

THE FORESTRY CRITERIA

Climate Bonds Standard



Green bonds & forestry

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Climate Bonds Initiative

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The Climate Bonds Initiative

Mobilising debt capital markets for climate change solutions



Market data
& analysis



Standard
setting



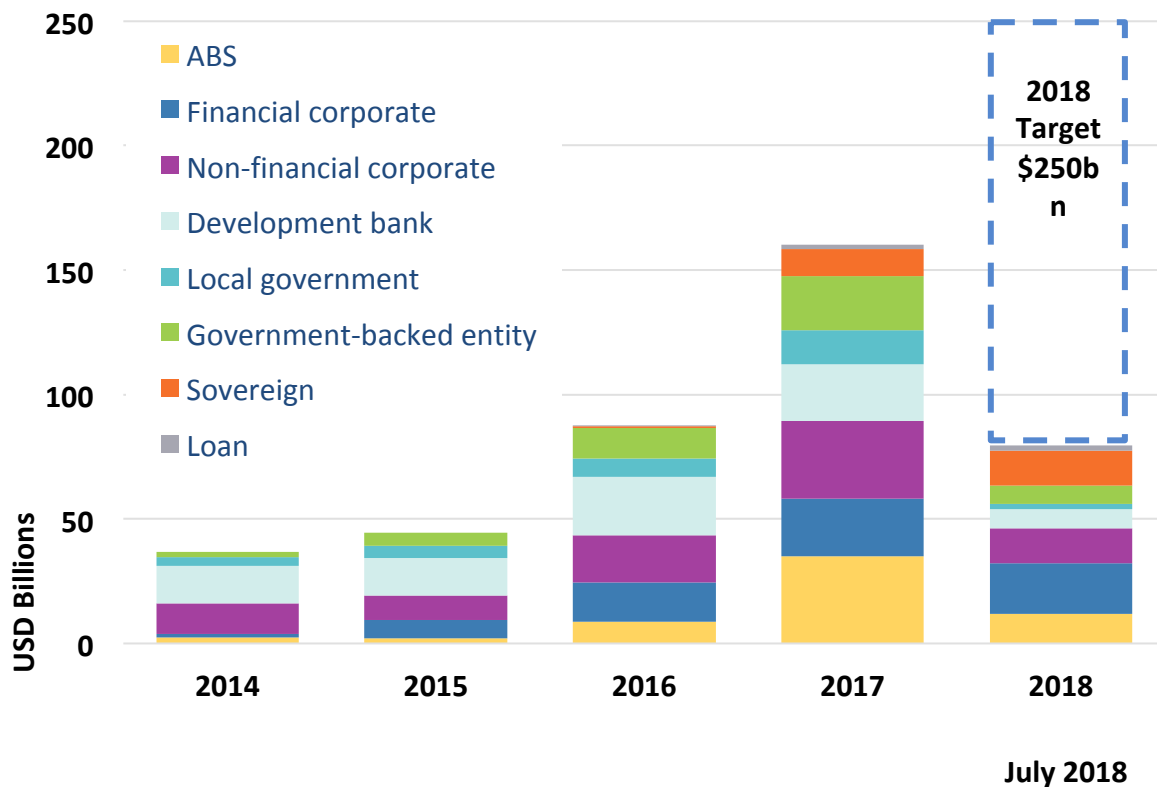
Policy &
market
development



Climate
Bonds
Certification



Green bonds



1. Proceeds go to green projects
2. Often an external review
3. Annual reporting required

New projects or re-financing

Issuers

- Investor diversification
- Market positioning
- Pricing

Investors

- Addressing climate risk
- Secondary market value

The key figures:

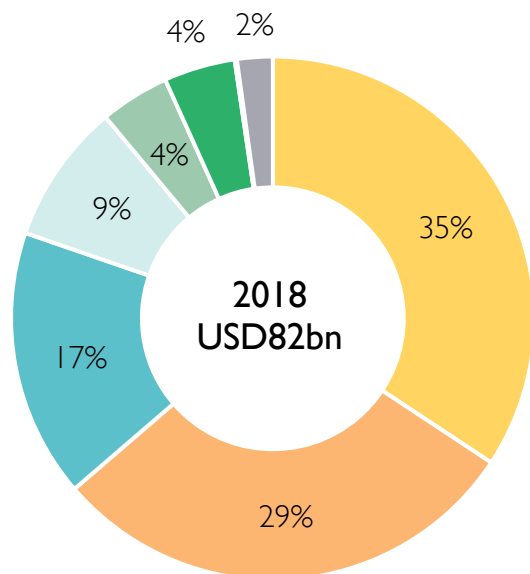
USD 161bn total green bond issuance in 2017; **Over 1500** green bond issues; **85%** growth on 2016

