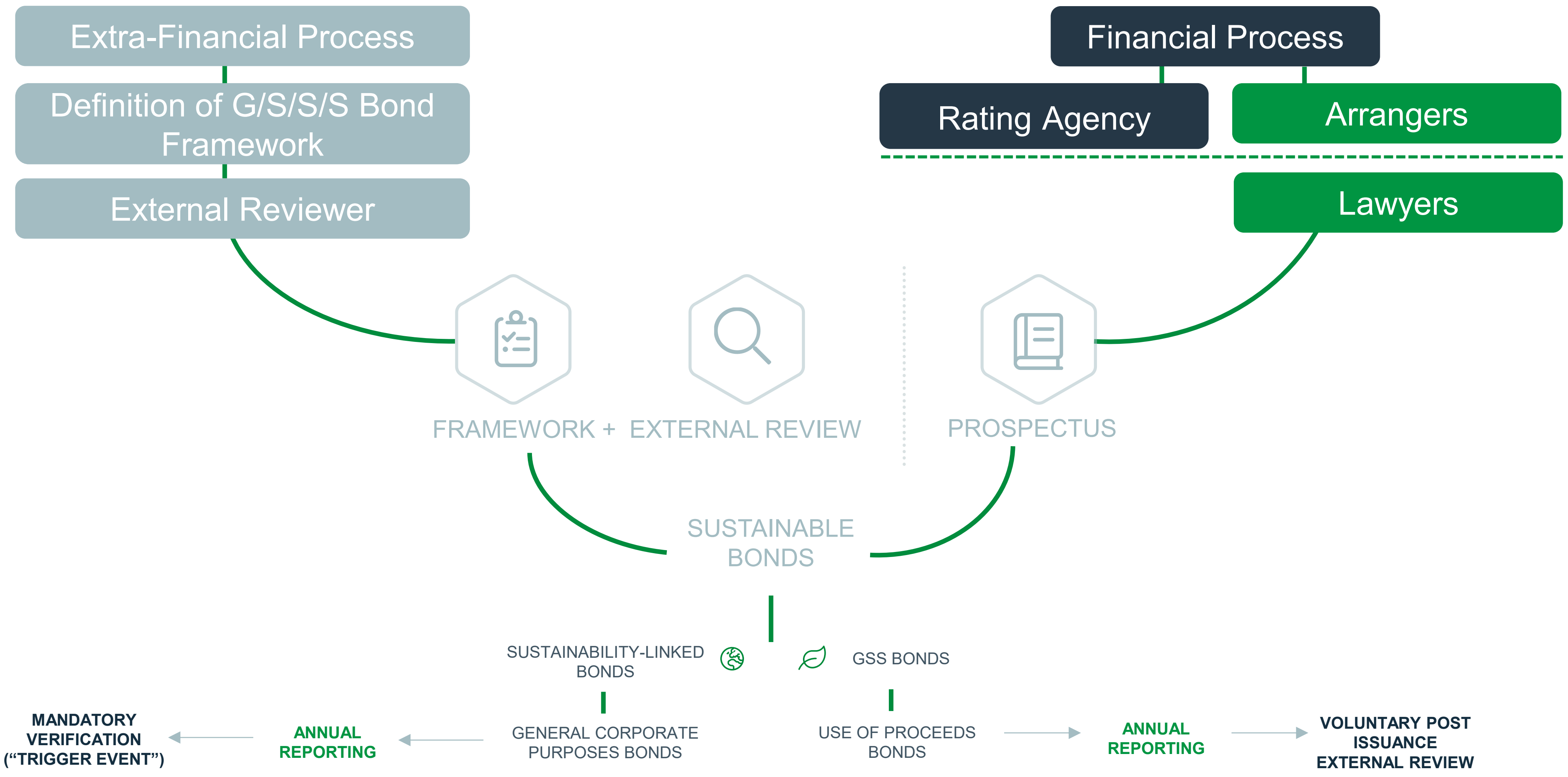
SUSTAINABLE BONDS ISSUANCE

How standards fit the issuance process

STEPS THAT REQUIRE EXTRA ATTENTION FROM ISSUERS OF A GSS, SL BOND COMPARED TO A REGULAR BONDS:

- Review funding option (drawbacks: heightened scrutiny, MRV costs)
- Identify eligible projects, assets or activities
- Design bond criteria and project selection process
- Set-up process and controls for use and management of proceeds (e.g. tagging of green finance) for GSS bonds
- Document processes (e.g. framework)
- Seek external assurance (e.g. second opinion)
- Disclose information and issue bond
- Allocate the proceeds in line with documented processes
- Report on the use of proceeds (and, if feasible, the impact of the activities) for GSS bonds
- Monitor and report on KPIs and SPTs for SLBs

The sustainable bond issuance process



Extra-Financial Process

Definition of G/S/S/S Bond Framework

External Reviewer

Financial Process

Rating Agency

Arrangers

Lawyers

FRAMEWORK + EXTERNAL REVIEW

PROSPECTUS

SUSTAINABLE BONDS

SUSTAINABILITY-LINKED BONDS

GSS BONDS

GENERAL CORPORATE PURPOSES BONDS ← **ANNUAL REPORTING** ← **MANDATORY VERIFICATION (“TRIGGER EVENT”)**

USE OF PROCEEDS BONDS → **ANNUAL REPORTING** → **VOLUNTARY POST ISSUANCE EXTERNAL REVIEW**

LUXEMBOURG
GREEN EXCHANGE
by Luxembourg Stock Exchange

Issuing and listing a sustainable bond on international exchanges

Is it necessary? Is it mandatory?

