



Engagement of International Consulting Company for designing the Model Framework Structure and Content for the issuance of Green Bonds in Armenia (Green Bond Framework)





Introduction to the assignment

Seth Landau, Team Leader, E Co.

ecoltdgroup.com

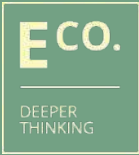
Assignment objective and plan

- 3-month assignment (through end of June 2030) to assist Armenian banks and non-banking financial institutions in attracting financing through issuance of the Green Bonds through
 - Work with **two** competitively selected entities on “Design of the Model Framework Structure and Content for the issuance of Green Bonds”
 - Proposed framework and standards to be met:
 - use of proceeds - i.e. types of investments to be included)
 - project / investment selection - i.e. the process by which an investment can be included in the green bond
 - management of proceeds
 - reporting
 - Advice on how to integrate into business practices
 - Tools / checklists for measurement, reporting, and verification
 - Assistance in preparation for approaching the market - specifically verification providers (but potentially also other actors)
- An additional phase (final structuring bringing the bonds to market) would be necessary



Development Partner / beneficiary selection

-
- A short application form will be developed and shared with interested parties after the workshop. The planned criteria for choosing beneficiaries include:
 - Level of alignment of the institution's investment / lending strategy with green bonds frameworks
 - Previous experience in financing / building green projects pipelines
 - The size and reputation of the institution
 - The existing governance structure and efforts to internationally approximate the Environment, Social, and Governance framework.
 - Application to be due 6/5/2022 (open for all)



Green bonds standards - international market standards and their characteristics

Yves Speeckaert, Green Bonds Expert, DAI

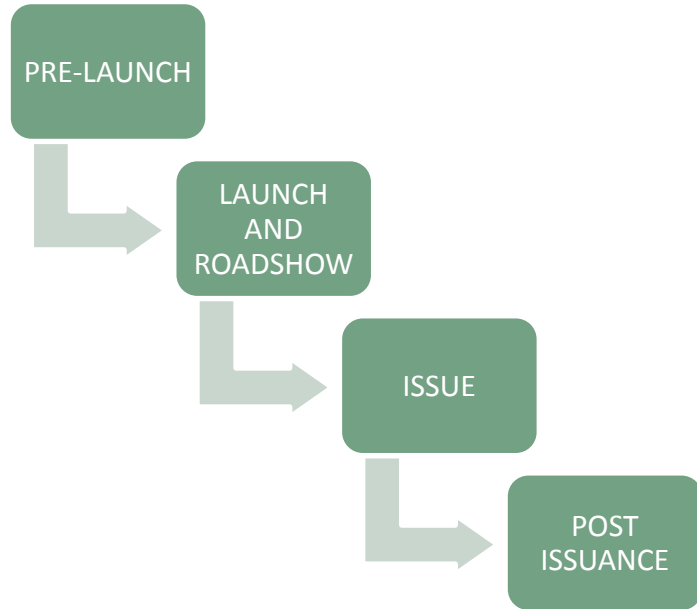




Topics covered

- Overview of green bonds
- Additional detail on green bonds standards and processes - including reporting requirements / practices
- Information on Main Listing Markets

Green Bond Issuance process



Parties involved :

- Lawyers
- Lead manager
- Paying agents, fiscal agent
- Auditors, register, listing agent
- Central Securities Depositor
- Stock Exchange
- External Reviewer

Documents :

- Prospectus
- Subscription agreement
- Fiscal agreement
- Signing and closing memorandum
- Bond Framework
- External reviews (pre/post issuance)
- Allocation and/or Impact reporting

Advantages of green bonds

- Flexibility of the instrument (reflected in terms of the issuer requirements, types of issuances, and the terms of issuances)
- New low-cost financing channel and ability to attract institutional capital, Lower interest rate, pricing advantages (can be observed as a result of the green label), long term repayment/refinancing profile, lower cost of capital
- Access to international capital, Investor diversification
- Increased efficiency/transparency in financial infrastructure using certification and audits by reputable institutions
- Green bond, an attractive debt instrument for small and medium-size utilities

