



Webinar

Green bonds – an innovative and efficient way of financing green investments

GIZ & SEB Strategic Alliance on Green Bond Market Development

The Strategic Alliance on Green Bond Market Development

Objective

Support the development of prosperous and sustainable green bond markets in G20 emerging economies

Approach

- 25+ technical workshops, roundtables & conferences
- Dedicated bilateral advisory support
- Knowledge products: Green Bond publication, webinars & online learning videos, global SF e-learning platform

Stakeholders

- Issuers
- Financial intermediaries
- Investors
- Policymakers & regulators
- External reviewers

Partners

Regional implementation partners



Technical partner



The partners



- Swedish bank is one of the leading underwriters & thought leader in the green bond market
- co-developed the GB concept for institutional investors and supported the inaugural World Bank Green Bond.
- One of the 14 founding banks that set up **The Green Bond Principles** (GBP)
- Member of **GBP Executive Committee** and External Reviews Working Group



- German public-benefit federal enterprise providing international cooperation services for sustainable development
- Works with governments, int'l organizations, businesses, research institutions & civil society in 120 countries
- Implements the develoPPP.de partnership on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ)



- CICERO is one of the world's foremost institutes for interdisciplinary climate research
- First and leading provider of second opinions for green bonds
- Provided second opinions for the 1st green bond, 1st green muni bond, 1st corporate green bond, 1st green sukuk

Content and learning objectives

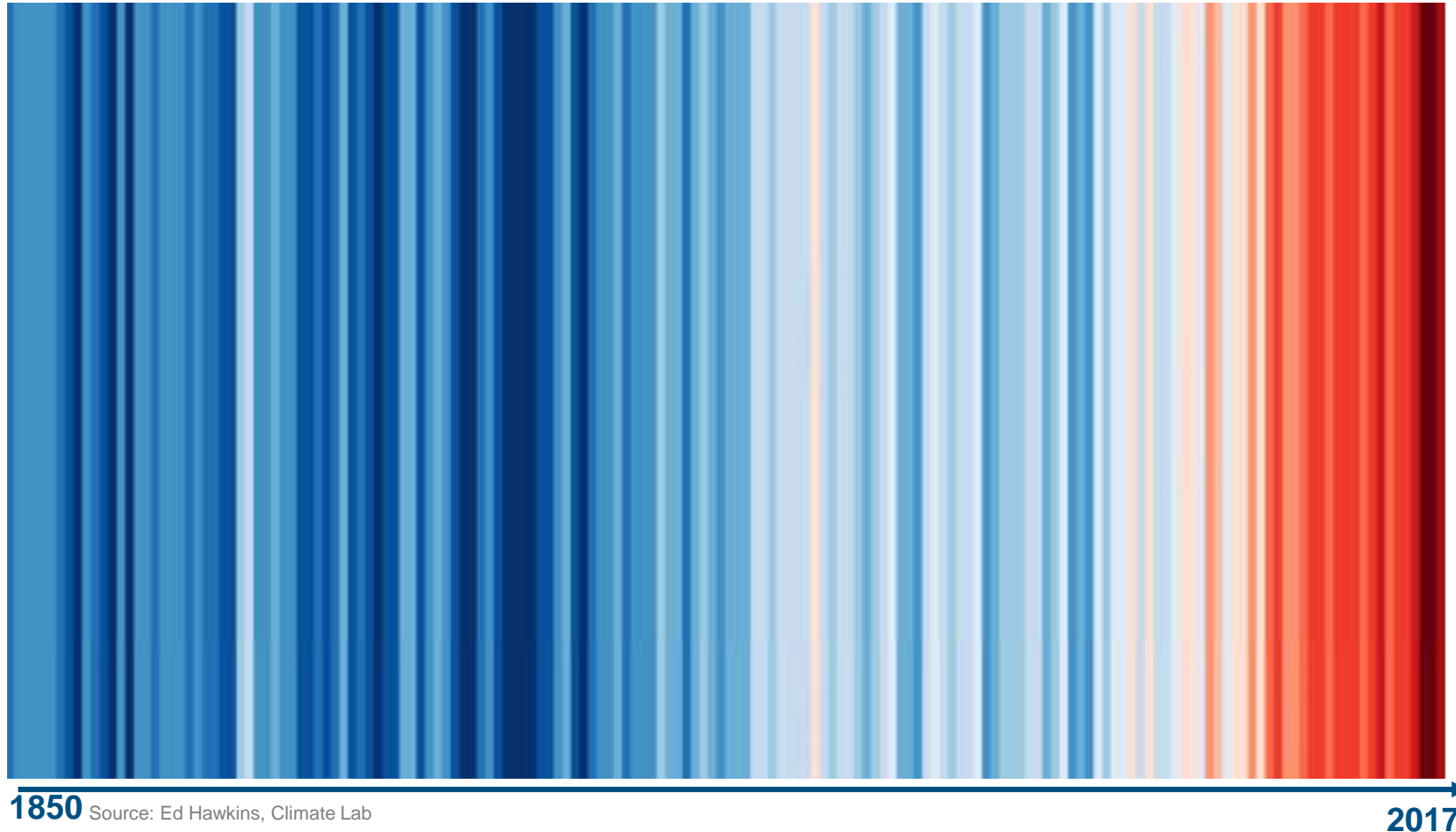
- Background: Why green bonds matter
- What is a green bond
- Green bond market development
- Why issue and invest in green bonds
- The Green Bond Principles & other standards
- How to set up a green bond framework
- The green bond issuance process
- External reviews
- Impact reporting

Part 1:

Why green bonds?