38 countries from all continents; **253** different issuers; **160** new issuers

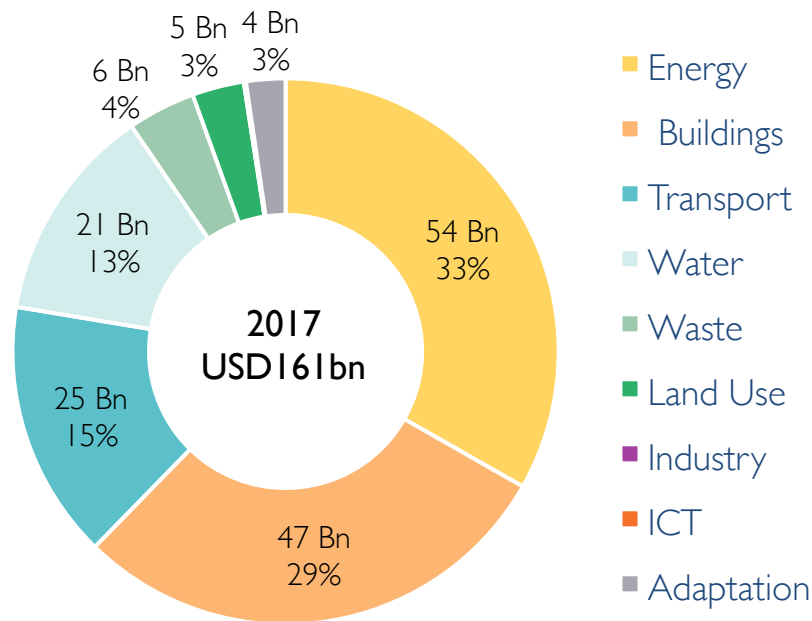
USD 10.7bn – largest single green bond

Green bonds

Use of green bond proceeds - 2018



Use of green bond proceeds - 2017



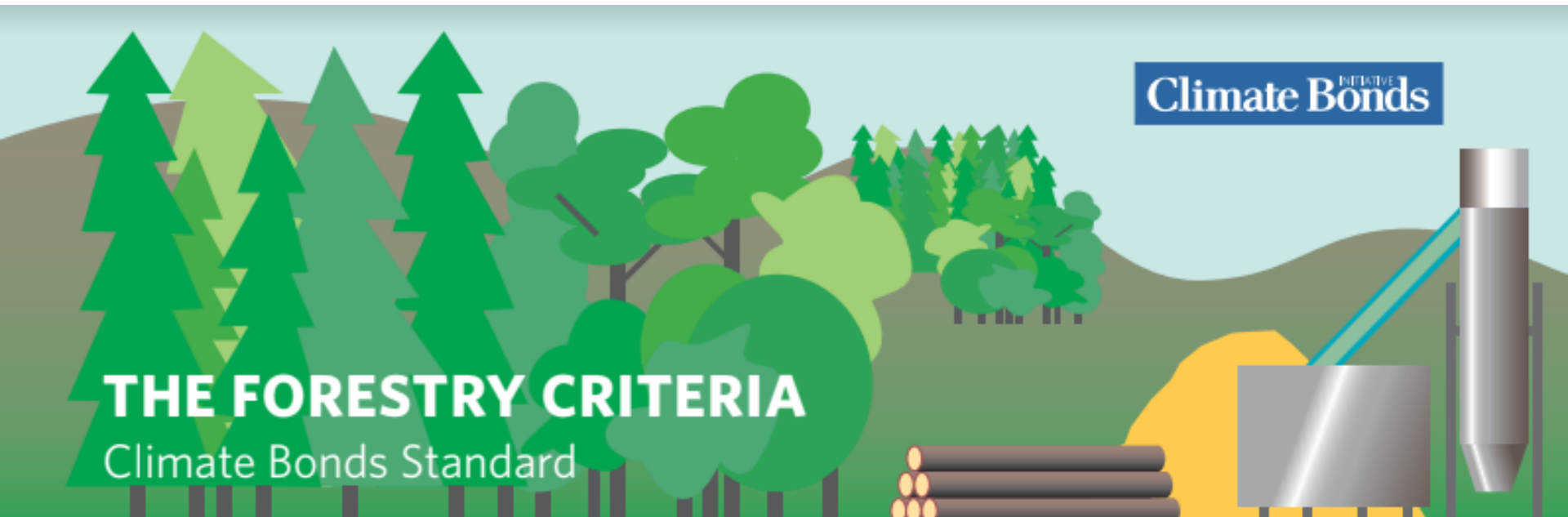
- Renewable energy has diversified from solar and wind to include power grids, geothermal, offshore wind
- Property related issuance is growing with covered bonds, green MBS and funding deals by European banks
- Transport is on the rise, mainly due to public rail transport investments
- Land use deals now include a forestry covered bond and a sustainable plantation with afforestation and wildlife protection corridors