Opportunities of green bonds

- ✓ **Strong investor interest and momentum for growth / exponential curve of green capital with more capital than yesterday but less than tomorrow - Growing market - doubling every year, currently strong over-subscription ($D > O$)**
- ✓ **Presence of favourable governmental policies combined with a worldwide momentum and an improving legal framework.**
- ✓ **Social / Citizen / Customers pressure on companies for taking sustainable actions to ever go greener.**
- ✓ **Financial markets and investors are requested to evolve and adapt and finance the transition to low-carbon and climate resilient growth.**
- ✓ **Option for investors to achieve a greater diversification of portfolios**

Green bond standards

- Several widely recognized international standards have emerged □ used for assessing suitability of ‘green investments and activities’, accompanied by certification schemes

<https://www.climatebonds.net/standard>

Climate Bonds INITIATIVE



2011

https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/eu-green-bond-standard_en



EU Green Bonds
Standard

2014

2020



<https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/green-bond-principles-gbp/>

Green bonds standards

- Components of **green bonds frameworks**
- A green bond standard can include various components - currently there is no complete consensus in the market on what should be included within ‘a standard’
- Green bonds frameworks mainly differ based on:

Project categories

- Sectors available
- Types of projects and eligibility
- Indicators and metrics

Reporting requirements

- Reference to the framework
- Allocation reporting
- Impact reporting

External review / verification requirements

- External review
- Accreditation of external reviewers
- Publication of external review

Green bond standards

- Comparing procedures for issuance of green bonds under different standards

	CBI Green Bonds Standard	ICMA Green Bonds Principles	EU Green Bonds Standard
Reference to the Standard in the Green Bond Framework Document	Required	Recommended	Required
Project categories / sectors	Own list of projects	Climate Bond Taxonomy	EU Taxonomy
Allocation reporting	Yes, annually	Yes, annually	Yes, annually
Impact reporting	Recommended	Recommended	Mandatory, at least once
External review	Yes	Yes	Yes
Publication of external review	Recommended	Recommended	Required
Accreditation of external review	List of approved verifiers	Organisations listed on ICMA website that have confirmed adherence to ICMA voluntary guidance guidelines but no accreditation	Yes, central accreditation system

Green bond standards

Comparing list of eligible sectors / Comparing list of eligible sectors

CBI Green Bonds Standard	ICMA Green Bonds Principles	EU Green Bonds Standard
Bioenergy; Geothermal energy; Marine renewable energy; Solar energy; Wind energy	Renewable energy	Electricity, gas, steam and air conditioning supply
Buildings	Energy efficiency	Buildings
	Pollution prevention and control	Manufacturing
Agriculture; Protected agriculture; Forestry	Sustainable management of living natural resources	Agriculture and forestry
Land conservation & restoration	Terrestrial and aquatic biodiversity conservation	
Low carbon transport; Shipping	Clean transportation	Transport
Waste Management; Water Infrastructure	Sustainable water management (including clean and/or drinking water)	Water, waste and sewerage remediation
Climate Resilience Principles (see here)	Climate Adaptation	
	Eco-efficient products, production technologies and processes	ICT



Example of eligible green or sustainable projects under **Green Bond Principles** :

- ✓ Renewable Energy
- ✓ Energy Efficiency
- ✓ Resource Efficiency
- ✓ Green Buildings
- ✓ Sustainable Waste Management ✓ Clean Transportation
- ✓ Sustainable Land Use
- ✓ Sustainable Water Management
- ✓ Climate Change Adaptation
- ✓ Green Trade
- ✓ Climate Smart Agriculture

• **Reference** to a Green Bond Standard vs **Use** of a standard- Issued Green Bonds

Enexis
Holding
NV

Regional Grid Operator, Netherlands
500 million EUR

Reference to ICMA GBP & EU GBS (announced)

Issue year: 2020

Maturity year: 2032

Use of proceeds:

- grid expansions and improvements for connecting renewable energy generation and transportation (including EV charging station connections)
- green commercial buildings
- smart meters

Investors:

Funds, Insurers/Pension Funds, Official Institutions/Agencies, Banks/Private wealth managers

Geographical distribution:

France, Benelux, UK, Ireland, Asia, Southern Europe, Switzerland

Ferrovio
dello
Stato
Italiane

State-owned Company for Transport, Italy
700 million EUR

Standard: Climate Bonds Standard

Issue year: 2019

Maturity year: 2026

Use of proceeds:

- new electric passenger and freight trains

Investors:

SRI investors, fund managers and insurance companies

Geographical distribution:

France, Germany/Austria, UK/Ireland

Green Bond Case Study Example

City of Johannesburg, South Africa - Launched in 2014, \$146 million - Listed on the Johannesburg Stock Exchange, Maturity 2024, 1.5x Oversubscribed

- **Challenges:** The Green Bond provided and will continue to provide funding for green projects that did not have any funding and could not be implemented, thus providing a solution to ensure that environmental solutions for the City are expedited.
- **Actions:** Activities targeted include reducing unaccounted for water (e.g. through smart meters etc), separation at source of waste, promotion of water harvesting and re-use, reducing congestions on public roads through better public transport, and energy conservation measures in low-income neighbourhoods such as Solar water heaters, Solar PV's and insulated ceilings
- **Outcomes:** This bond has helped the City in diversifying its funding instrument portfolio but also attracting new types of investors thereby providing potential market for future issuances. The green capital investments are expected to expedite the City's mitigation and adaptation initiatives and provide the citizens with a resilient, sustainable and liveable Johannesburg



Bond Reporting



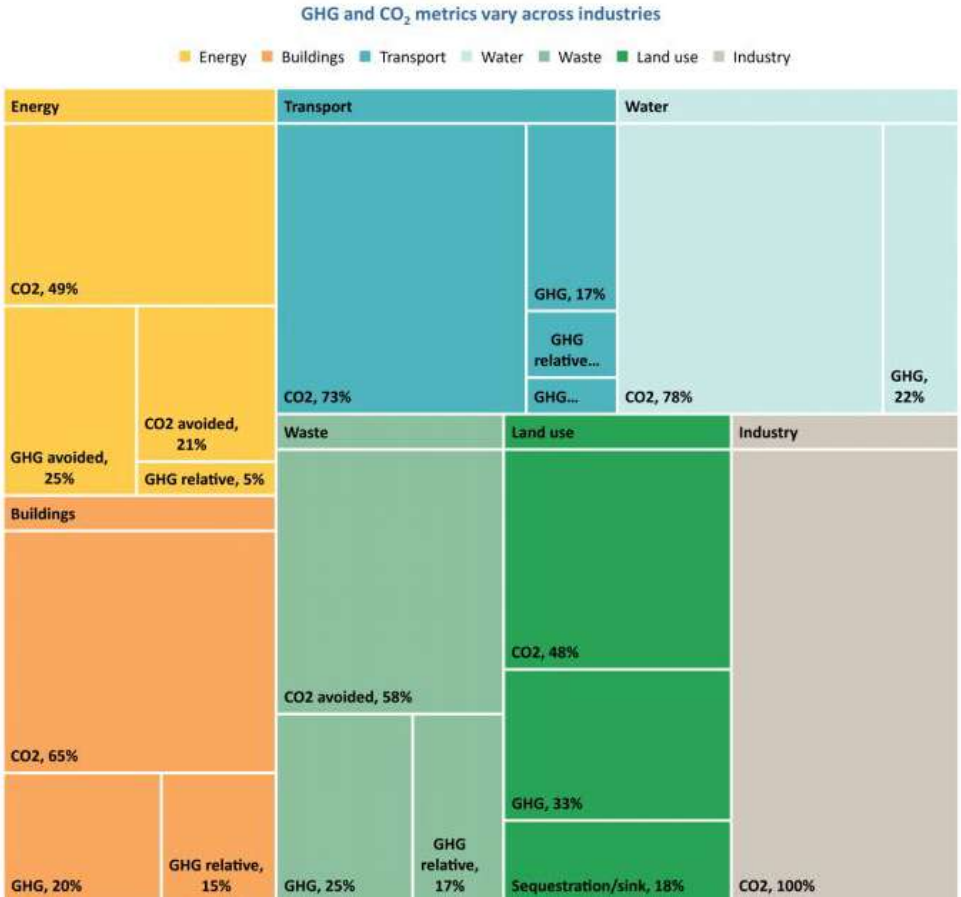
Reporting Requirements

- Each type of standard broadly has reporting across the 3 main areas listed below;