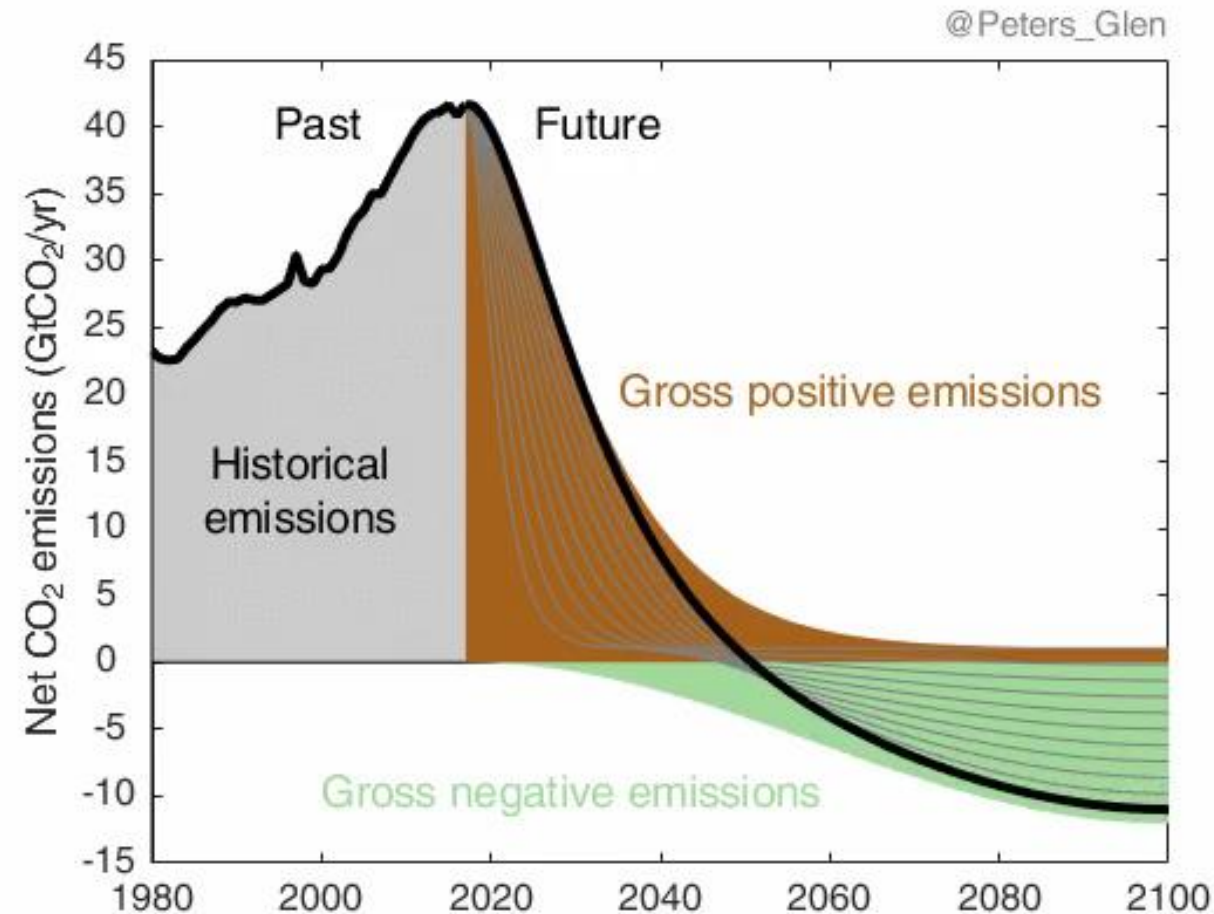
Global annual temperatures from 1850-2017

Colour-Code Global Annual Temperatures

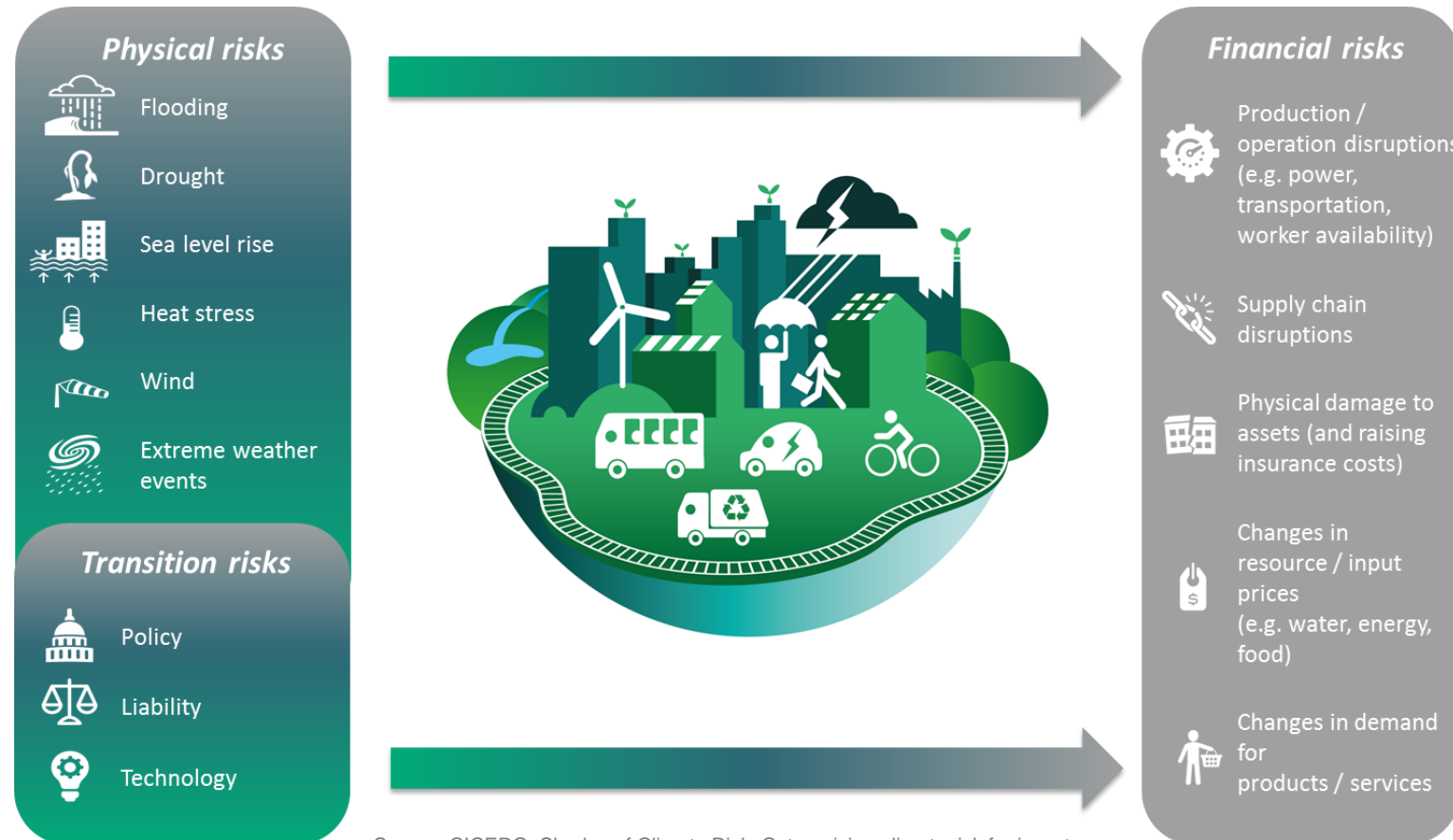


To stay well below 2°C, science tells us that...