Forestry related green bonds

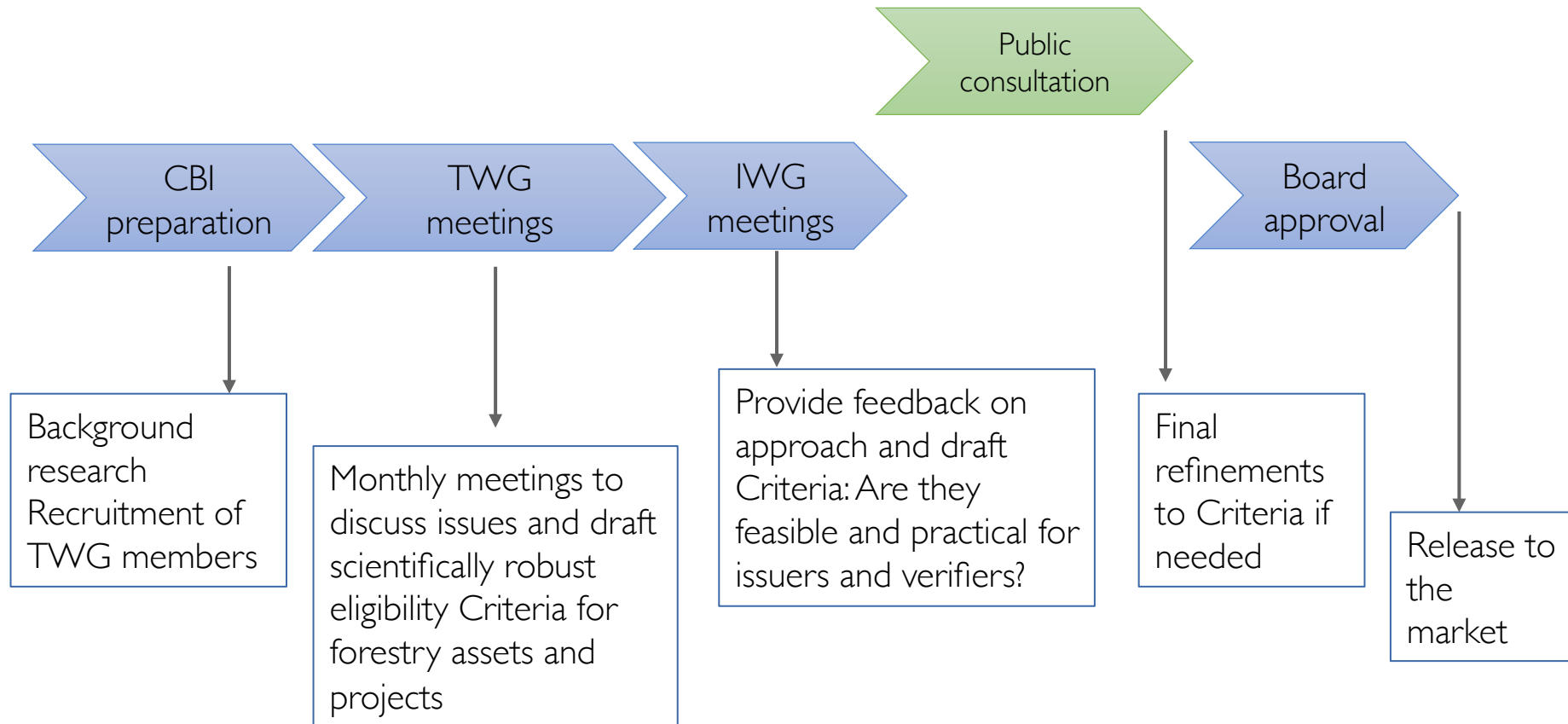
Issuer Name	Date of Issuance	Country	Value of bond	Use of proceeds
Landshypotek Bank	May 2018	Sweden	SEK5.2bn (USD605m)	Mixed bond for sustainable forestry, renewable energy and green buildings. The inaugural issue is backed by forestry loans on FSC or PEFC certified forestry assets
Sveaskog	Sep 2017	Sweden	SEK1 bn (USD126m)	Proceeds will finance FSC certified forests and forestry related investments, projects and assets to promote low carbon and climate resilience growth through sustainable forestry and its related operations
Sveaskog	Mar 2016	Sweden	SEK1 bn (USD116m)	General corporate purposes given it is a pure-play forestry company with all assets being FSC certified forests
Suzano Papel e Celulose	Sep 2017	Brazil	USD200m	Proceeds will be invested by Suzano in projects that feature positive environmental attributes and foster sustainable development
Suzano Papel e Celulose	Nov 2016	Brazil	BRL1 bn (USD295m)	Proceeds will be invested by Suzano in projects that feature positive environmental attributes and foster sustainable development
Klabin	Oct 2017	Brazil	USD500m	Mixed bond for FSC certified new planting and replanting activities, restoration of native forests, renewable energy, clean transport, energy efficiency, waste management, water management, circular economy products and adaptation
Martha's Vineyard Land Bank	Mar 2017	USA	USD20m	Preservation of woodland for biodiversity
Martha's Vineyard Land Bank	Nov 2014	USA	USD35m	Land acquisitions to protect biodiversity and woodland