REASONS FOR LISTING A SUSTAINABLE DEBT INSTRUMENT ON A STOCK EXCHANGE

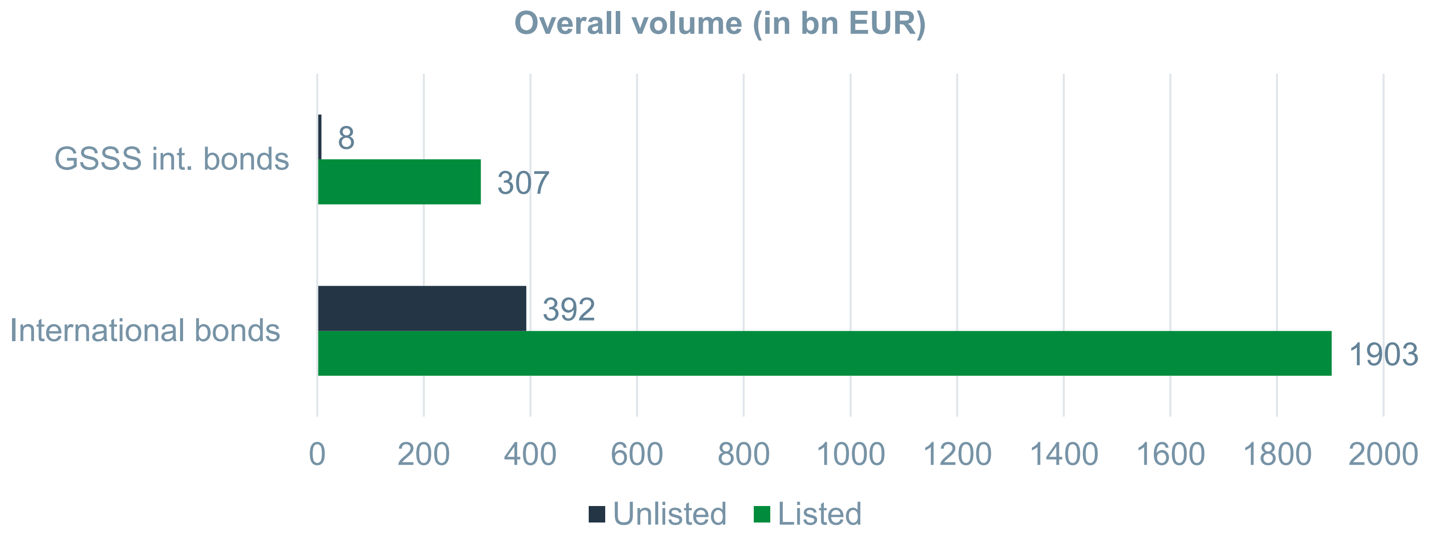
- Comply with some regulations
- Not mandatory but became a norm for sovereign issuers (Thailand, The Philippines, Poland, Uruguay, Mexico, etc)
- Same procedure for plain vanilla bond listing + extra requirements related to sustainability credentials
- It provides visibility, transparency, reaching out to international markets and further credibility

The key lesson is that the intention to list a sustainable bond should be clarified from the beginning so that the structure and associated transaction costs can be fully accounted.

Listing and displaying sustainable debt instruments: A strong connection

DID YOU KNOW THAT….

More GSSS bonds are listed than plain-vanilla bonds



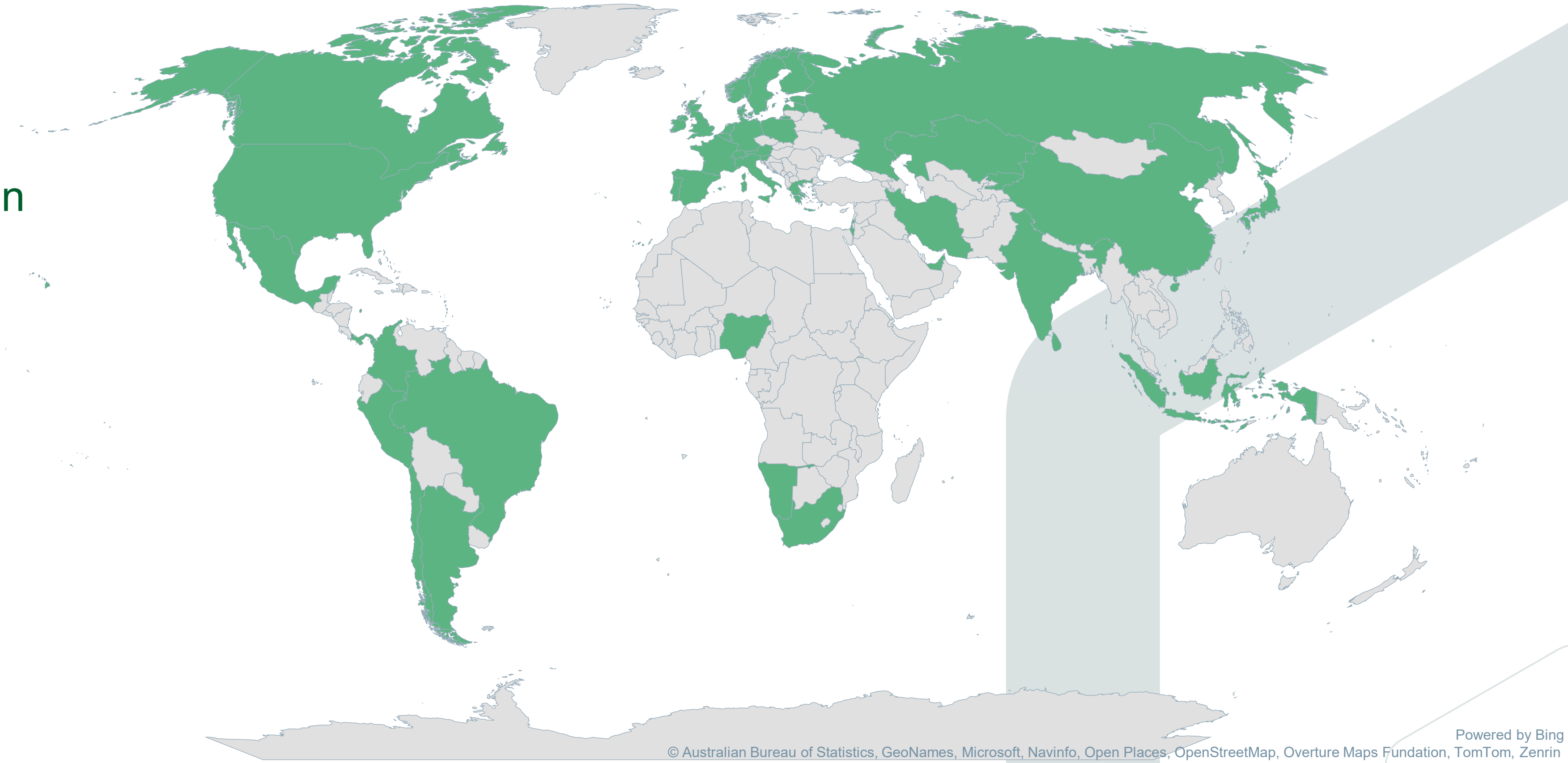
Source: Dealogic, issuance data from 01/01/2025 till 30/06/2025