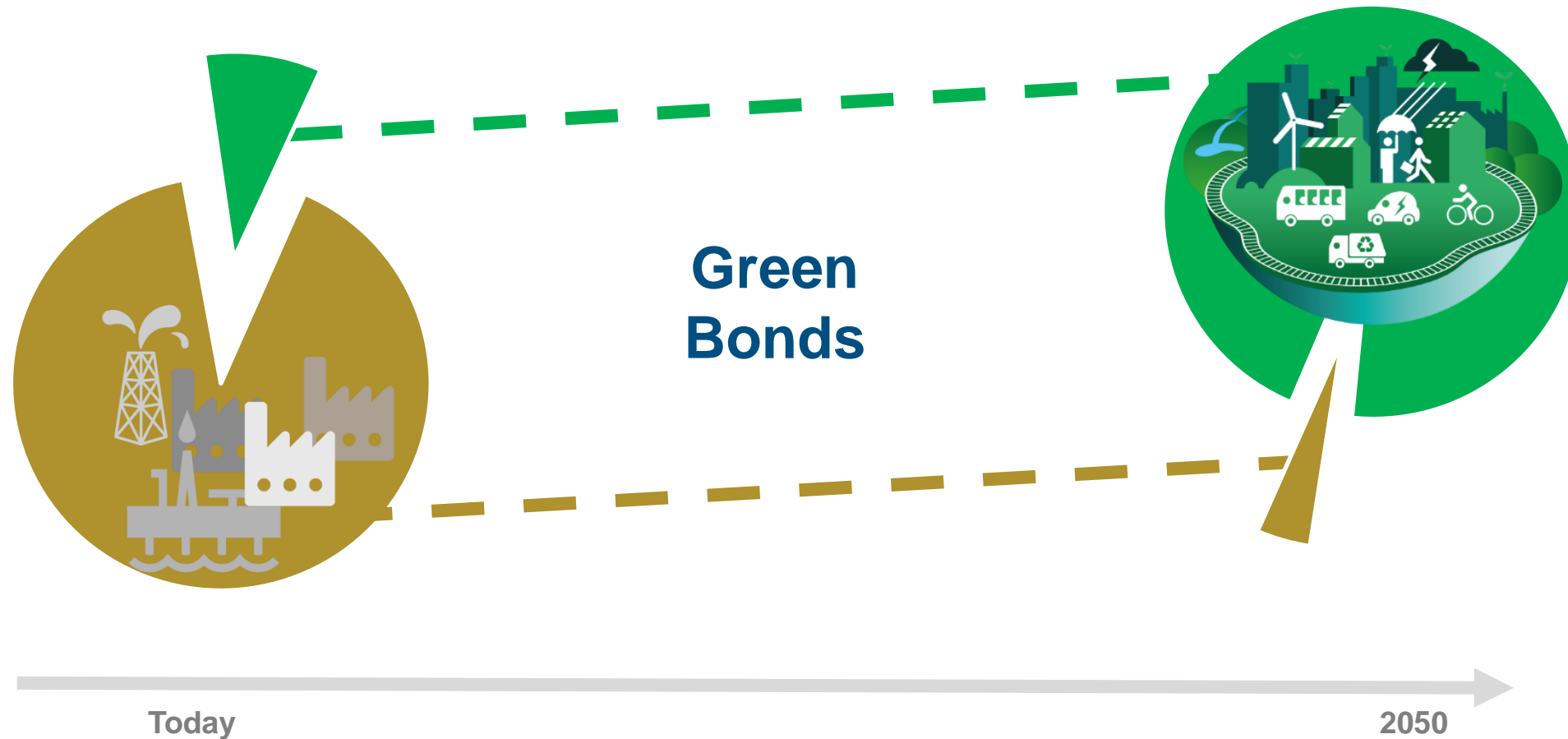
...emissions must go to zero within a few decades, or we need large-scale negative emissions (with the associated risks) to compensate.



Climate risks are financial risks



Transition to sustainable economies provides investment opportunities



Source: CICERO

Green solutions are scalable



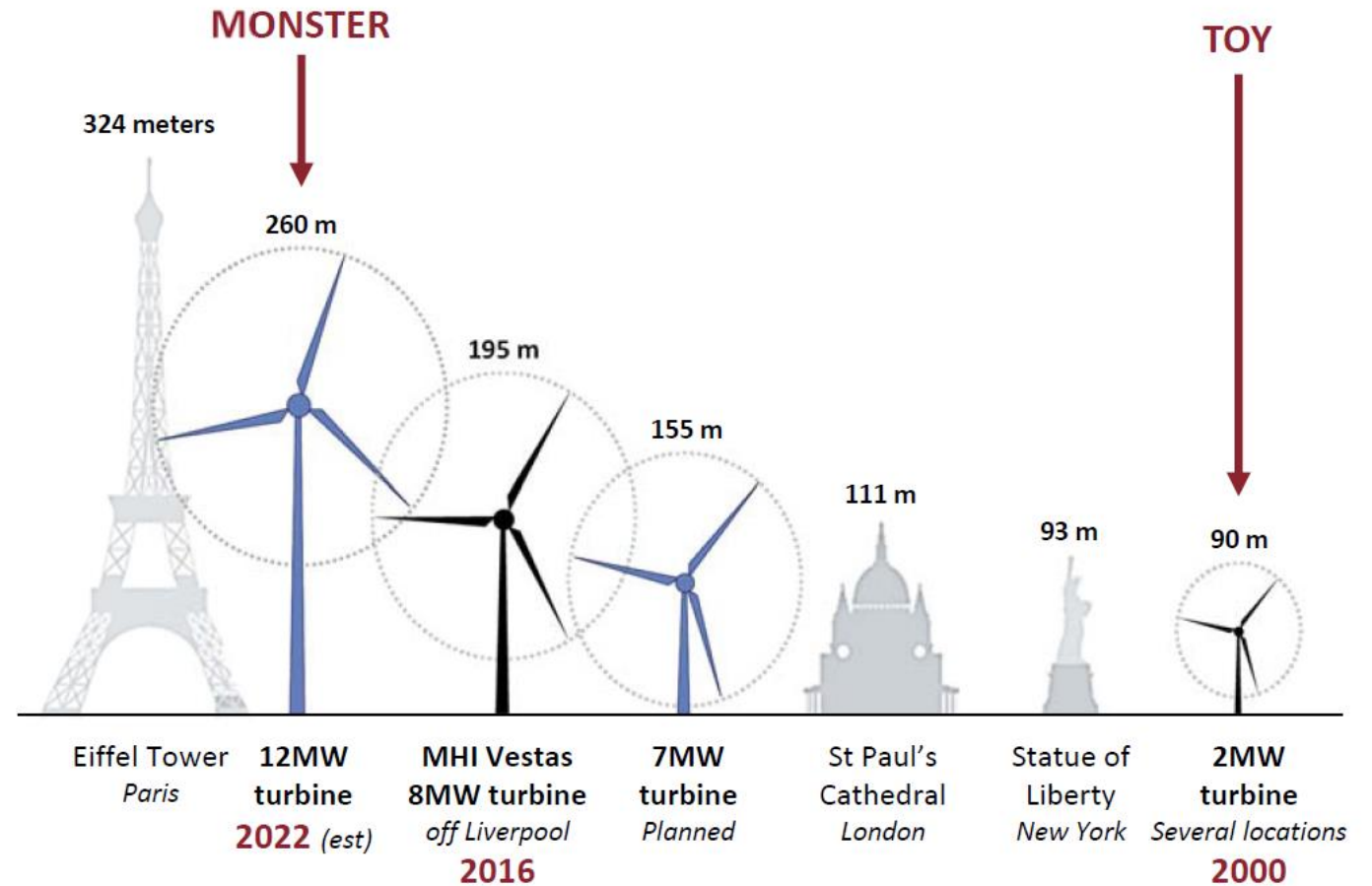
New rail lines
ADIF-Alta
Velocidad



**Electric and
hybrid cars**
Volvofinans



Flood defenses
Nederlandse
Waterschapsbank



Source: Reuters, GMO

Part 2:

What is a green bond?

