

September 2020

Climate Bonds^{INITIATIVE}

Climate Bonds Initiative Green Bond Database Methodology

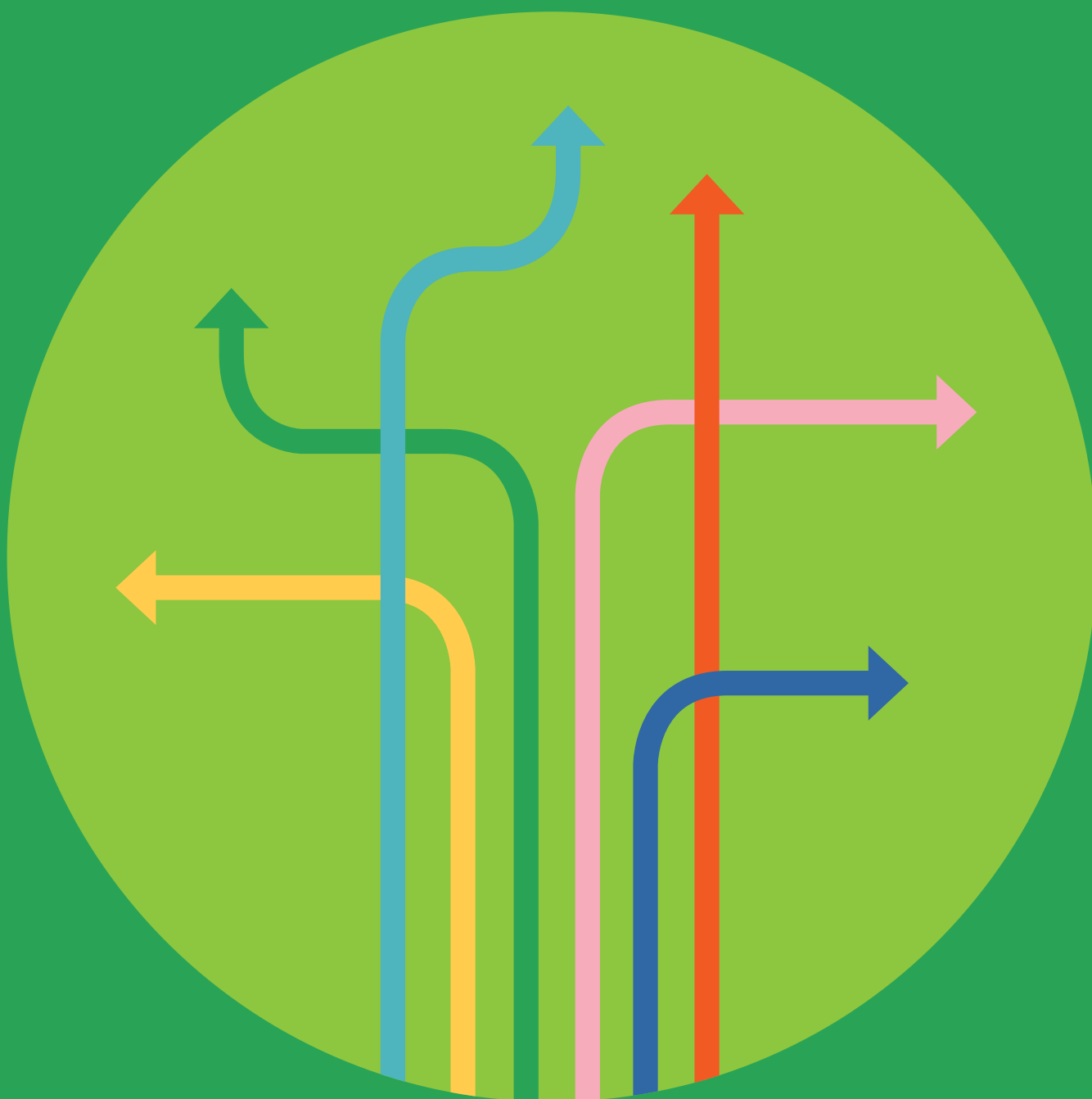


Table of Contents

1. Introduction	3
2. Overview of the Climate Bonds Initiative Green Bond Database screening process	4
3. Climate Bonds Initiative Green Bond Database and other labelled bonds	5
4. Climate Bonds Taxonomy and the Green Bond Database methodology	6
5. Certification under the Climate Bonds Standard and the Green Bond Database	7
6. Disclosure and instrument requirements for inclusion in the Climate Bonds Green Bond Database	8
7. Climate Bonds Initiative Green Bond Database screening process in detail	11
i. Identification of green bonds	11
ii. Screening sectors and green credentials	11
iii. Evaluating the use of proceeds	13
8. Pending deals and resolution process	15
9. Re-classification of a bond	15
Change in screening methodology	15
Change in the definition of alignment	15
Annex A: The Climate Bonds Taxonomy	16
Annex B: Green definitions for the Climate Bonds Initiative Green Bond Database	17
Annex C: The Climate Bonds Standard and Certification Scheme	23
Annex D: Eligible projects and assets under the Climate Bonds Standard	24

1. Introduction

The Climate Bonds Initiative screens self-labelled debt instruments to identify bonds and similar debt instruments as eligible for inclusion in the Climate Bonds Initiative Green Bond Database (the Database). The screening references the Climate Bonds Taxonomy, albeit using a modified sector list rather than the taxonomy indicators. This document provides information on the approach and the database maintenance process.

There are three overarching prerequisites:

- i. Debt instrument** includes but not limited to bonds, asset-backed securities and loans.
- ii. Self-labelled**, defined as a conscious decision by the issuer to label the instrument. Deals, which finance the right types of assets, projects and activities, but are not self-labelled by the issuer, are not included.
- iii. Public disclosure** that is sufficient to (1) determine if the financed assets / projects / activities are “green” and (2) allow inclusion of the debt instrument, most notably an amount outstanding and closing / settlement confirmation (issue date).

Notably, the label is used primarily to identify self-labelled debt. All labels are considered (see page 8). Once past the initial screening, the process looks beyond the actual label and evaluates the assets, projects and activities being financed to determine if the debt warrants inclusion in the Climate Bonds Initiative Green Bond Database, or another list/database, maintained by the Climate Bonds Initiative, e.g. as the social and sustainability bond database.

The screening is based on two key aspects: eligible sectors and eligible use of proceeds.