1. **Allocation Reporting:** includes
 - total proceeds
 - amount allocated as of the end of the reporting period,
 - breakdown by activities (e.g. renewable energy (solar and wind), public transport).
 - Allocation reporting should also reference the environmental objectives, and provide information on the geographical distribution of the Green Projects with information by country level where feasible.
2. **Eligibility Reporting:** confirmation that the Nominated Projects & Assets continue to meet the relevant eligibility requirements and information on the environmental characteristics or performance of Nominated Projects & Assets which is prescribed by the relevant Sector Eligibility Criteria.
3. **Impact Reporting:** provides the expected or actual outcomes or impacts of the Nominated Projects & Assets with respect to the climate-related objectives of the Bond. Uses qualitative performance indicators and, where feasible, quantitative performance measures of the outcomes or impacts of the Nominated Projects & Assets related to the climate-related objectives of the Bond. Also provide the methods and the key underlying assumptions used in preparation of the performance indicators and metrics.

Impact reporting for green bonds

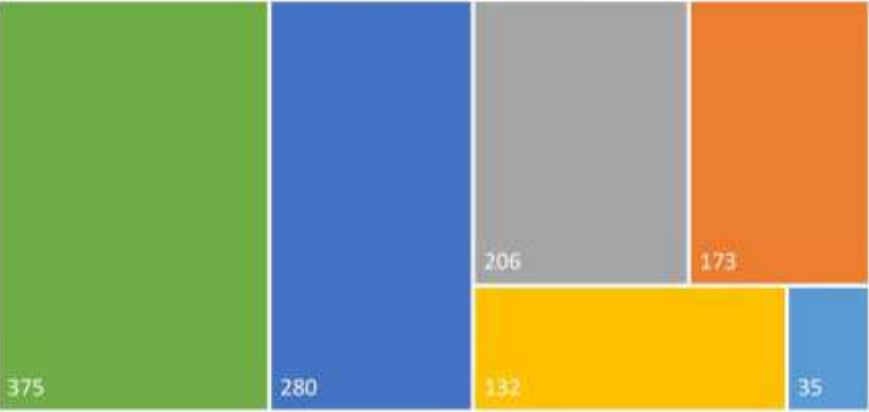
- Common metrics used for impact reporting



Impact reporting for green bonds

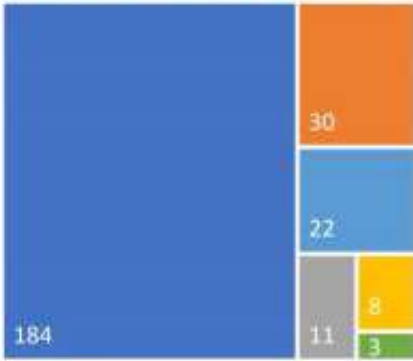
- Common metrics used for impact reporting

Energy Sector Metrics



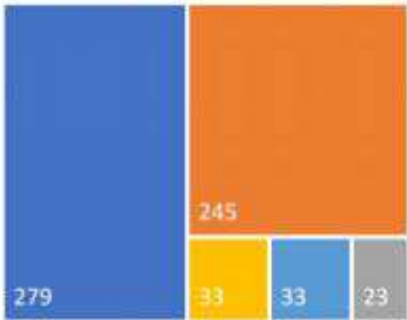
- Generation capacity installed
- Energy saving
- Pollutants
- Energy generated
- Electricity generation
- GHG reduction

Transport Sector Metrics



- GHG reduction
- Energy saving
- Number of vehicles
- Length of rail tracks
- Air quality
- Electricity generation

Buildings Sector Metrics



- GHG reduction
- Energy saving
- Waste & materials recycled
- Water saving
- Energy intensity

Source/Source: Climate Bond Initiative. 2019.
https://www.climatebonds.net/files/files/CBI_post-issuance-reporting_rev092019_en%281%29.pdf