What is a green bond?

Green Bond Definition



Green bonds are any type of **bond instrument**

Same underlying mechanisms as regular bonds

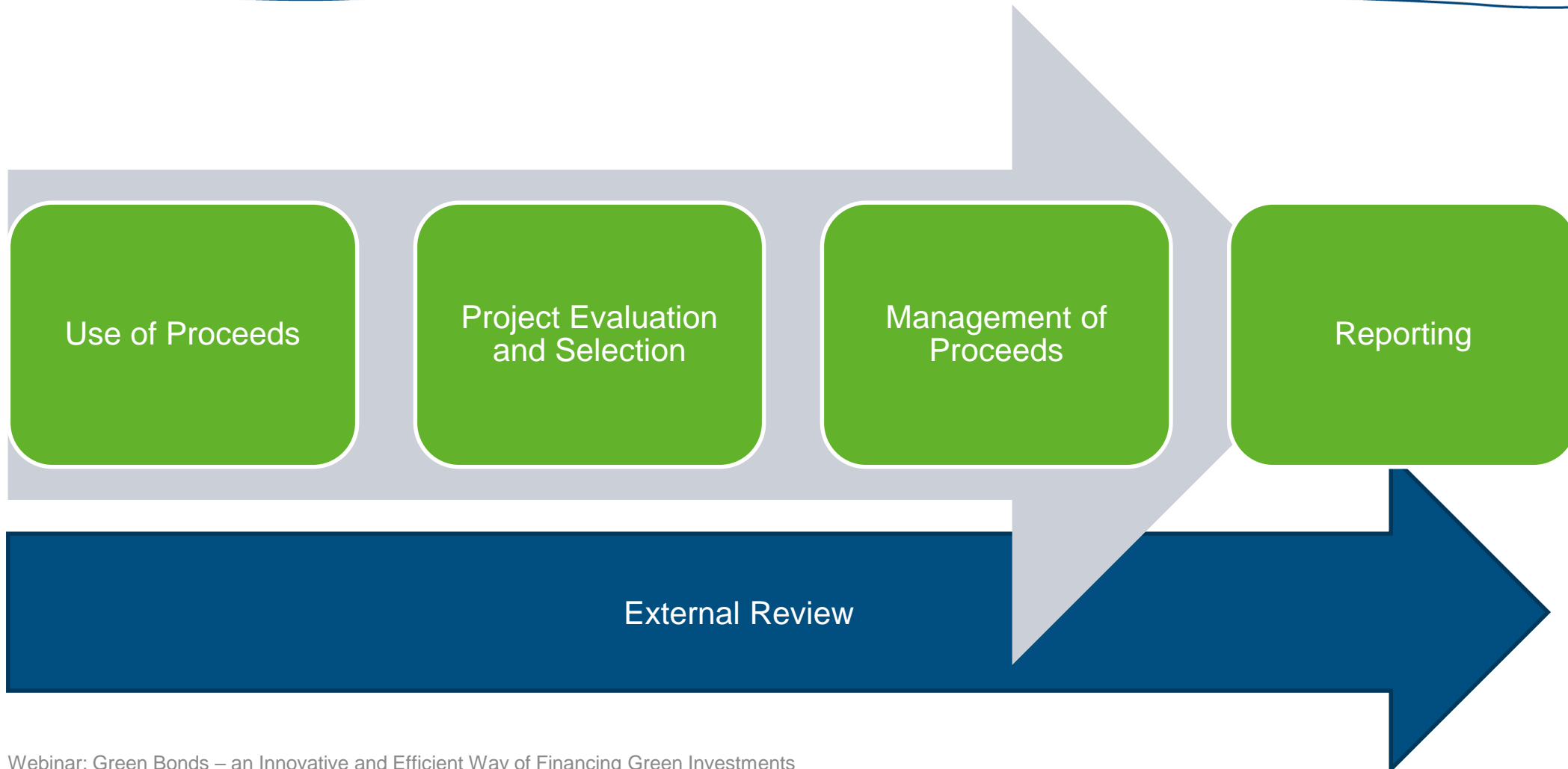
where the **proceeds** will be **exclusively** applied to finance or re-finance, in part or in full, new and/or existing **eligible Green Projects**

Main difference is that only pre-defined projects can be financed

and which are aligned with the **four core components** of the **Green Bond Principles**

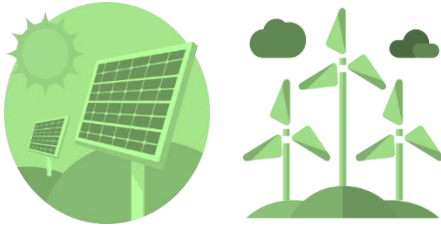
Green Bond Frameworks ensure that green projects are defined and that the issuers deliver on their promise

The Green Bond Principles

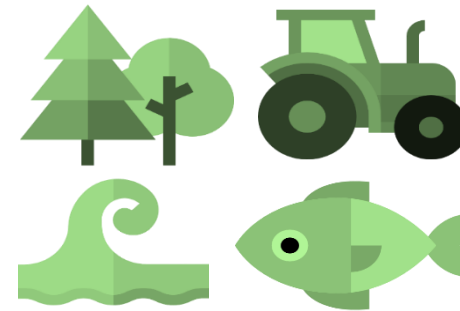


What do green bonds finance according to the GBPs?*

Renewable
Energy



Environmentally
Sustainable
Management of
Living Natural
and Land Use



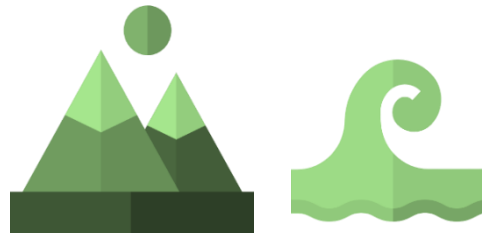
Sustainable
Water and
Wastewater
Management