Where to list? Local vs. International

ACCORDING TO THE UNSSE, 53 EXCHANGES HAVE SUSTAINABILITY BOND LISTING SEGMENT

Can you list on an exchange with no sustainability segment?

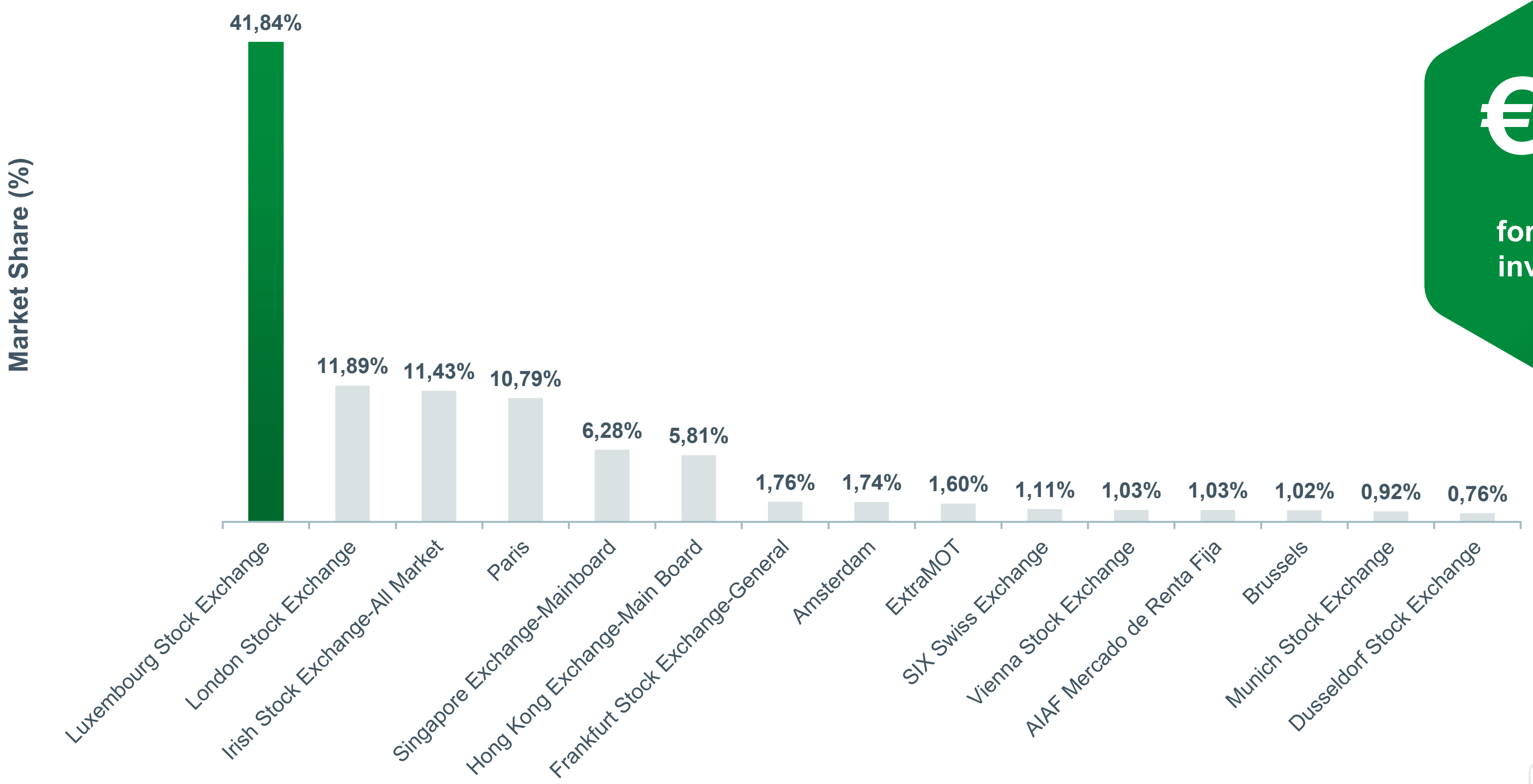
Exchanges with sustainability bond listing segment



Source: UNSSE initiative

The undisputed reference for sustainable securities

New listings in international debt capital markets FY2024 - labelled sustainable debt