Why are Forestry Criteria needed?

- Forestry projects can be net emitters or net sinks of GHG emissions
- Forestry projects may not be resilient to predicted climate change
- Criteria are needed to ensure green finance is only going to projects that are sequestering carbon and climate change resilient
- Issuers and investors need guidance



Forestry Criteria: development process

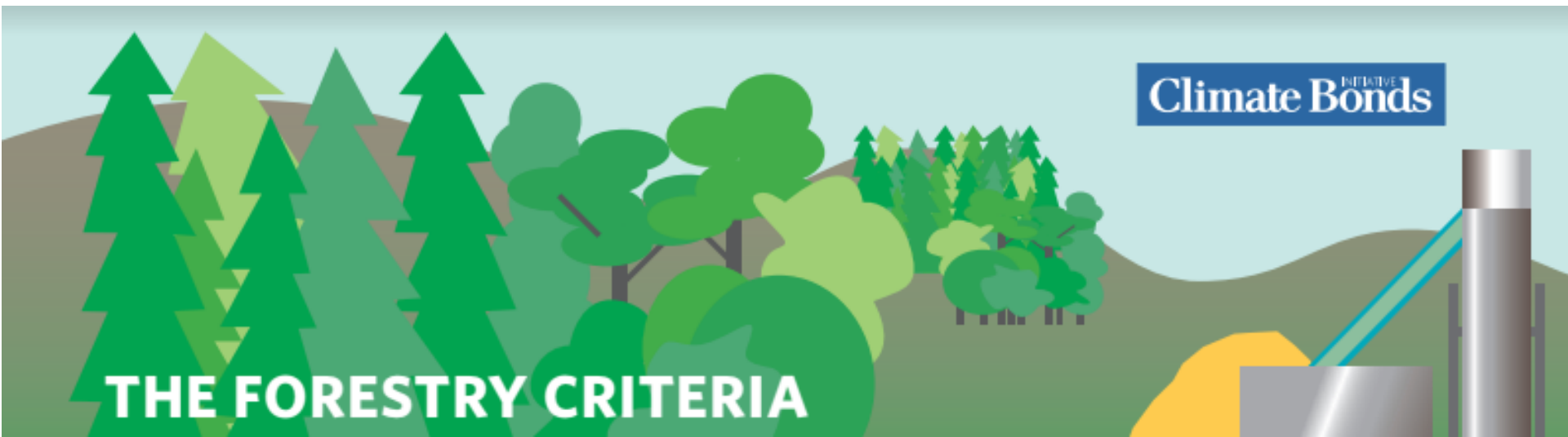


Forestry Criteria: development process

Forestry Technical Working Group (TWG)	Forestry Industry Working Group (IWG)
<p>Christine Negra, Versant Vision LLC, TWG Lead</p> <p>Torsten Boettcher, Agrobanco</p> <p>Sergio Collaco de Carvalho, University of Oxford, Geography Department</p> <p>Paul Chatterton, WWF International</p> <p>Stuart Clenaghan, EcoSystem Service Ltd</p> <p>Rupert Edwards, Forest Trends</p> <p>David Ganz, RECOFTC</p> <p>Michele Laird, Abt Associates</p> <p>Petri Lehtonen, Indufor</p>	<p>Michael Anderson, ERM</p> <p>Sophie Beckham, International Paper</p> <p>Jean-Dominique Bescond, World Bank</p> <p>Brian Kernohan, Hancock Natural Resources Group</p> <p>Sami Lundfren & Tim Lehesvirta, UPM</p> <p>Lars Mac Key, DanskeBank</p> <p>Jacob Michelsen, Nordea</p> <p>Beth Nelson & Pip Best, EY</p> <p>Mark Robinson, DNV.GL</p>

Scope of the Forestry Criteria

- Plantation forestry
- Sustainable forest management
- Harvest of Non-Timber Forest Products
- Forest conservation & restoration
- Other land conservation & restoration
- Supporting infrastructure & supply chain



Forestry Criteria's overarching principles

		Plantation forestry	Sustainable forest management	Non-timber forest products (NTFP)	Forest conservation & restoration	Conservation & restoration of other non-forested land	Supply chain activities
Mitigation Component	No natural landscape conversion	✓	✗	✓ ✗	✗	✗	✗
	Forests or other habitats carbon stocks and general health is maintained through good management practices	✓	✓	✓	✓	✓	✓
Resilience Component	Impacts that climate change may cause to the resilience of the forest, land or surrounding ecosystem are understood and mitigated	✓	✓	✓	✓	✓	✓
	Forest or other habitats are managed in-line with maintaining resilience	✓	✓	✓	✓	✓	✓

✓ Requirement applies ✗ Requirement does not apply ✓ ✗ Requirement applies in some scenarios