Eligible sectors for assets, projects and/or activities

The screening seeks to determine general alignment to the [Climate Bonds Taxonomy](#) (see Annex A). The Taxonomy provides two levels of information:

- a. broad guidance on eligible sectors and subsectors, and
- b. Sector specific metrics and indicators that identify assets, projects and activities consistent with the Paris Agreement.

The methodology's sector screening is primarily based on the first level (a). The Climate Bonds Initiative green bond database methodology uses an adapted list of eligible sectors and types of assets, projects and activities (see Annex B).

The 2°C indicators (b) are also used to inform the analysis. These indicators are sector and subsector specific. They link to [Sector-Specific Criteria](#), developed or being developed together with scientific and other technical and industry experts, for the purpose of [Certification](#) under the Climate Bonds Standard, a labelling scheme for financial instruments that are 2°C-compliant (see Annex C).

Green bonds included in the Climate Bonds Green Bond Database are not expected to meet the requirements for Certification (although some might, if assessed). Rather, the Sector Criteria are used to determine the level of ambition and allow the screening out of less ambitious deals. Climate Bonds is an advocate for high levels of ambition, i.e. deals that deliver decarbonisation sooner and would help keep global warming to 1.5°C. So, over time the requirements are expected to tighten and converge.

Climate Bonds Initiative has also started using the [EU Sustainable Finance Taxonomy](#) as a point of reference in cases where Climate Bonds has not yet developed its own guidance and/or Sector Criteria but is supportive of the approach used in the EU Taxonomy. For the database methodology the Climate Bonds Taxonomy and Sector Criteria are the first port of call.

More information: section “Climate Bonds Taxonomy and the EU Sustainable Finance Taxonomy”; on page 7.

Eligible use of proceeds

Historically, the focus has been on direct financing of physical assets and projects and indirect financing thereof (e.g. loans to suitable assets / projects). Annex D provides the expanded eligibility list from the new [Climate Bonds Standard version 3.0](#), which now includes physical assets and projects, financing thereof and certain expenses.

More information: section 5 “Climate Bonds Standard and Certification Scheme” and section 7 “Climate Bonds Initiative Green Bond Database screening process”, Annex C and Annex D.

Climate-change mitigation, adaptation and resilience

Most green bond financing to date has been allocated to climate change mitigation. However, climate change adaptation and resilience (A&R) measures are also eligible.

Climate Bonds' [Climate Resilience Principles](#) provide a framework for issuers to demonstrate that for the assets and activities (re) financed via the bond they understand the related climate risks, have identified measures that address them and can deliver resilience benefits, and the financing is provided to implement them. As risks are idiosyncratic given geography, climate profile and operations, suitable measures would be context specific.

Over time, A&R will be integrated in Climate Bonds' Sector Criteria. Specific assessment tools and/or indicators are expected to be developed to help determine that A&R measures do not involve unacceptable mitigation trade-offs, e.g. fossil fuel power generation lock-in. Until such guidance is developed, A&R-related bonds and measures will be considered on an ad hoc basis, engaging the issuer for dedicated A&R bonds, while the need for consultation will be determined based on materiality for other bonds. Climate Bonds may also draw on experts from its network.

Glossary:

Green bond framework: An issuance framework which defines eligibility categories for use of proceeds and reporting.

UoP: Use of proceeds, a.k.a. proceeds allocations

External reviews confirm compliance with the Green Bond Principles (GBP) or Green Loan Principles (GLP). Reviews include second party opinions, green bond ratings, assurance, etc.

Certified Climate Bonds (bonds, loans, debt programmes, deposits and other instruments) are Certified under the Climate Bonds Standard. The GHG emissions profiles of the assets / projects are verified by an Approved Verifier against Sector Criteria to determine if the assets/projects being financed are on a trajectory to full decarbonisation by 2050.

2. Overview of the Climate Bonds Initiative Green Bond Database screening process

As noted, the overarching prerequisites include self-labelled debt instrument, defined as a conscious decision by the issuer to label the instrument in a public document, and public disclosure that is sufficient to determine if the financed assets / projects / activities are “green” and to allow inclusion of the debt instrument in the Climate Bonds Initiative Green Bond Database.

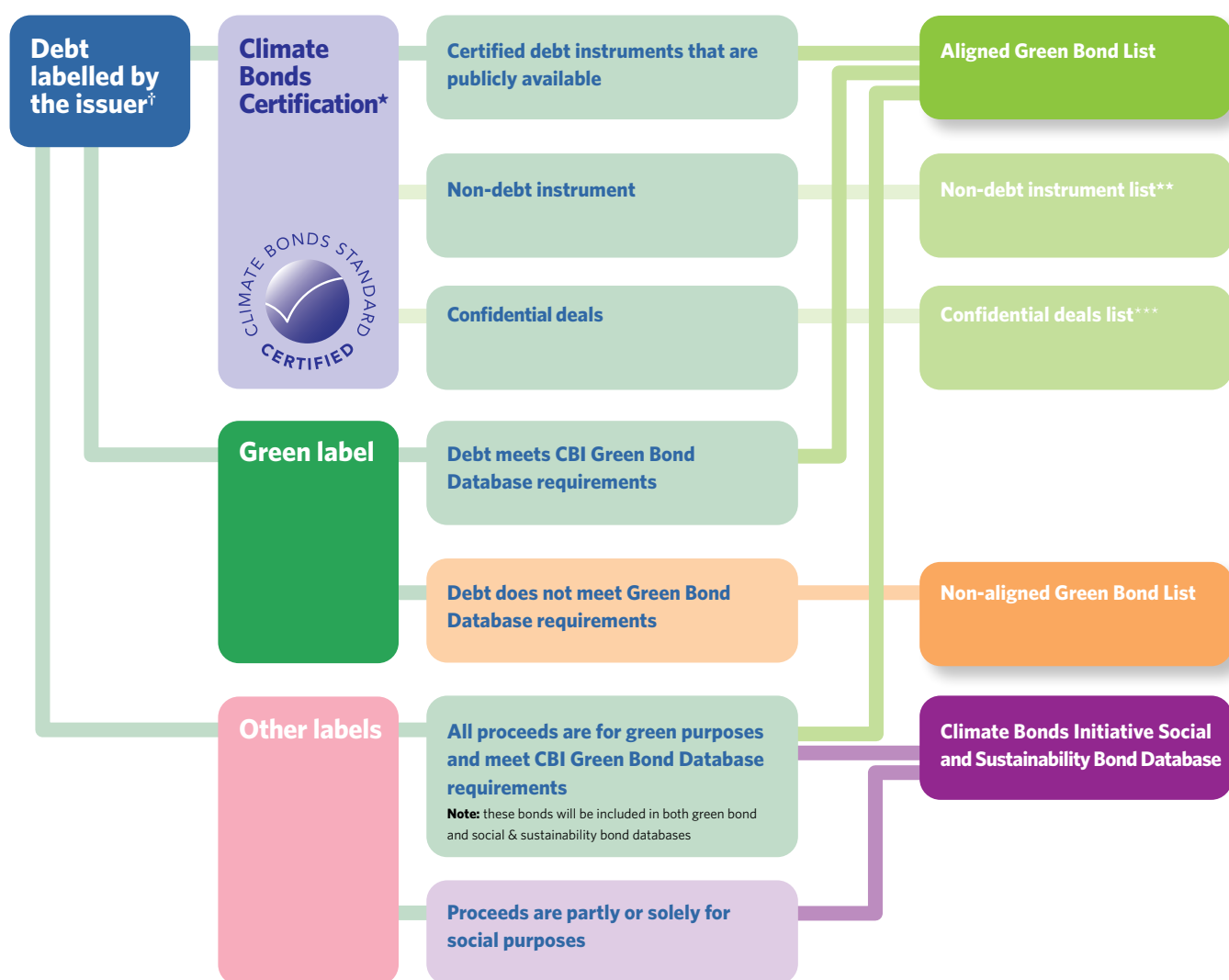
Assuming these are met, the three-step screening process to classify a green bond as eligible covers the following:

i. Identification of climate-themed, self-labelled debt;

ii. Screening sectors and green credentials to determine if the proceeds will finance eligible expenses, assets, projects or activities are in line with the Green Definitions in Annex B (which is adapted from the Climate Bonds Taxonomy and Sector Criteria). Notably, eligible expenses are a new aspect, in line with the proposed EU Green Bond Standard, but the eligibility rules are stricter. More information is provided in the section on certification and the details of screening below.

iii. Evaluating the use of proceeds threshold. Only bonds which are expected to allocate all net proceeds to aligned green assets, projects or activities are included in the Climate Bonds Initiative Green Bond Database.

Climate Bonds Initiative Green Bond Database screening process



† All labels are used primarily to identify bonds for screening. In the Green Bond Database, the assessment of the green credentials is based on the assets, projects or activities financed. In the Social and Sustainability Bond Database, the proceeds allocations are recorded rather than assessed.

* Certified Climate Bond/Loan is fully alignment with the Green Bond Principles/Green Loan Principles. It can be considered as a subset of the green bond/loan market. However, Climate Bonds Certification can be applied widely, including, but not limited to, non-debt instruments, directly to assets or projects (with no debt wrapper), and private/confidential deals.

** Certified non-debt instruments can be found on CBI website.

*** Confidential deals can be found on CBI website but certain information might not be available to the public.

3. Climate Bonds Initiative Green Bond Database and other labelled bonds

Database	Sub-datasets & Definition	Availability
Climate Bonds Initiative Green Bond Database	Aligned Green Bond List A list of labelled bonds and other debt instruments, which allocate all net proceeds to eligible sectors and comply with the criteria described in this methodology. Sustainability and SDG labelled bonds often have climate-related and social allocations. If the social assets / projects are also climate-related, i.e. “green”, they are included in this green bond database with the original label recorded.	Basic information is available to all Climate Bonds Partners through the Climate Bonds Partners Portal Comprehensive information is available to Premium and Advanced Climate Bonds Partners only, under a data licensing arrangement
	Non-aligned Green Bond List A list of labelled green bonds and similar debt instruments, that fail to meet the criteria for inclusion in the Climate Bonds Initiative Green Bond Database. Such bonds may meet local green bond rules: e.g. China’s green bond catalogue (2015 version) used to allow the so-called “clean coal” projects, but Climate Bonds Initiative does not.	Available to Premium and Advanced Climate Bonds Partners only, under a data licensing arrangement
	Pending list A list of labelled bonds and similar instruments for which there is insufficient information to determine eligibility initially, and where they are kept temporarily. Upon further investigation, the bond may be categorised as aligned or non-aligned.	Available to Premium and Advanced Climate Bonds Partners only, under a data licensing arrangement
	Repacks list A list of labelled debt instruments, primarily ABS but also bonds, which invest in green bonds that meet the screening criteria.	Available to Premium and Advanced Climate Bonds Partners only, under a data licensing arrangement
Climate Bonds Initiative Social and Sustainability Bond Database	A list of debt instruments that carry various labels, including but not limited to Social, Sustainability, SDG, ESG, and Covid. In the Social and Sustainability Bond Database, the proceeds allocations are recorded rather than assessed.	A comprehensive list will be available soon.

The screening methodology allows the classification of labelled debt. Climate Bonds Initiative curates and maintains the Climate Bonds Initiative Green Bond Database, which contains the bonds that have passed the screening. It also curates and maintains further lists of labelled debt as detailed below.

Labelled loans

Historically, Climate Bonds has included labelled loans in the Climate Bonds Initiative Green Bond Database, or in the various related lists. We are now in the process of separating loans into a stand-alone labelled loan database, structured in the same manner as the Climate Bonds Initiative Green Bond Database, i.e. including a green loan list, sustainability loan list, sustainability-linked loans, social loan list, and non-aligned loans.

When this split occurs, Climate Bonds will provide a before-and-after reconciliation. All the above commentary and distinctions will apply in the same way to loans as they do to the bond universe. This includes the self-labelling and disclosure pre-requisites for inclusion in the database.

Labelled versus unlabelled climate-related debt

Unlabelled climate-related debt is not included in the Climate Bonds Initiative Green Bond Database. While it is acknowledged that any debt which finances climate-friendly assets, projects and activities supports climate goals, the fact that the debt is not labelled is seen as an indication that the issuer is not committed to the green label. This could be because the issuer does not wish to provide disclosure, e.g. allocations reporting, and/or is not prepared to limit financing only to pre-defined eligible categories of assets, projects and activities.

Climate Bonds Initiative also curates and maintains a database of climate-aligned issuers and outstanding unlabelled climate-aligned bonds. Upon screening the issuers’ business in a similar manner to green bonds against the Climate Bonds Taxonomy, issuers are included if at least 75% of their revenues derive from aligned business lines, and they have outstanding debt.