€1.2tn
raised in total
for green and social
investment projects

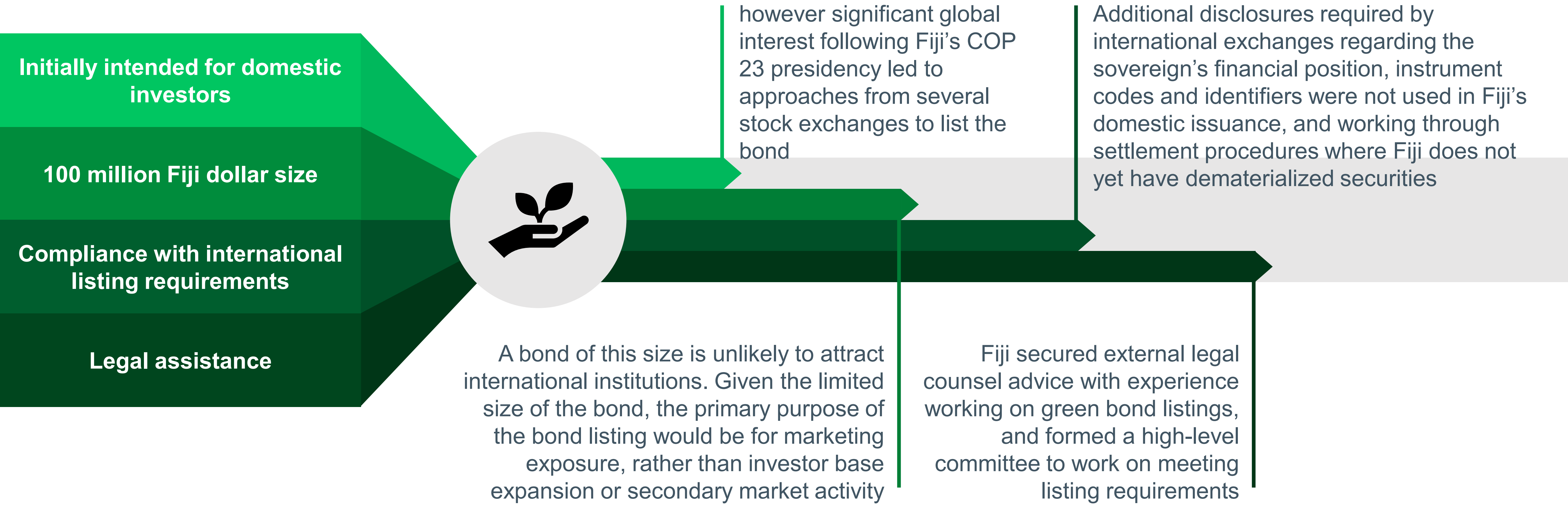
2,200+
sustainable
bonds displayed
in total

45%
market share
new GSSS bonds
YTD

Source: Dealogic / Basis for computation EUR (m) 560,8 of issued and listed amounts

Case of listing Fiji green bond on LSE

While the sustainable bond component/credentials can be clear/ straightforward, the structure of the bond itself might not immediately be in compliance with the listing rules



Initially intended for domestic investors

however significant global interest following Fiji's COP 23 presidency led to approaches from several stock exchanges to list the bond

100 million Fiji dollar size

A bond of this size is unlikely to attract international institutions. Given the limited size of the bond, the primary purpose of the bond listing would be for marketing exposure, rather than investor base expansion or secondary market activity

Compliance with international listing requirements

Additional disclosures required by international exchanges regarding the sovereign's financial position, instrument codes and identifiers were not used in Fiji's domestic issuance, and working through settlement procedures where Fiji does not yet have dematerialized securities

Legal assistance

Fiji secured external legal counsel advice with experience working on green bond listings, and formed a high-level committee to work on meeting listing requirements

Source: Guidance for sovereign green bond issuers – IFC adapted by LGX

Tanga Water Green bond dual listing

THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF WATER
TANGA URBAN WATER SUPPLY AND SANITATION AUTHORITY

TANGA
WATER GREEN BOND
"Every Drop Counts"

TZS 53.12 billion
Issued in February 2024

EUR 17 800 000
Listed on LSE in October 2024

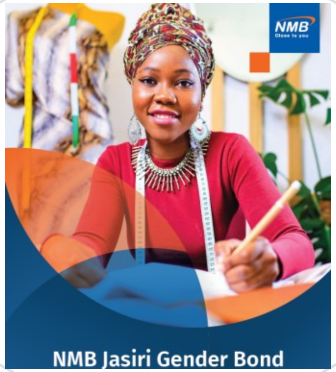
1st
green bond to be issued by a public institution in East Africa

KEY CHARACTERISTICS OF THE ISSUANCE

Issuer	**Tanga Urban Water Supply and Sanitation Authority**
ISIN	TZ1996105296
Type of Bond	Green
Listing date	17/10/2024
Maturity date	02/05/2034
Coupon rate	13.5%
Use of Proceeds	The bond will finance access to clean and affordable water in Tanzania. Proceeds from the bond will include, for example: • Rehabilitation and extension of the drinking water supply network; • Renewable energy based (solar, wind) for boreholes water pumping;; • Sustainable land management.
Links	[Tanga UWASA issues East Africa's first ever Water Green Bond]()

Source: LuxSE

NMB Jasiri Bond dual listing



TZS 25 Billion

Issued in February 2022

EUR 8 057 000

Listed on LSE in March 2023

Awarded the platinum winner in the Sustainable Bond of the year category at the 2022 Global SME finance award

1st

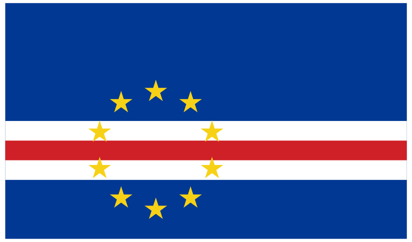
bank first Gender Bond in the whole of Sub-Saharan Africa (SSA) whose framework aligns with Social Bond Principles administered by the International Capital Market Association