Energy
Efficiency
and inclusive
Green
Buildings



Terrestrial and
Aquatic
Biodiversity
Conservation



Eco-Efficient
and/or Circular
Economy Adapted
Products,
Production
Technologies and
Processes



Pollution
Prevention
and Control



Clean
Transport



Climate
Change
Adaptation

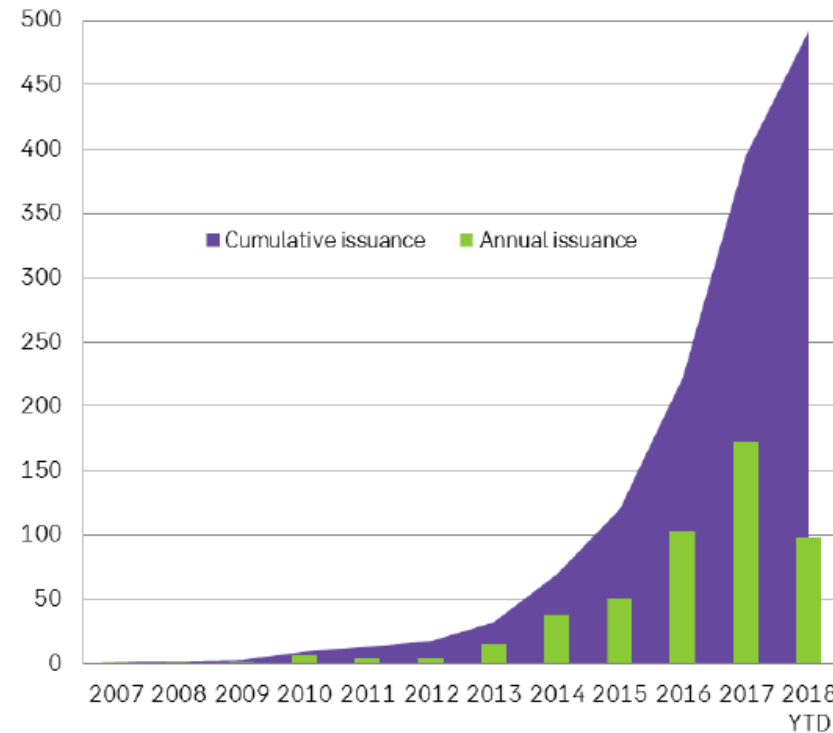


Part 3:

Green bond market development

Green Bond market surging – annual and cumulative issuance

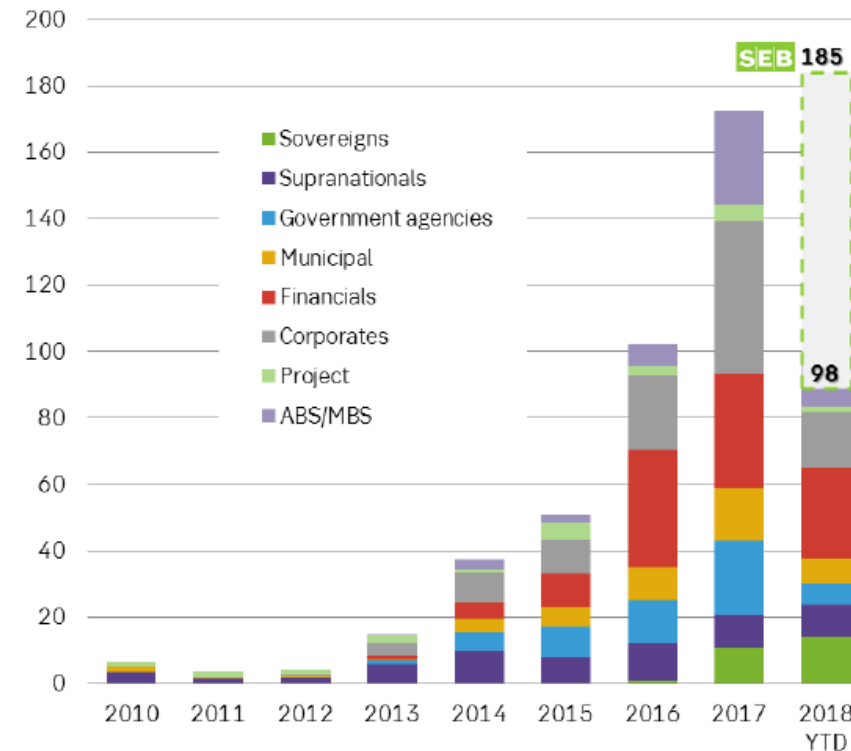
Figure 1. Total Cumulative Issuance (USD Bn)



Source: SEB analysis based on Bloomberg and SEB data

Green Bond market growth and sectors of the market shifting

Figure 3. Green bond market growth (USD Bn) by sector



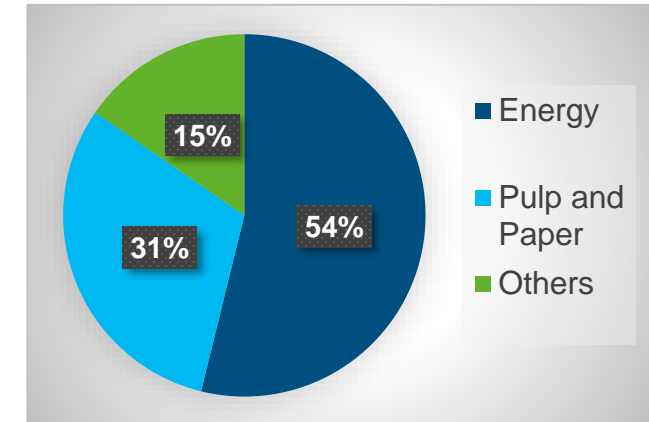
Source: SEB analysis based on Bloomberg and SEB data. SSA: Sovereign, sub-sovereign (municipal/regional), Supranational and Agency.

Part 4:

Green bonds in Brazil

Green bond emissions in Brazil

	Issuer	Sector	Issuance date	Volume (millions)
National	CPFL Renováveis	Energy	Oct 2016	R\$ 200
	Suzano	Paper & celulose	Nov 2016	R\$ 1.000
	Ômega Energia	Energy	Mar 2017	R\$ 42
	Rio Energy	Energy	Abr 2017	R\$ 112
	Ômega Energia	Energy	Sep 2017	R\$ 220
	PEC Energia	Energy	Nov 2017	R\$ 48
	Enel Green Power	Energy	Dec 2017	R\$ 22
	ISA CTEEP	Energy	Apr 2018	R\$ 621
International	BRF	Consumo não cíclico	May 2015	€ 500
	Suzano	Paper & celulose	Jun 2016	US\$ 500 + US\$ 200 ^[1]
	Fibria	Paper & celulose	Jan 2017	US\$ 700
	BNDES	Financial	May 2017	US\$ 1.000
	Klabin	Paper & celulose	Sep 2017	US\$ 500



Who deals with the green bond agenda in Brazil?