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Climate Bonds Standard

The Forestry Criteria are in public consultation until 20th July 2018

- All documents are available on our website here:
<https://www.climatebonds.net/standard/forestry>
- Or email me: katie@climatebonds.net

Forestry Criteria: management plan

Requirements of the management plan

1. **Soil health:** a soil management plan is developed and implemented with a focus on soil carbon, productivity, retention of soil, retention of soil biomass and soil structure
2. **Water management:** there has been an assessment done of the water requirements of the forests, impacts on and water needs of downstream users (both human and natural) and discharges into watercourses. A water management plan is in place that addresses relevant risks and includes measures to protect ground water and local water bodies
3. **Fire management:** measures have been developed and are implemented for the management of forest fires
4. **Riparian areas protection:** provision has been made to protect riparian areas
5. **Biodiversity management:** the management plan includes provisions for managing and maintaining biodiversity
6. **Species selection:** selection of species that are suitable for the project type (e.g. conservation, restoration or sustainable forest management), will not disrupt genetic diversity or that are suitable for current or projected future ecological conditions
7. **Chemical use:** no use of treatments that are on the WHO list of Critically Important Antimicrobials for Human Medicine, that are listed in the Stockholm Convention, the Rotterdam Convention or that are listed as classification I in the WHO recommended Classification of Pesticides by Hazard. Chemical use is minimised and they are applied in a targeted way
8. **Forest protection:** protection and monitoring measures are in place to prevent and monitor for illegal logging and illegal land conversion

Forestry Criteria: resilience checklist

Requirements of the resilience checklist

1. Future climate change related risks and vulnerabilities have been evaluated
2. A plan has been designed and implemented to mitigate and adapt to the climate risks and vulnerabilities identified and to improve the resilience of the assets
3. There is a plan to annually re-evaluate the risks climate change poses