KEY CHARACTERISTICS OF THE ISSUANCE

Issuer	**NMB BANK PLC**
ISIN	TZ1996105213
Type of Bond	Social - Gender
Maturity date	28/05/2026
Coupon rate	8.5%
Use of Proceeds	The debut issuance under the bank Social Bond Framework focuses exclusively on gender equality and economic empowerment of women (SDG-5 specifically) by channeling its proceeds to women-owned or led businesses and those businesses whose products and services directly benefit a woman.Proceeds from the bond will target, for example: • Women and/or sexual and gender minorities; • Excluded and/or marginalized populations and/or communities; • Underserved (owing to a lack of quality access to essential goods and services).
Links	Ground-breaking Jasiri Gender Bond in Tanzania

Source: LuxSE

Cabo Verdean blue bond dual listing



CVE 350 000 000

Issued in March 2023

Listed on LuxSE in November 2023

1st

Cabo Verdean green bond listed on LuxSE

KEY CHARACTERISTICS OF THE ISSUANCE

Issuer	**INTERNATIONAL INVESTMENT BANK S.A.**
ISIN	CVIIBDOM0007
Type of Bond	Green - Blue
Maturity date	01/03/2028
Coupon rate	4%
Use of Proceeds	The proceeds of the bond will help finance sustainable ocean-based projects and provide affordable loans to individuals and small businesses active in the sustainable maritime and fisheries sectors in the island state. Proceeds from the bond will target, for example: • Aquaculture and Algiculture; • Services and Scientific Research Relating to the Blue Economy; • Water, Water Resources and Energy Efficiency.
Links	[IIB West Africa issues the first blue Bonds in Cape Verde]()

Source: [LuxSE]()

Some sovereigns' sustainable instruments on LuxSE and LGX

Benin
Egypt
Nigeria
Mexico
Thailand
Philippines
Austria
Ecuador
Colombia
Turkey
Luxembourg
Romania
Peru
Uruguay
Latvia
Hungary
Chile
Brazil
Poland

Source: LGX Datahub a universe of 20.000+ worldwide listed sustainable debt instruments as of end 2024

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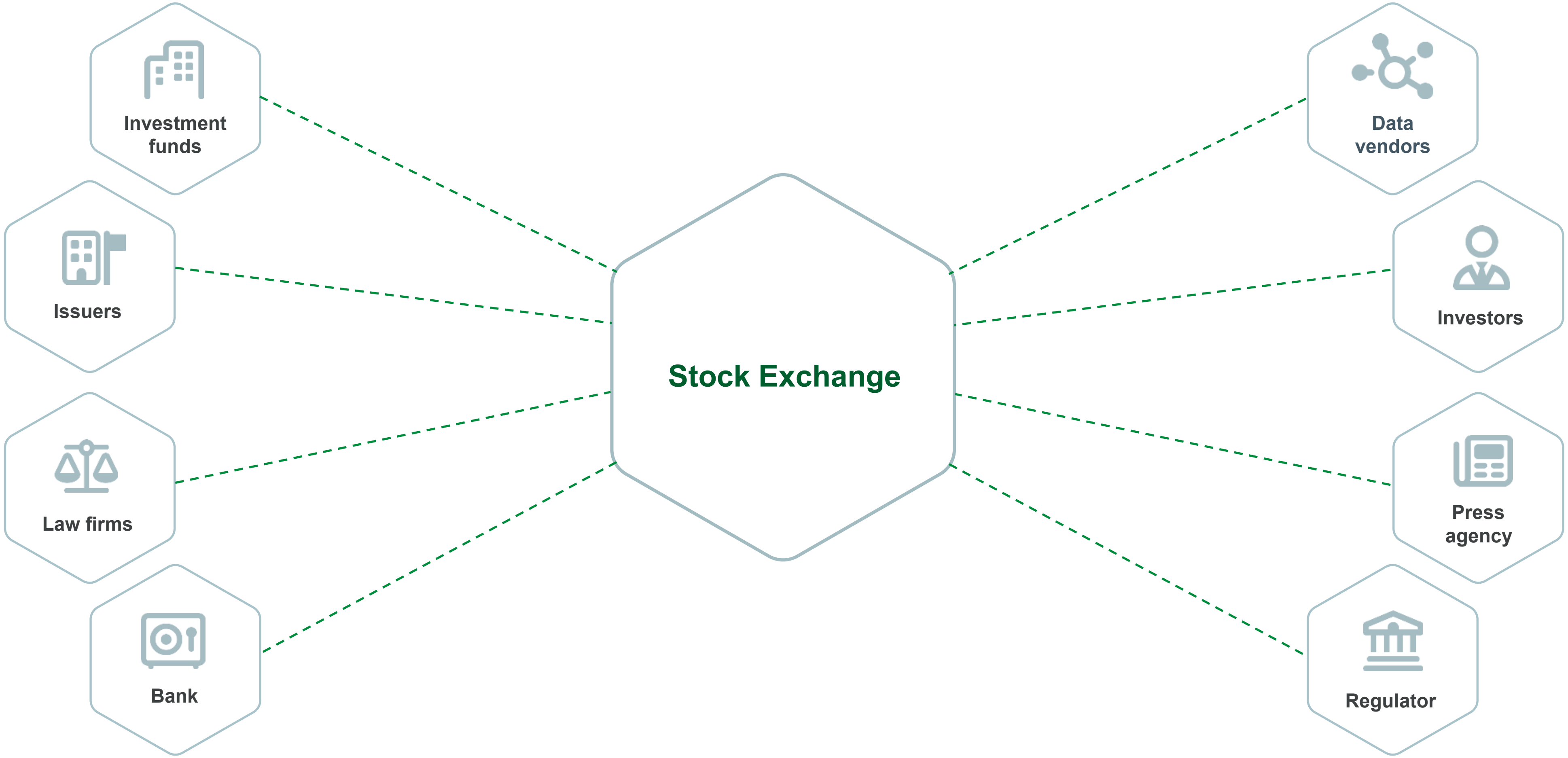
by Luxembourg Stock Exchange