The climate-aligned database is not covered by this methodology document and is only available under special arrangements with Premium Climate Bonds Partners.

4. Climate Bonds Taxonomy and the Green Bond Database Methodology

The Climate Bonds Taxonomy and Sector Criteria are used to determine the issuer's level of climate ambition and allow the informed screening out of less ambitious deals in the context of the Climate Bonds Initiative Green Bond Database methodology.

The Criteria can change over time as science, technologies, regulations, policy and climate thinking evolve. For instance, Climate Bonds has integrated adaptation and resilience considerations in more recently developed criteria (e.g. [Waste](#), [Hydropower](#)) and intends to revise older criteria (e.g. [Transport](#)) to incorporate such aspects and/or update metrics and tighten requirements and/or add subsectors. The most recent list will be available at: <https://www.climatebonds.net/standard/sector-criteria>

Annex B provides the assessment guidelines for the Climate Bonds Initiative Green Bond Database methodology. While based on the Climate Bonds Taxonomy and informed to a degree by Sector Criteria, the guidelines have been adapted so as to:

- i. allow assessment in the absence of metrics disclosure and/or third-party verification of metrics; and
- ii. relax the requirements for the more challenging sectors so as not to stifle the green bond market prematurely.

For some sectors where measurement is less of an issue (e.g. solar, wind) or metrics are typically met by certain types of assets (e.g. rail excluding fossil fuel freight), the methodology follows the Taxonomy quite closely.

For sectors where metrics are not readily available and/or, if reported, metrics need further assessment against a benchmark or proxy and/or available information needs to be further analysed and mapped against criteria, the methodology uses adapted approaches.

For Buildings, for instance, Sector Criteria seek to establish decarbonisation trajectories appropriate for different cities and regions. The sector has not been forthcoming with operational data to benchmark emissions performance and set appropriate trajectories, and the building standards that are being used by the industry do not have a sufficiently robust mitigation focus, i.e. do not provide good evidence of mitigation impact. A series of proxies for buildings, including a proxy of LEED Gold or Platinum plus 30% improvements on the level of ASHRAE 90.1, are thus used for Certification under the Climate Bonds Standard.

The buildings industry and property sector, however, are using the wider range of available building certification schemes as evidence of green impact. So the methodology takes a pragmatic approach based on the information that is more readily available for property financing, i.e. building certification schemes and energy efficiency ratings.

The approach taken in this methodology seeks high levels of ambition from green bond issuers, but it accepts lower levels of building certification than the LEED Gold proxy used for Certification and a variety of well-established international and local certification schemes and energy performance rating schemes. The methodology also accepts substantial improvements in energy performance for retrofits.

Criteria in advanced stages of development or in public consultation may be used for screening under the Climate Bonds Initiative Green Bond Database Methodology even before adoption for Certification subject to consultation with the Climate Bonds Standards Team, which manages criteria consultation with technical and industry expert groups.

Over time, the requirements for inclusion will be tightened. In this update, for instance, we are tightening the requirements for buildings as follows:

- **Building certification levels:** assets / projects that satisfy only the bottom (least ambitious) level of certification will be excluded. Also, there will be increased focus on international and strong national certification schemes, rather than accepting all building certification schemes. This applies to energy efficiency ratings (e.g. EPC), too.
- **Building upgrades:** we require substantial energy performance improvement and threshold will be aligned with the requirements in the EU Taxonomy.

Changes in assessment criteria will be notified, but as a general rule the aim is to encourage high levels of ambition in the green bond market and promote rapid transition to a low carbon economy.

Climate Bonds Taxonomy and the EU Taxonomy

In March 2020 the EU released a proposed [EU taxonomy of sustainable activities](#). The EU taxonomy may be used as a point of reference or proxy for sector-specific criteria for which there are currently no Climate Bonds Sector Criteria. This will be re-assessed as Climate Bonds Initiative develops and releases new Sector Criteria, or formally decides to adopt EU taxonomy metrics.

5. Certification under the Climate Bonds Standard and the Green Bond Database

The Climate Bonds Standard and Certification Scheme is summarised in **Annex C**.

Debt instruments or other financing arrangements Certified under the Climate Bonds Standard are expected to satisfy the sector eligibility requirements for inclusion in the Climate Bonds Initiative Green Bond Database (as laid out in the Introduction).

However, non-debt instruments Certified under Climate Bonds Standards are kept in a separate list since the Climate Bonds Initiative Green Bond Database only includes labelled debt instruments. In addition, confidential Certified Climate Bonds are not available to the public or data partners, as the Database requires public disclosure of at least the label and basic information (e.g. amount issued, currency denomination and date issued).

Similarly, if issuers want to claim compliance with the GBP or GLP and the proposed EU Green Bond Standard, they must make at-issuance disclosure and post-issuance reporting publicly available. The proposed EU Green Bond Standard envisages publicly available reporting on the benchmark metrics set out in the EU Taxonomy. ICMA and the Global Reporting Initiative have published guidance and templates for impact reporting by sector.

Currently, Certified deals such as bilateral loans and private placements can be handled confidentially. This is changing: CBS V3.0 now requires public disclosure of the periodic post-issuance compliance statement, which confirms that the Certified Climate Bond continues to meet the Certification requirements.

A summary of cases where the debt or other financing instruments Certified under the Climate Bonds Standard may potentially not be included in the Climate Bonds Initiative Green Bond Database are summarised in Annex 3 of the [Climate Bonds Standard version 3.0](#) (CBSV.3.0).

Providing sufficient information on the greenness of assets, projects and activities – e.g. the issuer's green bond framework and assessment metrics – allows market participants to assess for themselves if the deal merits inclusion for their purposes. With a view to strengthening Certification requirements and adhering to best practice, Climate Bonds is now tracking how many issuers will opt out of Certification if they were required to publicly disclose minimum bond information (amount, issue date, maturity date), information on the eligible categories and selection process (e.g. green bond framework), and post-issuance reporting.



6. Disclosure and instrument requirements for inclusion in the Climate Bonds Green Bond Database

Certain basic transparency requirements with respect to the debt instruments must be disclosed, namely:



i. Disclosure of the amount issued, issue date and maturity date of the instrument. Notably, no pricing, tranching, covenant or similarly sensitive information needs to be disclosed for private deals, but it is expected that all material information is disclosed in bond documentation for publicly listed instruments.



ii. Type of debt instrument, e.g. bond, medium-term note, asset backed securities, etc.