Fundo de Energia Sustentável



Part 5:

Why issue and invest in green bonds?

Incorporating sustainability in financial systems

Investment Principles	Sustainable Financial Products	Policies & Regulation	Disclosure
<ul style="list-style-type: none"> • Principles for Responsible Investments (PRI) • Montreal Carbon Pledge • Equator Principles 	<ul style="list-style-type: none"> • Green/social bonds • Green/social loans • Securitization • Microfinancing • Indices & ETFs • Green funds • Green listings • YieldCos • Venture Capital • Crowdsourcing 	<ul style="list-style-type: none"> • European Commission's Action Plan on Financing Sustainable Growth • China's Green Bond Guidelines and Catalogue (2015) • Vietnam's Directive on Promoting Green Credit Growth and E&S Risk Management (2015) • Brazil's Resolution of E&S Responsibility for FIs (2014) 	<ul style="list-style-type: none"> • Task Force on Climate-related Financial Disclosures (TCFD)

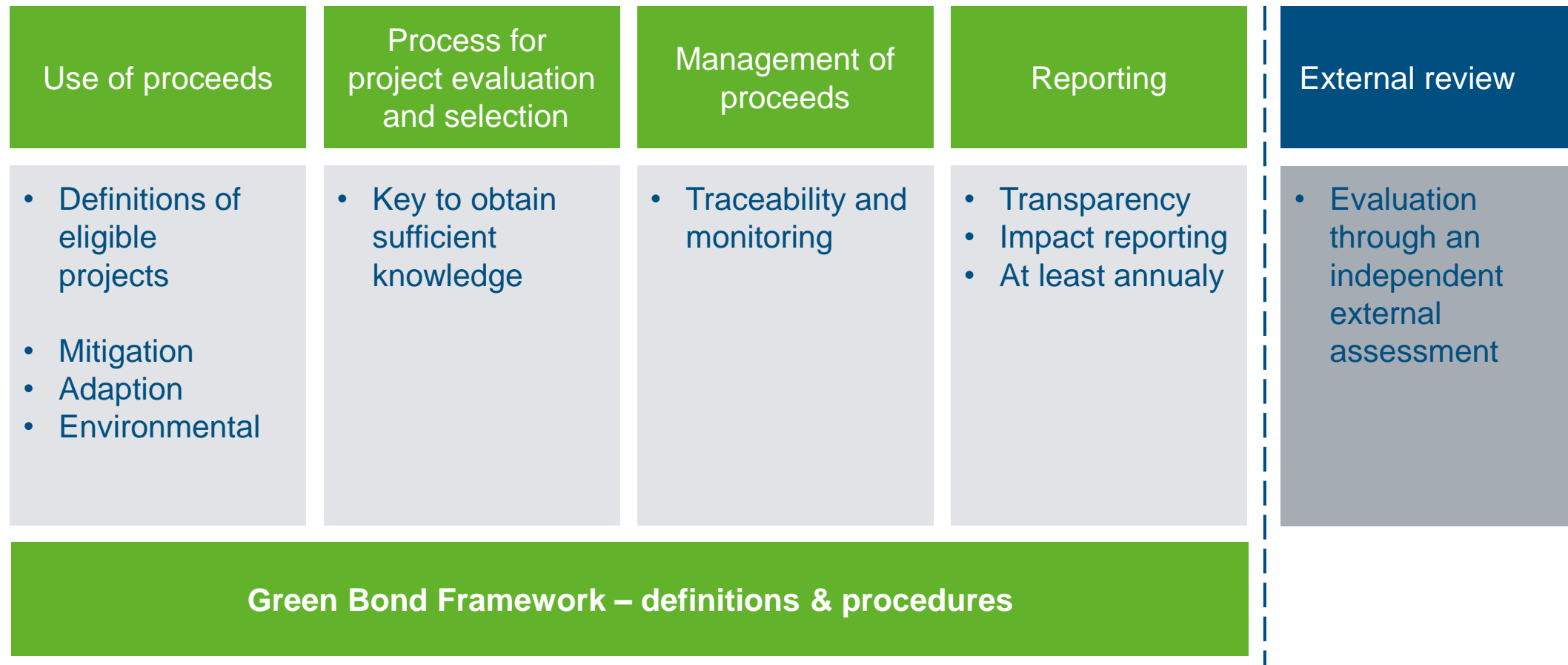
Value proposition of green and sustainable bonds



Part 6:

The five pillars of a green bond framework

The Green Bond Principles



Example of a green bond - Volvofinans Bank

SELECTION OF ELIGIBLE PROJECTS

TRANSPARENCY

To enable investors to follow the development and provide insight to prioritised areas, Volvofinans Bank will provide an annual Green Bonds investor letter which will include the following items.

1. A description of the Green Loan Portfolio including:
 - (a) impact reporting at portfolio level;
 - (b) information about the maturity profile of the Green Loan Portfolio;
 - (c) information about the average share of the total value of the vehicles in the Green Loan Portfolio that has been financed by Volvofinans Bank; and
 - (d) information about the share of Green Bond financing of the Green Loan Portfolio.
2. A selection of Eligible Project examples. A summary of Volvofinans Bank's Green Bond development.

Volvofinans Bank recognises the importance of impact reporting. Volvofinans Bank undertakes to include information in the Green Bonds investor letter about the reduced carbon footprint of the funded Eligible Projects at portfolio level in relation to relevant reference values.

- o biogas/natural gas vehicles
- o biogas/natural gas/petrol vehicles

¹ If criteria develop over time or if the referenced legislation is amended or superseded with respect to Environmental Friendly Cars, the definition of Environmental Friendly Cars for the purpose of Eligible Projects shall be amended accordingly.

selected in consensus by the Head of Treasury and the Head of Finance (i.e. both departments have a veto). Approved loans and leases will form Volvofinans Bank's green loan portfolio ("**Green Loan Portfolio**"). The ambition is that the green loan portfolio at all times will be larger than the amount of outstanding Green Bonds issued by Volvofinans Bank. The share of Green Bond financing of the Green Loan Portfolio will be reported in the annual Green Bonds investor letter, see section 4 (*Transparency*).

that are funded, in
carbon and climate

Volvofinans Bank will provide an annual Green Bonds investor letter which will include the following items.

1. A description of the Green Loan Portfolio including:

entirely or partially by non-fossil fuels, i.e.:

- vehicles
- vehicles
- control hybrid vehicles
- essel hybrid vehicles
- control hybrid vehicles

- o biogas/natural gas vehicles
- o biogas/natural gas/petrol vehicles

Part 7:

External review

Who defines green?