Impact reporting for green bonds

- How should **impact reporting** for green projects look?
 - Apart from establishing bond issuance processes, it is also crucial to **report according to a set of indicators** for monitoring and reporting of the impact
 - Example of reporting template for renewable energy project(s) impact reporting □ **Project vs. Portfolio reporting**

Illustrative Summary Template for Project-by-Project Report:

Renewable Energy (RE)	Signed Amount <u>a/</u>	Share of Total Project Financing <u>b/</u>	Eligibility for green bonds	RE component	Allocated Amount <u>c/</u>	Project lifetime <u>d/</u>	#2) Annual generation (electricity / other)		#3) a) Renewable energy capacity added	#3) b) Renewable energy capacity rehabilitated	#1) Annual GHG emissions reduced/avoided <u>e/</u>	Other Indicators
Project name <u>f/</u>	currency	%	% of signed amount	% of signed amount	currency	in years	MW/ GWh	GJ/ TJ	MW	MW	in tonnes of CO ₂ equivalent	
e.g. Project 2	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	Capacity of RE plant(s) to be served by transmission systems (MW) XX t CO ₂ eq. Absolute annual project emissions.

Renewable Energy

Illustrative Summary Template for Portfolio-based Report³¹:

Renewable Energy (RE)	Signed Amount <u>a/</u>	Share of Total Portfolio Financing <u>b/</u>	Eligibility for green bonds	RE component	Allocated Amount <u>c/</u>	Average portfolio lifetime <u>d/</u>	#2) Annual generation (electricity/other), possibly per unit of financing		#3) a) Renewable energy capacity added (possibly per unit of financing)	#3) b) Renewable energy capacity rehabilitated (possibly per unit of financing)	#1) Annual GHG emissions reduced/avoided (possibly per unit of financing) <u>e/</u>	Other Indicators (possibly per unit of financing)
Portfolio name	currency	%	%	%	currency	years	MWh/ GWh	GJ/TJ	MW	MW	in tonnes of CO ₂ equivalent	
e.g. Portfolio 2	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	Capacity of RE plant(s) to be served by transmission systems (MW) XX t CO ₂ eq. Absolute annual portfolio emissions



Main Listing Markets



Dual listing can be done in order to gain increased access to international capital and liquidity, and we detail three key green bond markets:

1. Luxembourg Green Exchange

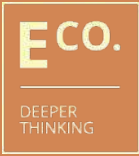
- Demand for sustainable finance has surged on the back of the COP 21 / Paris Agreement and the ratification of the UN SDGs. In 2007, the main LuxSE listed the first green bond with the European Investment Bank's EIB "Climate Awareness Bond". In order to help facilitate the development of sustainable finance, the Luxembourg Green Exchange (LGX) was launched in 2016, as a dedicated platform for sustainable securities and issuers contributing to financing a low-carbon and more inclusive economy.
- Since then, the LGX has become the leading venue for this asset class. Today, more than 620 green bonds are listed on this platform with issuers ranging from Sovereigns, Public International Bodies, Agencies and Development Banks to Financial Institutions and Corporates. Listing on the LGX would offer a reputable platform bringing an increased visibility with access to a broad range of green investors whilst benefitting from technical support from LuxSE's expertise in green finance.

2. Nasdaq Sustainable Bond Market

- Nasdaq's bond markets list over EUR 1 trillion in nominal volume and includes all bond types, ranging from high yield corporate bonds to investment grade bonds under EMTN programs and SSA Bonds. In 2015, Nasdaq launched the first exchange segment that allowed for all types of sustainable bonds in the Nordics. Since then, the European market has grown from around US\$ 750m to US\$ 40 bn and doubled in volume each year since its inception.
- Nasdaq's sustainable debt markets is comprised of many listing segments across the Nordic and Baltic exchanges, listing all types of debt instruments - from Sovereign bonds to Commercial Papers. Nasdaq's listing criteria are updated in tandem with market developments and based on the Green Bond Principles, administered by the ICMA of which Nasdaq is part of the Advisory Council. NSBM could be another place to market the Armenian Green Bond and reach the Nasdaq's investors base of 8,000 clients worldwide.