The Role of Stock Exchanges

Essential players within the GSSS bond market



Investment funds

Issuers

Law firms

Bank

Stock Exchange

Data vendors

Investors

Press agency

Regulator

Traditional vs Sustainable Finance

LUXEMBOURG GREEN EXCHANGE
by Luxembourg Stock Exchange

TRADITIONAL

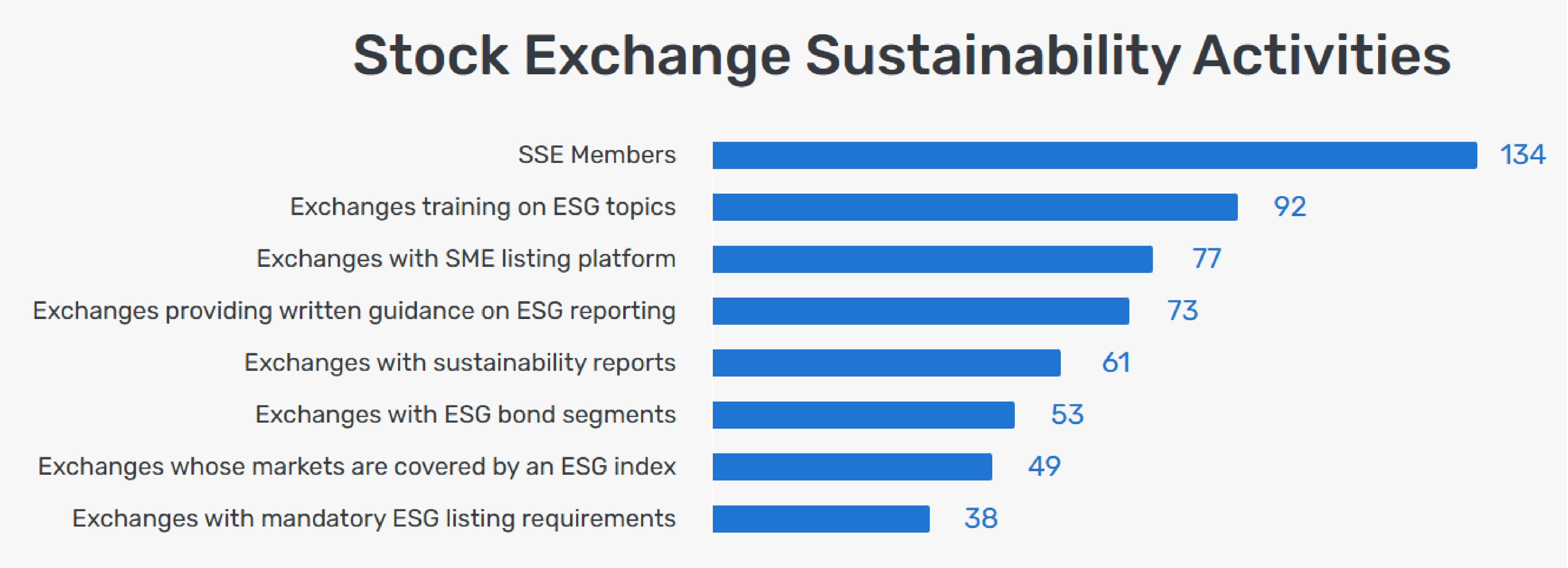
- Facilitate capital raising and ensure liquidity
- Improve information and investor relations
- Provide visibility and enhance issuer's reputation/credibility
- Achieve ECB eligibility (in EU)
- Ensure market efficiency

SUSTAINABLE FINANCE

- Re-orient capital flows towards sustainable development
- Connect sustainable issuers with ESG investors
- Promote transparency
- Promote product identification
- Promote issuer's ESG strategy and credentials
- Contribute to training and education
- Provide data
- Promote innovation through products, indexes, etc.

UN Sustainable Stock Exchanges initiative (UNSSE)

DIFFERENT FORMS OF ACTIVITIES



Source: [SSE initiative]()

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GREEN EXCHANGE
by Luxembourg Stock Exchange

Case study: LuxSE's listing process and disclosure requirements

How to display a sustainable security on LGX

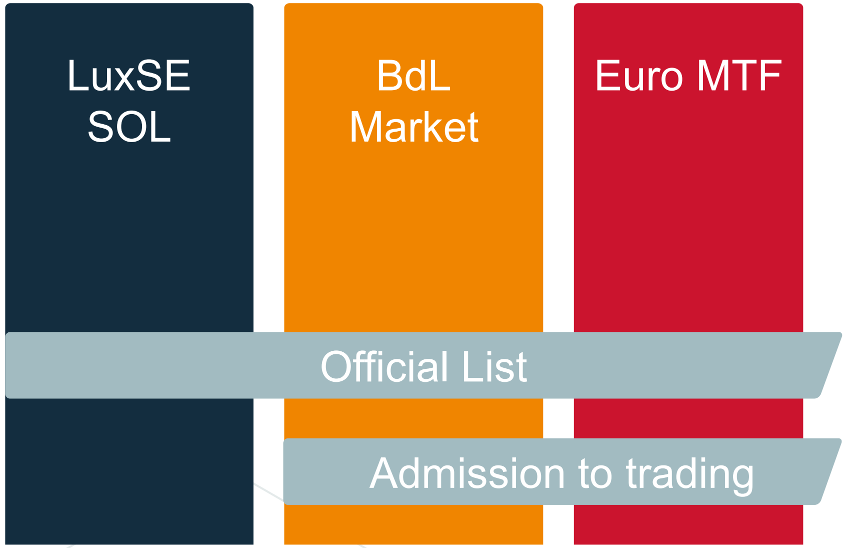
A DISPLAY ON LGX FIRST REQUIRES AN ADMISSION ON ONE OF THE TWO MARKETS OF LUXSE OR, ALTERNATIVELY, AN ADMISSION TO THE SECURITIES OFFICIAL LIST (LUXSE SOL)