Impact (e.g. GHG emissions metrics) is recommended but voluntary for Certification. Assessment of the indicators which determine compliance with Sector Criteria is required, but disclosure of these metrics is voluntary. Under the GBP and GLP as well as this methodology, impact reporting is also voluntary.

Eligible use of proceeds types

The Climate Bonds Initiative Green Bond Database methodology references eligible use of proceeds to the Climate Bonds Standard. As described in the Introduction, this pertains to the types of funding allowed. Historically, the focus has been on direct financing of physical assets and projects and indirect financing thereof (e.g. loans to suitable assets / projects).

Annex D provides the eligibility list from the new Climate Bonds Standard version 3.0 (CBS V3.0). Compared to the eligibility criteria under CBS V2.1, the new list further specifies the meaning of “financing”, namely the itemised inclusion of capex and asset acquisition costs, subsidies, loans, leases and other similar forms of asset/project financing. It also adds certain related and supporting expenditures, namely:

- **relevant installation and routine maintenance expenditure** and upgrades undertaken to maintain the value and/or extend the lifetime of the asset;
- **relevant performance monitoring costs** with respect to tracking climate credentials (e.g. GHG emissions) and climate information services (e.g. satellite monitoring and emissions testing);
- **relevant research and development, training and programme implementation costs** and expenditures, where there is a definable future asset, product and/or process that can be linked to climate benefits under the relevant Sector Criteria.

These additions are in the spirit of the proposed EU Green Bond Standard (available at https://ec.europa.eu/info/publications/sustainable-finance-teg-green-bond-standard_en), but definitions are tighter. What is acceptable under CBS V3.0 and for inclusion in the Climate Bonds Initiative Green Bond Database methodology has been limited to expenditures and upgrades that maintain the value and/or lifetime of physical assets, monitoring applications and expenditures related to clearly defined assets, and products or processes with defined climate benefits that would meet Sector Criteria emissions limits or performance thresholds.

These changes acknowledge that the green bond market has – so far – focused on climate change mitigation and primarily invested in physical assets and projects. However, in some sectors mitigation can be achieved not so much through the asset (e.g. land) as through improved methods (e.g. sustainable agriculture practices) and effective monitoring. Also, adaptation and resilience measures do not always attach to investment in physical assets / projects. Finally, there is the need to implement and adopt technological innovation.

More information on how different types of allocations are assessed in the screening process is provided in the subsection entitled “3. Evaluating the use of proceeds” of the next section. Broadly speaking, issuers will need to provide sufficient detail for Climate Bonds to be able to determine if any proposed expenditure financing under a green bond is in line with the approach of CBS V3.0, although assessment for inclusion in the Climate Bonds Initiative Green Bond Database will not necessarily seek to apply Sector Criteria.

7. Climate Bonds Initiative Green Bond Database screening process in detail

i. Identification of green bonds

The issuer of a climate-themed bond must declare that the bond is intended to be environmentally beneficial through labelling the bond, ideally as "green".

The most commonly used label is 'green', but other labels are considered. Examples include, but are not limited to:

- **Climate-awareness**
- **Solar, wind, renewable energy and similar**
- **Energy efficiency, PACE and similar**
- **GreenStar (BAM)**
- **Environmental**
- **Water bond and similar**
- **Blue, marine conservation and similar**
- **Energy transition / Sustainable transition**
- **ESG, SDG, sustainability, social and similar**
- **Climate action**
- **Transition**

Glossary of abbreviations:

PACE: *Property assessed clean energy (US DOE scheme)*

BAM: *Build America Mutual*

ESG: *Environmental, Social and Governance*

SDG: *Sustainable Development Goals (UN scheme)*

The label should appear in a public document such as:

- press release,
- bond prospectus or other bond issuance document, whereby the label needs to be clearly visible on the bond description to make identification possible and be definitive that it is labelled,
- green/sustainability/SDG bond/sukuk framework,
- external review of an issuer framework or other due diligence to confirm the green credentials,
- green bond assessment, green evaluation or other (e.g. green bond rating)

We will consider all debt instruments with a defined amount. Short-dated instruments will be considered as long as the use of proceeds meet the requirements. Normally, they form a relatively small portion within a programme, such as, but not limited to, medium term (MTN) programme or Programmatic Certification, where the debt programme includes a variety of instruments and maturities.

Unlabelled bonds will not be included in the Database, even if they finance assets which are aligned to the Climate Bonds Taxonomy. In addition to asset alignment, we are looking for transparency, and labelling is key to green bond visibility. Furthermore, commitment to manage proceeds and to post-issuance reporting under GBP / GLP is integral to market credibility.

Our best-practice recommendations include:

- external review at issuance
- clearly set out commitment to post-issuance reporting on allocations and impacts.

Impact reporting is required under the proposed EU Green Bond Standard, increasingly demanded by investors and highly encouraged by Climate Bonds Initiative. In the case of impact reporting, best practice includes:

- defining relevant metrics and baselines, as well as specifying which measures are actual and which are estimated / modelled;
- identifying the scope of assessment: annual or over the lifetime of the asset/project; and
- setting out the assessment framework and calculation methodologies.

Such further information is used for ongoing monitoring of bonds as follows:

- Confirm basis for continued inclusion
- Exclude if actual allocations are not to assets or projects aligned with the Climate Bonds Taxonomy
- Consider inclusion for previously excluded bonds if the assets/projects are aligned with the Climate Bonds Taxonomy AND all net proceeds are climate-related allocations

ii. Screening sectors and green credentials

Each bond or other debt instrument is reviewed based on the green credentials of the use of proceeds. This may be earmarked proceeds for asset-linked, senior unsecured or secured bonds, projects funded by a project bond, or assets backing an ABS or other secured debt. The key is that the asset/project to be financed/refinanced is green.

At issuance, the issuer must declare the eligible asset and project categories. Most issuers specifically link their deal and framework to the GBP or GLP and obtain an external review to confirm compliance. This is now the prevalent practice and is helping improve market integrity.

External reviews

We consider all types of external assessments (see summary table below). An external review is recommended but not required as long as equivalent information is clearly disclosed by the issuer in a bond framework, prospectus or other document. Equivalent information covers the four principles of GBP/GLP, namely:

- Pre-determined eligibility criteria
- Information on the selection process
- Management of proceeds to ensure allocation
- Post-issuance reporting (at least on allocations)

The fact that an external review has been obtained does not mean that the bond will be automatically included in the Climate Bonds Initiative Green Bond Database, as compliance with GBP/GLP does not mean that the categories meet all the inclusion criteria. Rather, the review as well as other information disclosed by the issuer is independently assessed for alignment with the Climate Bonds Taxonomy.