3. London Stock Exchange - Sustainable Bond Market

- **London Stock Exchange Group (LSEG)** has set a dedicated Sustainable Bond Market (SBM) which champions innovative issuers in sustainable finance, and improves access, flexibility and transparency for investors. In order to be applicable for admission onto the SBM, listing or admission onto one of the LSE fixed income primary markets is required. As the demand from investors and companies to manage climate risks and create impact becomes ever more important, the expanded SBM offers a wide range of opportunities for green, sustainable and social bonds, in addition to bonds from green economy issuers and most recently sustainability-linked bonds.
- **Over 300 bonds have been listed to date on the SBM, with over US\$90 Billion raised in total admitted securities.** The depth and breadth of London's markets provides a deep pool of capital to help lead the transition to a sustainable and low-carbon economy. LSEG provides guidance and support to issuers through variety of channels, including the Issuer Services platform and other Group services (Refinitiv ex Thomson Reuters is now part of LSEG). Issuing a sustainable finance debt instrument provides a signal that the issuer's business has a meaningful sustainability strategy, has identified material environmental risks and opportunities that the business faces and investing to deliver on them. The extra disclosure required to issue a sustainable debt instrument creates greater levels of dialogue between borrowers and lenders, improving the relationship between issuers and investors.
- **The SBM covers a full suite of asset classes and instrument types, ranging from plain vanilla bonds to more complex instruments such as asset-backed securities.** Combined with expertise across LSEG in primary, secondary markets, data and post trade services, SBM helps deliver the broadest sustainable finance platform to issuers and investors.



Potential relevance of Green Bonds for Armenian financial institutions

Lilit Gharayan, Financial Expert, ADWISE Consulting





Relevance of green bonds to the Armenian market

- Is there any legal and regulatory framework?
- Green finance practices in Armenia (asset side)
- Funding sources for green finance
- What's next..



Questions / Answers / Discussion



Questions & Answers

Back to the audience (open discussion)

- What is your interest in developing / issuing a green bond over the next 18 months?
- What are the bottlenecks / barriers for your institution to enter in such sustainable finance instruments?
- What types of investments are most interesting? Is there any particular sectors that may require “Green debt” financing?

Next steps

- Application for technical assistance (due 6 May)
- Advisory services through end of June / potentially slightly extended
- Work with two competitively selected entities on “Design of the Model Framework Structure and Content for the issuance of Green Bonds”
- Proposed framework and standards to be met:
 - use of proceeds - i.e. types of investments to be included)
 - project / investment selection - i.e. the process by which an investment can be included in the green bond
 - management of proceeds
 - reporting
- Advice on how to integrate into business practices
- Tools / checklists for measurement, reporting, and verification
- Assistance in preparation for approaching the market - specifically verification providers (but potentially also other actors)
- ***Legal / terms and conditions and negotiations not covered by technical assistance***



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Annexes





Climate Bonds Initiative Green Bond Standards



- Certified Climate Bonds can be issued by a variety of different organisations seeking to finance or re-finance low-carbon developments. The focus for green bond Certification is the low carbon 'portfolio' or 'projects & assets' being financed by the green bond, rather than the entity which is issuing it, such as:
 - Project developers
 - Utilities
 - Equipment manufacturers
 - Banks
 - Aggregators
 - Local Governments
 - State backed entities
 - National Governments (sovereign)

Eligibility for Acceptance

- Nominated Projects & Assets shall fall into one or more of the investment areas listed as included in the Climate Bonds Taxonomy (on slide 9)
- Nominated Projects & Assets shall meet the specific eligibility requirements provided in the relevant Sector Eligibility Criteria documents*
- All Sector Eligibility Criteria are approved by the ***Climate Bonds Standard Board*** following process involving Technical Working Groups, Industry Working Groups and stakeholder consultation.
- Further details on the development process and the sector-by sector criteria are available from the Climate Bonds Initiative resources [webpage](#).

** If there are different versions of the relevant Sector Eligibility Criteria documents, then the version which was current at issuance of the bond may be used for demonstration of the eligibility of Nominated Projects & Assets for the duration of the bond.*



Certification of Green Bonds _

The **Certification Process** has three distinct phases that are aligned with the normal process for issuing and maintaining a bond, loan or other debt instrument. This allows the *Certification Mark* to be used during the pricing and marketing of the bond or the negotiation of the loan or other debt instrument..