» LUXSE'S LISTING PROCESS AND DISCLOSURE REQUIREMENTS

Source: LuxSE/LGX

Three choices for your securities

BDL MARKET, EURO MTF AND LUXSE: LUXSE'S 3 VENUES



LuxSE SOL

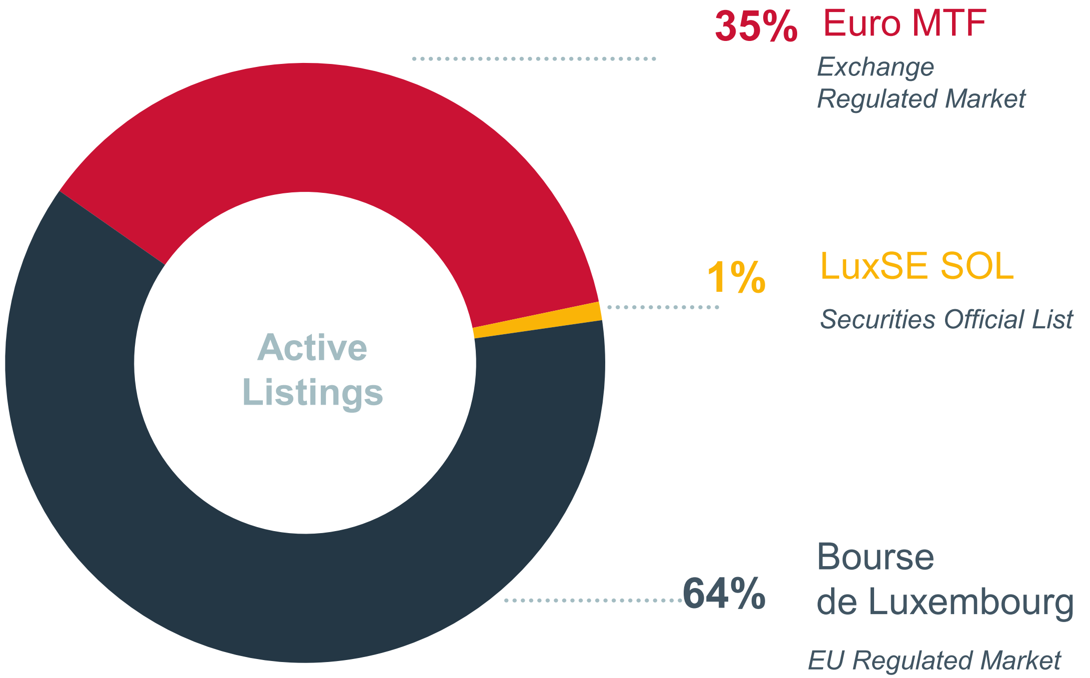
BdL Market

Euro MTF

Official List

Admission to trading

SECURITIES DISPLAYED ON LGX: ON WHICH VENUE ARE THEY LISTED?



Source: LuxSE/LGX

Admission documentation

LUXEMBOURG GREEN EXCHANGE
by Luxembourg Stock Exchange

LUXSE'S LISTING PROCESS AND DISCLOSURE REQUIREMENTS

DOCUMENTS TO BE FILED BY THE ISSUER FOR **LUXSE LISTING**:

- Draft prospectus
- Articles of incorporation
- Financial statements for the last 2 years
- Application form, letter of undertaking, KYC form (for new issuers only)

DOCUMENTS TO BE FILED BY THE ISSUER FOR **LGX DISPLAY**:

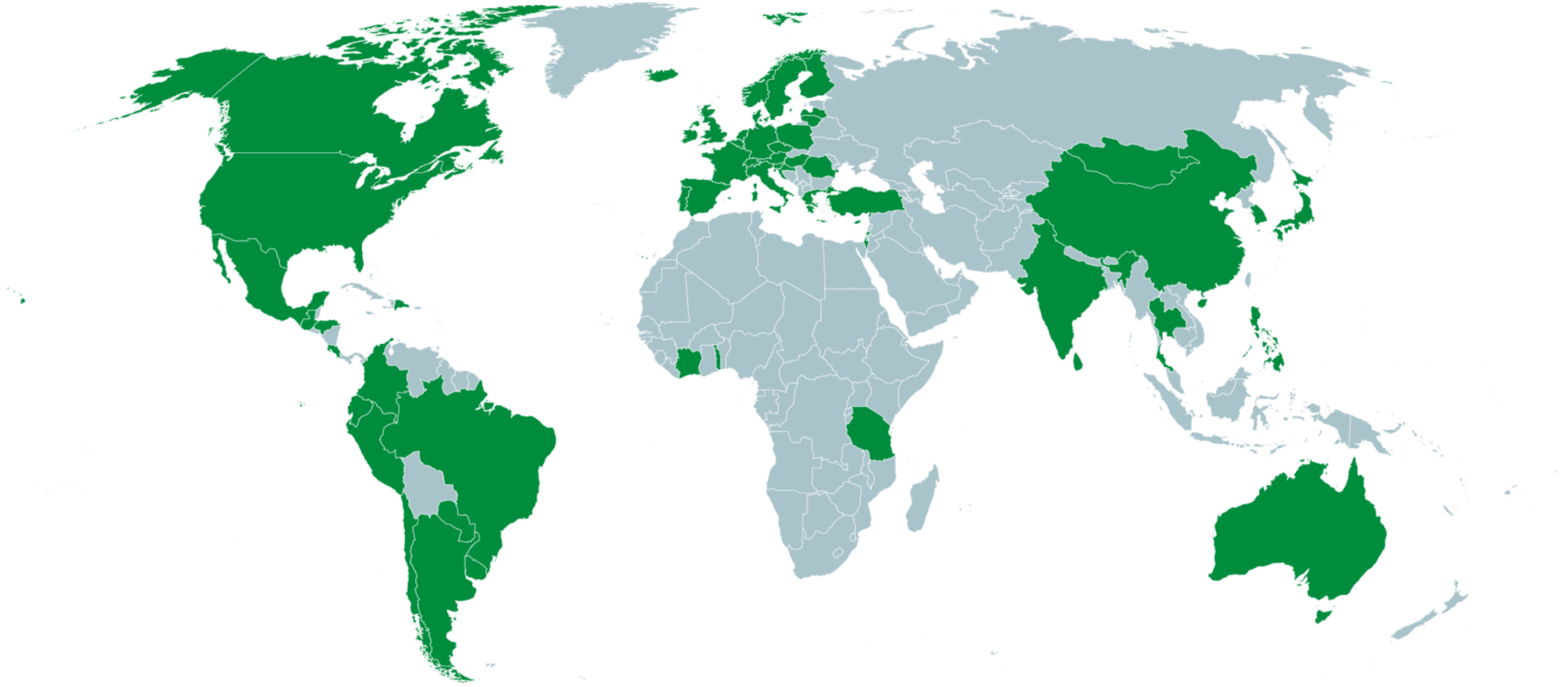
- GSSS bond framework
- External review such as second opinion, certification, verification report, bond rating report
- Allocation report and, if available, impact report, one year after issuance