We will consider bonds for which there is no external review, but adequate disclosure on the assets financed is provided by the issuer. For instance, US Munis, Solar ABS, PACE ABS and domestic market Chinese issuers typically provide this information in the bond prospectus.

Disclosure

The assessment is typically based on publicly available information. Occasionally, we may obtain private information to determine alignment.

For post-issuance reporting, Climate Bonds Initiative relies solely on publicly available information. Information made available on the Climate Bonds website about Certified instruments is considered publicly available even if the issuer has not made it publicly available on their website.

Assessment

As noted, the methodology for inclusion in the Climate Bonds Initiative Green Bond Database is aligned to the GBP/GLP, the Climate Bonds Taxonomy and the spirit of the scientific Sector Criteria but with less stringency. (See summary in Annex B.)

For borderline or complicated cases, input from the Climate Bonds Standards team, and on occasion external technical experts, may be sought and the guidance published in a briefing (e.g. NYK special briefing). This is likely to be the case for new industries (e.g. cement) and products (e.g. bioplastics) and more comprehensive approaches, particularly around circular economy claims.

A&R allocations are assessed on a case by case basis as noted in the introduction.

Overview of external review types and providers

Pre-issuance review	Scope	Providers (examples)
Assurance	Positive or negative assurance on compliance with the Green Bond Principles (GBP) / Green Loan Principles (GLP)	EY, Deloitte, KPMG
Second Party Opinion (SPO)	Confirm compliance with GBP / GLP. Provide assessment of issuer's green bond framework. Some analyse the "greenness" of eligible assets.	CICERO, DNV-GL, Sustainalytics, Vigeo Eiris, ISS-Oekom
Green bond rating	Assess the bond's alignment with GBP and integrity of its green credentials. (NB: Credit ratings, increasingly incorporating ESG factors, are assessed separately.)	Moody's and S&P, RAM (Malaysia), R&I and JCRA (Japan)
Pre-issuance verification of the Climate Bonds Certification	Third party verification confirms that the use of proceeds adhere to the Climate Bonds Standard and sector specific criteria as required for bond / programmatic Certification.	Approved Verifiers under the Climate Bonds Standard
Post-issuance review		
Assurance, audit or post-issuance SPO	Assurance of actual allocation of proceeds to eligible green projects.	Audit firms, ESG service providers
Impact report	Reporting that seeks to quantify the climate or environmental impact of a project/asset numerically.	As above
Post-issuance verification of the Climate Bonds Certification	Third party verification confirms the allocation of proceeds is to eligible green projects and the types of green projects conforms to requirements of the Climate Bonds Standard.	Approved Verifiers under the Climate Bonds Standard

iii. Evaluating the use of proceeds

Climate Bonds Initiative's focus is on climate-change mitigation, adaptation and resilience. Only bonds which are expected to allocate all net proceeds to aligned green assets, projects and activities are included in the Climate Bonds Initiative Green Bond Database.

Exclusions

The bond will not be eligible for inclusion if proceeds are (expected to be) used for social projects, general corporate purposes, working capital/ operating and training expenses that are not part of an acceptable programme/project delivery, early-stage R&D when the outcome and/or climate benefit are not yet defined and/or cannot yet be quantified, and other expenses or assets that are not aligned.

The most significant exclusions are fossil fuel power and any process, product, asset or improvement, which locks in the use or extends the life of fossil fuels.

As new low-carbon technologies make "alternatives" mainstream (e.g. zero- and low-emission vehicles versus ICE vehicles), the list of assets that are not supportive of rapid decarbonisation will likely grow.

We also exclude assets / projects that do not meet the thresholds set out in **Annex B**, e.g. building upgrades that achieve some but not sufficient improvements in energy performance, or hybrid vehicles that are more efficient than ICE but not efficient enough to meet emissions limits.

Notably, broad categories – such as energy efficiency without reference to a specific sector / asset / project – may lead to exclusion if the detail is insufficient to determine alignment under this methodology, even if it can be broadly determined that the investment may have a positive climate impact.

Importantly, lack of sufficient information on a bond's green credentials to determine this also results in exclusion. Sufficient information covers:

- specificity of category definitions, e.g. energy efficiency financing should be linked to a sector such as buildings, transport, grids, etc.
- clarification if social programmes also have specific green objectives or benefits, e.g. energy efficiency upgrades to social housing, and
- confirmation that no financing is allocated to improving fossil fuel power generation or related technologies.

The bond is added to the excluded bonds list if:

- proceeds are used or expected to be used for social projects, assets or working capital that do not align to the Climate Bonds Taxonomy;
- there is insufficient information to determine alignment or lack thereof.

Excluded bonds are announced in the regular market updates, together with the reason for exclusion.

Post-issuance reporting on the actual allocation of proceeds can also lead to exclusion from the database if the funding proves to be allocated to assets that are not aligned. Climate Bonds has undertaken two studies into post-issuance reporting (in 2017 and 2018) and continues to monitor the market, with a further study to come later this year.

Notably, excluded sustainability, SDG, ESG and similar bonds may, nonetheless, be funding primarily green assets and projects. Consequently, these may well be aligned to investment policies and thresholds for some investors, indices and investment products. Bonds with other labels that do not meet the Climate Bonds Green Bond Database inclusion criteria are recorded in a separate database.

Tracking the wider labelled market: social v green

An asset or project can have both social and green credentials. For example, TLFF I (Indonesia) issued a sustainability bond to fund a sustainable rubber plantation and smallholder plots on degraded land. Employment, food security and equality are social goals, but the rehabilitation of degraded land to productive, sustainable use is in line with the Climate Bonds Taxonomy, so the bond is included in the Climate Bonds Initiative Green Bond Database.

Issuers are advised to state if their projects meet both social and green criteria. An issuer financing social housing may also require that properties are energy efficient to a specific (ideally high) standard. However, without the green clarification, the bond will not be included in the Climate Bonds Initiative Green Bond Database.

As noted above, Climate Bonds Initiative maintains not just the Climate Bonds Initiative Green Bond Database, but also sustainability and social bond lists, as well as a list of repacks. Deals that do not qualify as green bonds under this methodology may be included in one of those lists.