- 1. Pre-Issuance Certification:** Assessment and Certification of the Issuer's internal processes, including its selection process for projects & assets, internal tracking of proceeds, and the allocation system for net proceeds. This phase includes the Issuer preparing a Green Bond Framework and a list of eligible projects & assets; verification of the framework and the list by an Approved Verifier; production of a Verifier's Report; Pre-Issuance Certification is valid until Post Issuance Certification is awarded.
- 2. Post-Issuance Certification:** Assessment and Certification of the bond, loan or other debt instrument after it has been issued or has closed. This phase includes preparation of post-issuance updates; verification of the information by an Approved Verifier; production of a Verifier's Report; and provision of certification documents to the Climate Bonds Standard Secretariat.
- 3. Ongoing Certification:** Maintenance of the Certification based on ongoing conformance with the Post-Issuance Requirements of the Climate Bonds Standard



ICMA Green Bonds Principles



The ICMA Process

In 2014 the International Capital Market Association (ICMA) introduced a well-defined framework for issuing green bonds, known as the GBP. The GBP are voluntary process guidelines that recommend transparency and disclosure and promote integrity in the development of the green bond market by clarifying the approach for issuance of a green bond.

It relies on the following main components :

- 1. Use of Proceeds:** Designated green projects should provide clear environmental benefits, which will be assessed, measured, and reported by the Borrower.
- 2. Process for Project Evaluation and Selection:** The Borrower of a green bond should clearly communicate how it is organized to assess and select projects that will receive bond proceeds. In addition, the Borrower explains how it will manage environmental and social risk of eligible projects.
- 3. Management of Proceeds:** The proceeds of a green bond should be credited to a dedicated account or tracked by the borrower to maintain transparency and promote the integrity of the product.
- 4. Reporting:** The principles recommend the use of qualitative performance indicators and, where feasible, quantitative performance measures (for example, energy capacity, electricity generation, greenhouse gas emissions reduced/avoided, etc.)

Types of ICMA Green Bond

There are currently 4 types of Green Bonds (framework is still evolving):

- **Standard Green Use of Proceeds Bond:** a standard recourse-to-the-issuer debt obligation aligned with the GBP. (Corporate Lending)
- **Green Revenue Bond:** a non-recourse-to-the-issuer debt obligation aligned with the GBP in which the credit exposure in the bond is to the pledged cash flows of the revenue streams, fees, taxes etc., and whose UoP go to related green projects. (Ring-fenced Cash Flow)
- **Green Project Bond:** a project bond for a single or multiple green Projects for which the investor has direct exposure to the risk of the projects with or without potential recourse to the issuer, and that is aligned with the GBP. (Project Financing)
- **Green Securitised Bond:** a bond collateralised by one or more green projects, including but not limited to Covered Bonds, Asset-Backed Securities, Mortgage-Backed Securities, and other structures; and aligned with the GBP. The first source of repayment is generally the cash flows of the assets.

The proceeds must be inked to central government expenditures contribute to Armenia's environmental and climate goals

Process of Project Selection and Review

Process for Project Evaluation and Selection

- The issuer of a Green Bond should clearly communicate to investors:
 - **The environmental sustainability objectives of the eligible Green Projects;**
 - **The process by which the issuer determines how the projects fit within the eligible Green Projects categories** (examples are identified above); and
 - Complementary information on processes by which the issuer identifies and manages **perceived social and environmental risks** associated with the relevant project(s)
- Recommended that issuers appoint (an) external review provider(s) to assess (*pre-issuance*) the alignment of their Green Bond or Green Bond programme and/ or Framework with the four core components of the GBP (i.e. Use of Proceeds, Process for Project Evaluation and Selection, Management of Proceeds and Reporting).
- *Post issuance*, it is recommended that an issuer's management of proceeds be supplemented by the use of an external auditor, or other third party, to verify the internal tracking and the allocation of funds from the Green Bond proceeds to eligible Green Projects.