Voluntary principles for issuing a green bond
that the vast majority of issuers align with *across all markets*



Country level guidelines in *some markets*



Stock exchanges with green bond lists set *criteria for listing*



Green bond indices and funds *have criteria for inclusion*

Guidelines for external reviews of green bonds

1. Integrity
2. Objectivity
3. Professional Competence and Due Care
4. Confidentiality
5. Professional Behaviour



Guidelines for Green, Social and
Sustainability Bonds External Reviews
June 2018



Source: <https://www.icmagroup.org/green-social-and-sustainability-bonds/external-reviews/>

Range of external review approaches – pre-issuance

Type	Pre-Framework	Pre-issuance		
	Framework consulting	Second Opinions	Green Scoring/ Ratings	Certification against standard
Approaches	Help issuer develop green bond framework	Most follow the GBP. Some follow accounting for proceeds only, some look into environmental criteria and governance	Some ratings allow only a portion of proceeds used for green projects, some take a broader climate risk approach	Current standards available only for carbon emissions in certain project types in energy, transport, utilities and buildings sectors
Potential challenges	Conflict of interest with fully independent second opinions	Wide range of approaches and quality	Wide range of approaches and quality	Possibility that standard locks out best practices (e.g. resiliency in mitigation projects), or new technology development necessary for transition (e.g. electric car battery development)

Adapted from: Clapp, Christa, "What is Green and the Developing Green Bond Standards", Green Bond Evolution, Environmental Finance.

Notes: Table reflects author's opinion based on: CICERO Second Opinion Framework, GBP 2017, and available methodology descriptions for CBI, Moodys, Oekom, Sustainalytics, S&P, and Vigeo.

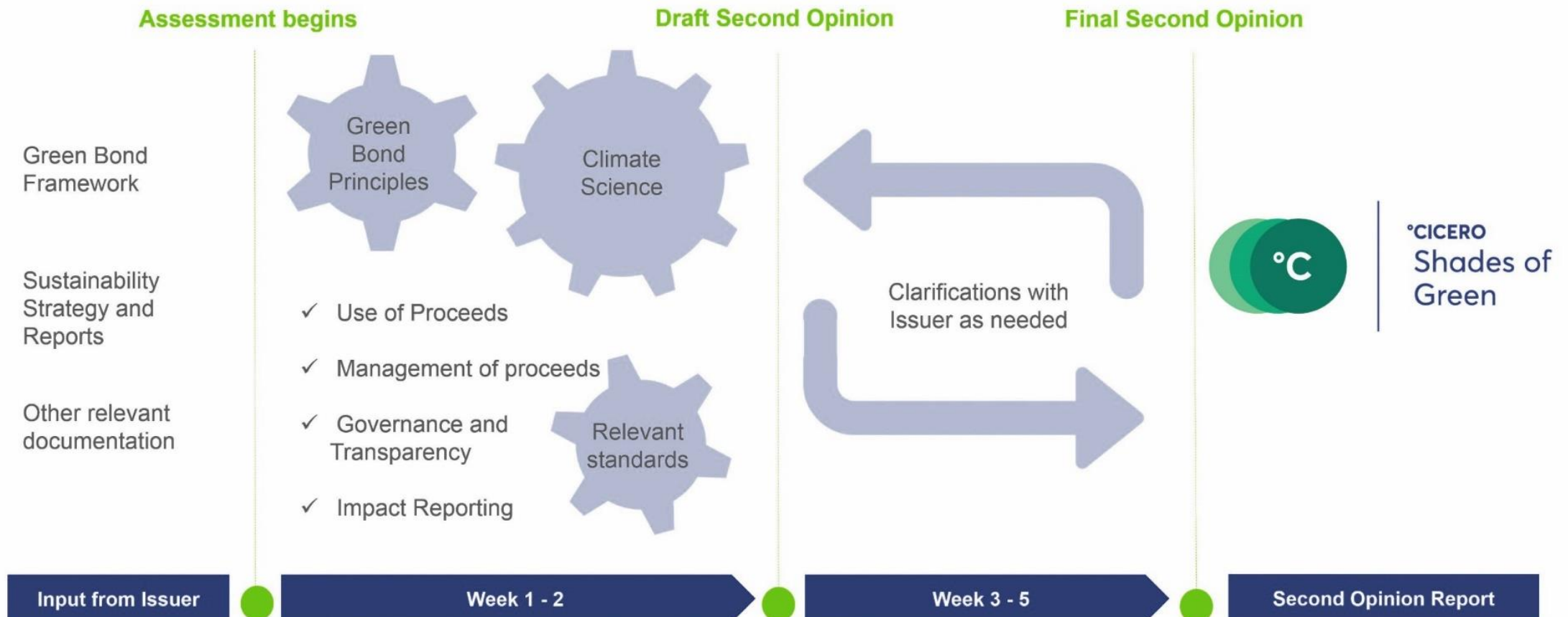
Range of external review approaches – post-issuance

Type	Verification of use of proceeds	Verification of environmental impacts	Updates of ratings and second opinions
Approaches	Follow accounting of financial flows for green projects	Measure realized carbon emissions or other environmental metrics of projects	Annual renewals can result in upgrades or downgrades of ratings or opinions
Potential challenges	Does not consider how green projects are	Can be overly focused on emission reduction accounting	Unclear if scope of updates includes realized impacts

Source: Clapp, Christa, "What is Green and the Developing Green Bond Standards", Green Bond Evolution, Environmental Finance.

Notes: Table reflects author's opinion based on: CICERO Second Opinion Framework, GBP 2017, and available methodology descriptions for CBI, Moody's, Oekom, Sustainalytics, S&P, and Vigeo.

The second opinion process



Green rating on climate risk

SHADES OF GREEN

EXAMPLES



Dark green is allocated to projects and solutions that correspond to the long-term vision of a low carbon and climate resilient future.



Wind energy projects with a governance structure that integrates environmental concerns



Medium green is allocated to projects and solutions that represent steps towards the long-term vision, but are not quite there yet.



Plug-in hybrid busses



°CICERO
Shades of
Green



Light green is allocated to projects and solutions that are environmentally friendly but do not by themselves represent or contribute to the long-term vision.