Source: LuxSE/LGX

Gain global visibility with the world's leading sustainable finance platform

LUXEMBOURG GREEN EXCHANGE
by Luxembourg Stock Exchange

The leading venue for sustainable debt securities worldwide



3,800+
securities in total

340+
issuers

60+
countries

40+
currencies

LGX Assistance Services

Navigate sustainable bond issuance with expert assistance

LUXEMBOURG GREEN EXCHANGE
by Luxembourg Stock Exchange

OUR KEY STRENGHTS

As the world's leading platform for sustainable finance, LGX has privileged and unrestricted access to a comprehensive online database of information on sustainable instruments.

Our sustainable finance experts collect extensive data on large samples of documents on a daily basis. As such, they are well-positioned to identify and suggest best reporting practices to issuers.

Through the LGX Academy, our team of sustainable finance experts allow participants to enrich their sustainability knowledge and gain a deeper understanding of market practices and instruments and is already successfully providing qualitative guidance for issuers.

ESSENTIAL SERVICES THROUGH THE LIFETIME OF THE ISSUANCE

Tailor-made courses	✓ Building the capacity of the potential issuer by providing tailor-made trainings on latest developments in the market in terms of standards and best practices.
Peer comparison	✓ Provide insights into industry peers' practices.
Review of the framework	✓ Assist the issuer in establishing a solid sustainable (green, social, sustainability and sustainability-linked bonds) framework in line with best practices in the market.
Structure of the framework	✓ Assist the issuer in reviewing the existing framework and upgrading it to meet best practices in the market, without providing an official opinion.
Post-issuance reporting	✓ Assist the issuer in establishing a solid sustainable post-issuance allocation and impact report in line with market best practices.

How to join LGX

Registration

BdL Market

Euro MTF Market

LuxSE SOL

Classification

- GREEN BONDS
- SOCIAL BONDS
- SUSTAINABILITY BONDS
- SUSTAINABILITY-LINKED BONDS

Transparency and Disclosure

- Use of proceeds
- Project selection
- Management of proceeds
- Reporting
- External review

Commitment to

LGX REVIEW PROCESS

Upon receipt of the listing documentation, LGX verifies the availability of:

- Use of proceeds
- Framework
- External review

If the documentation is available, LGX will immediately start to classify the security and proceed to onboarding.

No formalised request required from issuer

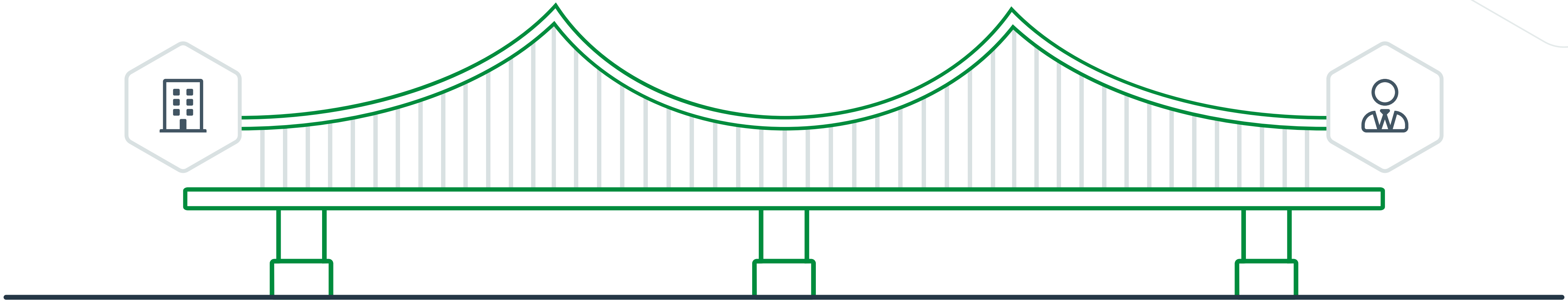
A rigorous three level validation process will determine if the security complies with LGX criteria. If positive:

Security displayed to LGX & confirmation message sent to issuer

Post-issuance reporting is verified 12 months after issuance. After review, the report is uploaded to the issuer's security.

No action required by the issuer

Benefits of joining LGX



FOR ISSUERS

- Additional **channel to communicate** with **new and prospective investors**
- Highest **visibility** & enhanced ESG profile
- Leverage **disclosure efforts** via an information platform service
- **Free upload of sustainable documentation**

FOR INVESTORS

- Easy access to **highly transparent** sustainable financial instruments
- Free and unrestricted **access to sustainability-related information**
- Improved **comparability** of sustainable financial instruments
- High level of **transparency**

LUXEMBOURG
GREEN EXCHANGE
by Luxembourg Stock Exchange

Thank you!

Legal Disclaimer