Financing capital assets versus eligible expenses

The transition to a low-carbon economy needs to be swift to keep global warming under 2°C. Consequently, the focus of Climate Bonds Initiative's advocacy is on mobilising bond markets at scale to fund sustainable and climate-resilient infrastructure, low-carbon buildings, sustainable use of natural resources and improving industrial processes to reduce emissions. Scale is achieved with the financing/ refinancing of capital assets that can generate immediate or near-term impact and would continue generating a positive climate benefit over the medium- to long-term.

In this context, capital expenditure to improve assets and make them more energy efficient and/or more climate resilient is an acceptable use of proceeds. In fact, it forms the basis of the Buildings (Upgrade) Sector Criteria used for Certification. As with any allocation, though, the level of ambition needs to be sufficient, which translates to meeting benchmark metrics where these are specified. For property CapEx, for example, the energy efficiency improvement threshold is going to be aligned with the EU Taxonomy. On a case-by-case basis, the threshold may be re-assessed – e.g. if the work is being done on new and refurbished buildings that are already energy efficient and/or there is a combination of targets such as improving energy efficiency and reducing water consumption (as is the case with, say, Fannie Mae's Green Rewards programme).

Funding general operating expenses generally covers an immediate cost that is not necessarily linked to green assets, projects or activities. However, the funding of enabling expenses to deploy climate-friendly assets or projects will be considered as eligible. For instance, training farmers on sustainable agriculture practices is crucial to achieving a long-term benefit from investment in adaptation and resilience projects, assets and equipment.

Another example is financing the measurement and tracking of climate impacts, pollution control, natural resource conservation measures, and the effect of adaptation and resilience measures in the context of ensuring long-lasting climate benefits. We categorise such funding as adaptation and expect to see such allocations in the context of wider investment programmes. For instance, the Seychelles blue bond funds sustainable fisheries and marine reserve conservation as well as enabling measures such as scientific monitoring. The French government is using part of the proceeds of its green sovereign bond for satellite observation of weather patterns and climate change, and partly to maintain wetlands and natural green spaces under biodiversity conservation programmes.

This approach acknowledges that developing effective measures and monitoring of implementation is vital to achieving the overall goal of limiting global warming and decarbonising the economy, including the preservation and growth of carbon sinks (e.g. forests).

Eligible R&D expenses

Climate Bonds Initiative is supportive of scientific study to improve mankind's ability to address climate change. We look for R&D spend that is likely to provide an immediate to near-term investment in capital assets that can deliver positive climate benefits. An example would be pilot projects for new technology or climate-resilience projects / products that – if successful – can continue to deliver benefits long-term. Spatial observation to identify, verify and/or implement mitigation and adaptation measures could also qualify.

The rule of thumb for corporate R&D expense eligibility is that early stage R&D is not eligible as there are multiple scenarios for the project(s), no specific product / asset / process (just an aim to find an improvement), and climate benefits are as yet undefined or cannot be measured.

By contrast, late stage R&D is better defined. The existence of specific (existing or prototype) products, assets or processes for which there is a defined approach for improvement allows the quantification of climate benefit and attainment of sector-relevant thresholds in the near to medium future.

Capitalisation of R&D is also acceptable insofar as it converts expenditure into an asset. For existing assets/products/processes this approach is similar to capital expenditures. For new assets/products/processes this approach is similar to acquisition/development costs.

If the type of R&D is not specified, Climate Bonds Initiative will tend to err on the side of caution. This may result in exclusion if the poorly specified R&D (e.g. not sufficient information on what R&D relates to, stage of R&D project, etc) represents. Notably, acceptable R&D counts towards eligible use of proceeds.

At the sovereign level, it is acknowledged that national governments provide enabling funding for various research programmes, some to explore areas of interest (e.g. early stage research, research that may not have an identified practical application as yet or is expected to be beneficial) but with practical application – and hence climate benefits – only in the medium- to long-term future. To accommodate the role of government support for technological and scientific innovation, the limit for unspecified expenditure by sovereigns can be raised up to 10% of allocations. Note that acceptable R&D – such as France's satellite climate monitoring satellite programme – would be included as eligible, so the 10% limit does not apply to this.

Adaptation and resilience measures

Climate Bonds Initiative set up an Adaptation & Resilience Expert Group to develop high-level guidance for determining when projects and assets are compatible with a climate-resilient economy. Climate resilience covers assessment of risks, which tend to be idiosyncratic depending on geographic location and local climate, as well as developing measures to address and adapt to acute events (e.g. storms) and long-term changes (e.g. temperature and sea level rises).

As a first step, Climate Bonds Initiative has published the Climate Resilience Principles (see <https://www.climatebonds.net/climate-resilience-principles>). They provide a framework for issuers to demonstrate that for the assets and activities (re)financed via the bond they:

- Understand the climate risks faced by the asset, activity or system in question;
- Have addressed those risks by undertaking risk-reduction measures and adopting flexible management plans that take account of inherent uncertainties around climate change, and ensuring that the asset, activity or system is robust, flexible and fit-for-purpose in the face of that uncertainty;
- Can deliver resilience benefits over and above addressing identified risks (for system-focused investments); and
- Are undertaking regular (re)evaluation of the asset and/or system's climate resilience performance, adjusting to risk reduction measures over time as needed.

These types of measures and programmes could involve both physical assets (e.g. coastal flood defences such as bollards (Louisiana) or dykes (Netherlands)), nature conservancy (e.g. land banks) and reforestation (e.g. Indonesia's TLFF I), as well as asset / project management that improves resilience and ongoing assessment of impact. So far, investments have been primarily in physical assets and projects, often in combination with mitigation measures in water management and sustainable land use.

Financing of A&R will be included in the Climate Bonds Initiative Green Bond Database if the issuer can demonstrate that the A&R use of proceeds does not finance assets or activities that undermine emissions reductions goals. For example, adaptation and resilience projects that lock in fossil fuel technology will not be eligible and may lead to the bond not being included.

8. Pending deals and resolution process



In some cases, the information available on the deal's use of proceeds is insufficient for an immediate decision as to whether the bond should be included or excluded. This is often the case for private deals, but may also occur if, say, documentation is not available in English or is only made available to bondholders or lenders.

Such bonds are marked as "Pending" and further work is undertaken to obtain or clarify information. This investigation process is carried out by contacting the issuer, underwriter, rating agency or the green bond external review provider (if applicable) within 30 days after the bond is identified. Also, Climate Bonds Initiative keeps monitoring further information disclosed to the market. If no further information is made available or the obtained information does not confirm sector alignment in 90 days after the bond is identified, and/or other database requirements are still not met, the bond is added to the sustainability, social or excluded list, as appropriate.