Efficiency in fossil fuel infrastructure that decreases cumulative emissions

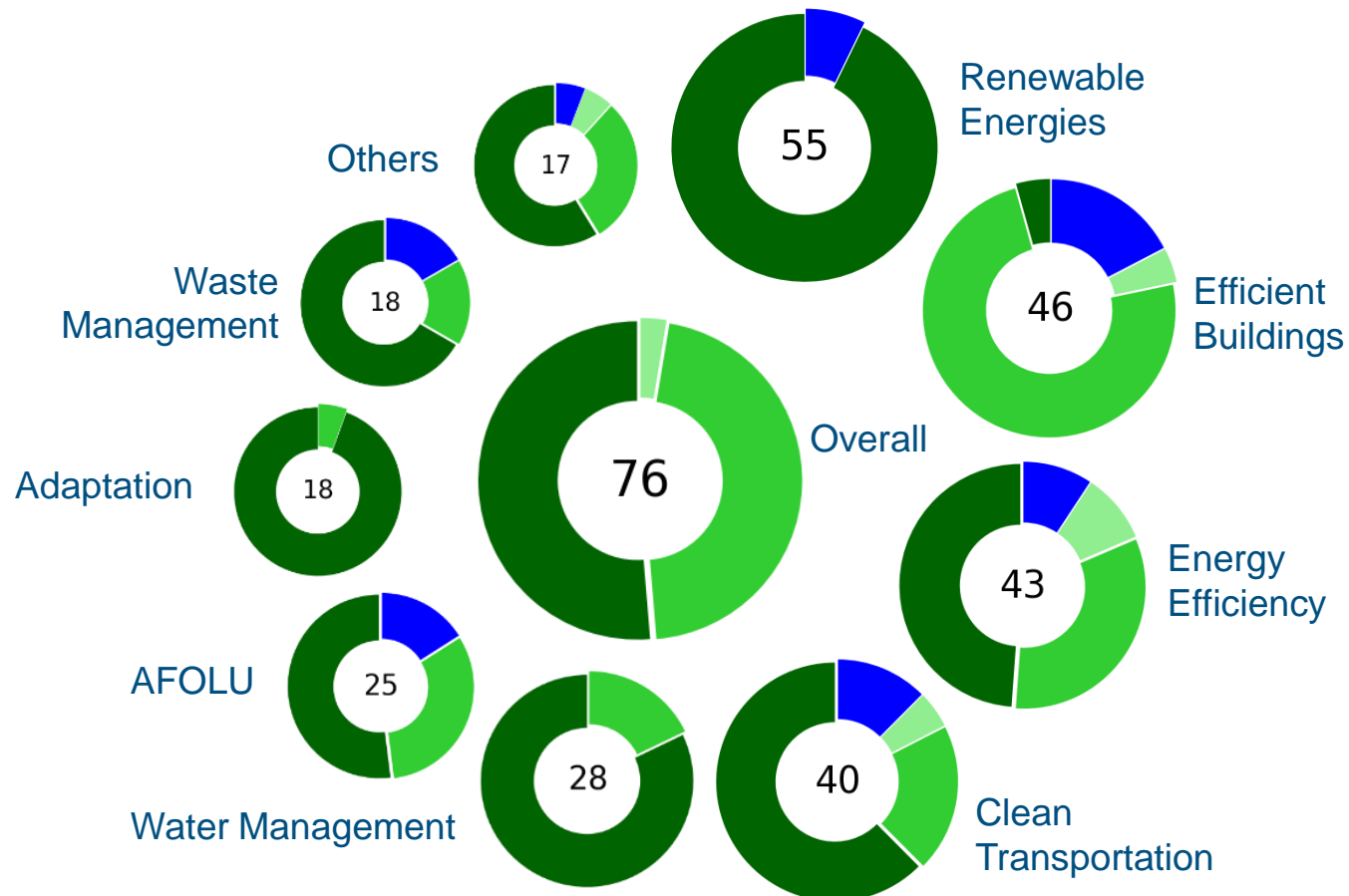


Brown for projects that are in opposition to the long-term vision of a low carbon and climate resilient future.

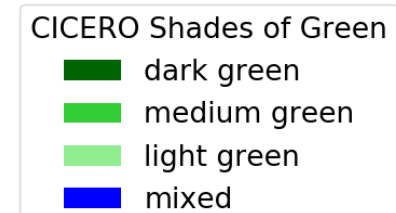


New infrastructure for coal

Rating by project categories



- Green projects come in all shades, but clear trends by sector
- Fewer light green projects so far, these projects are essential to a successful transition



Note that the mixed category includes all shades of green

CICERO's Absolute Number of Assigned Shades of Green (2013-2018) per Involved GBP Project Category

Part 8: Impact reporting

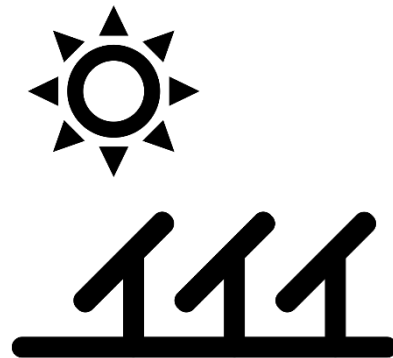
Why report on environmental impacts?

- Transparency is key to the integrity of the green bond market
- Pre-issuance external review provides insights on framework, post-issuance reporting on implementation and actual environmental impact
- Investors increasingly expect impact reporting for green bonds

Impact metrics

Numeric measurements of expected/actual impact.
Issuer is encouraged to include "green metrics" in addition to emissions.

Examples:



Mwh of electricity
produced



Reduction of CO₂-
equivalents emissions

Guidelines for impact reporting



ICMA working groups
have suggested metrics
for some sectors



Nordic Public Sector issuers
2017 Position Paper



MDBs Harmonized Framework
for Impact Reporting from 2015

External reviews in Brasil

PEAX – A Brazilian Program to Promote the Structuring and External Evaluation of Green Bonds

- Companies interested in issuing green bonds may obtain financial support through this program
- Cover the costs of consultancy and external evaluation of the green credentials of the bond.

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Part 9: Wrap-up

Further information

- UNEP Inquiry: [The Financial System We Need](#) (2015) & [Annual Overview 2017](#)
- [Task Force on Climate-related Financial Disclosures \(TCFD\)](#): Final Report & 2018 Status Report
- [High Level Expert Group's Final Report](#) & [EU Action Plan on Financing Sustainable Growth](#)
- [ICMA: The Green Bond Principles 2018](#)
- [SEB's latest Green Bond research](#)
- [CICERO's climate finance work](#)
- ICMA: The Green Bond Principles 2018
- Green Bonds – Working towards a Harmonized Framework for Impact Reporting (Dec 2015)
- Nordic Public Sector Issuers: Position Paper on Green Bonds Impact Reporting (Oct 2017)
- ICMA: Guidelines for Green, Social and Sustainability Bonds External Reviews
- Climate Bonds Initiative: Green Bond Pricing in the Primary Market (Q4 2017)
- [ICMA: Guidelines for Green, Social and Sustainability Bonds External Reviews](#)
- [CEBDS & Febraban: Guide for Issuing Green Bonds in Brazil](#)
- [Laboratório de Inovação Financeira](#)

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Part 10: Questions?