EU Taxonomy / EU Green Bonds Standard



EU Taxonomy on Sustainable Finance

- Why does the EU need a taxonomy of ‘green activities’?
 - *“To meet the EU’s climate and energy targets for 2030 and reach the objectives of the European Green Deal, it is fundamental to direct investments towards sustainable projects and activities...”*
 - EU taxonomy is a **classification system**, establishing a list of environmentally sustainable economic activities
 - EU taxonomy is expected to **create security for investors, protect private investors from greenwashing, help companies to plan the transition, mitigate market fragmentation and eventually help shift investments where they are most needed**

Elements of the EU Taxonomy on Sustainable Finance on Sustainable Finance

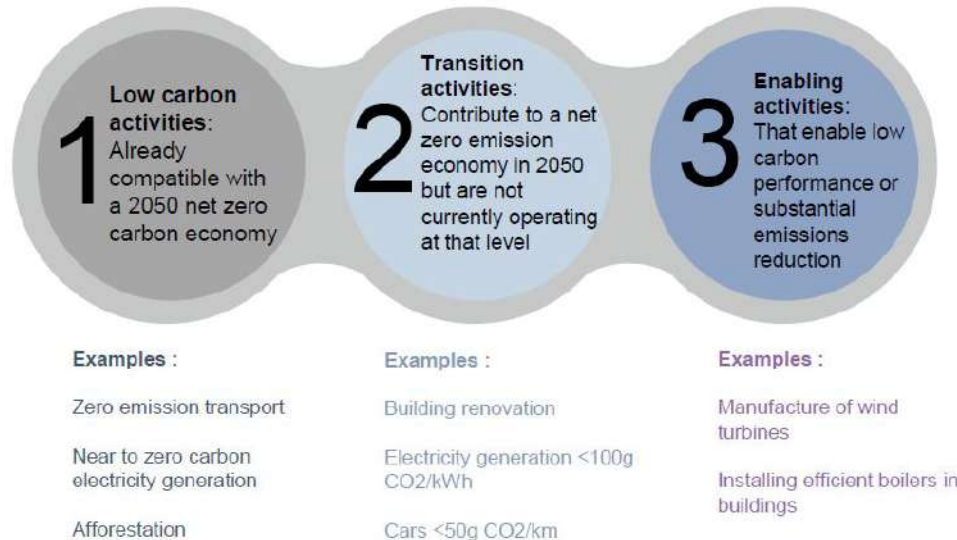
-  Climate change mitigation
-  Climate change adaptation
-  sustainable and protection of water and marine resources;
-  transition to a circular economy
-  pollution prevention and control;
-  protection and restoration of biodiversity and ecosystems.

Why does the EU need a taxonomy of ‘green activities’?



Broad Spectrum of Activities under EU Taxonomy on Sustainable Finance

Still, the Taxonomy remains **binary** (you are in, or you are out) for the sake of simplicity but “brown industries” are included, albeit under extremely stringent conditions



Broad spectrum of activities eligible for EU Green Bonds aligned with EU taxonomy

- **EU Green Bonds Standard** is currently being established and aligned with the EU Taxonomy, but it also builds on market best practices such as the Green Bond Principles (GBP), developed by the International Capital Market Association (ICMA)
- **Voluntary application** of the EU Green Bonds Standard by market participants - can be used to finance **projects in the EU as well as outside the EU**
- Creation of **accreditation system** for reviewers
- What can be **considered as a green project under EU Green Bonds Standard**:
 - **Green assets** can include physical assets and financial assets such as loans. Green assets can be tangible or intangible, and they can include the share of working capital that can reasonably be attributed to their operation.
 - **Green expenditures** can include any capital expenditure (CapEx) and selected operating expenditures (OpEx) such as maintenance costs related to green assets, that either increase the lifetime or the present or future value of the assets, as well as research and development (R&D) costs. For the avoidance of doubt, OpEx such as purchasing costs and certain leasing costs would not normally be eligible, except in specific and/or exceptional cases as may be identified in the EU Taxonomy Regulation and/or future related guidance.
 - **Green expenditures** for sovereigns and sub-sovereigns can also include relevant public investments, subsidies and expenditures.