9. Re-classification of a bond



If a green bond is included but the issuer cannot fulfil the criteria at a later date or the proceeds are eventually applied to "non-green" assets, it may be removed from the Climate Bonds Initiative Green Bond Database. Conversely, excluded bonds may be re-classified if satisfactory information is provided or obtained at a later date which confirms sector alignment.

Re-classifications are announced in Climate Bonds' Market Blog, noting the reason for the change of status of the bond. Classification changes are pre-announced to Data Partners, such as index providers.

Change in screening methodology

A change from 'excluded' to 'included' may also occur if we change the methodology to expand the list of acceptable approaches to labelling. For instance, in 2018 we started treating green bond ratings as equivalent to labelling and retroactively included bonds that had been excluded for lack of labelling. Likewise, in 2018 we formally started accepting ABS deals identified as solar, PACE or similar as acceptably labelled.

Updates of this nature are most likely to occur in connection with our annual and semi-annual Green Bond Market Highlights report.

Change in the definition of alignment

Excluded deals may also be included retroactively to reflect the evolution of scientific thinking and internal guidance on asset categories. For instance, historical guidance was to exclude large-scale hydro. However, the new Taxonomy focuses on the power density and GHG footprint of reservoirs. Consequently, some previously excluded deals may be included.

Changes of this type are likely to occur after an update to the Taxonomy and/or the publication of new sector-specific Certification Criteria.

On the other hand, deals will not be retrospectively excluded as Climate Bonds tightens the screening criteria levels used in this methodology.

Changes to the screening criteria will be pre-announced in the Climate Bonds Market Blog.

Annex A: The Climate Bonds Taxonomy

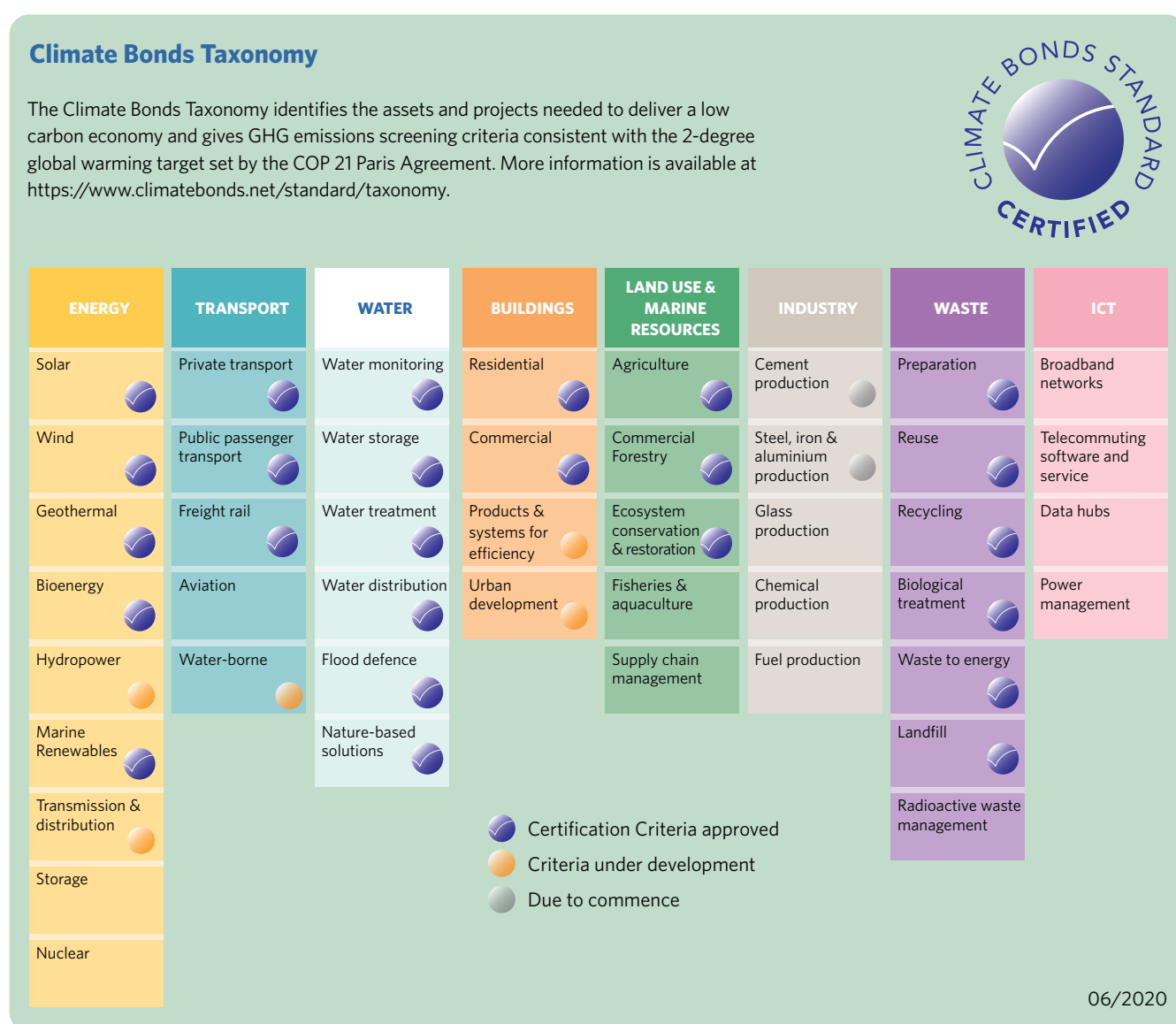
The Climate Bonds Taxonomy provides guidance for prospective green bond and climate bond issuers and investors. The current diagram summarising eligible sectors in the Taxonomy is reproduced below. The underlying Taxonomy document provides two levels of information:

1. broad guidance on eligible sectors and subsectors, and
2. metrics and other indicators designed to help identify assets and projects which are on a trajectory to zero carbon by 2050, i.e. aligned to the Paris Agreement target of limiting global warming to 2°C.

Guided by the Climate Science Advisory Panel, the aim of the Taxonomy is to encourage common definitions across global markets, in a way that supports the growth of a cohesive green bond market.

The chart below summarises the sectors and subsector Climate Bonds Initiative considers 'green'. Notably, what is recognised as eligible under each sector and sub-sector evolves over time as science, technologies and the economics of implementation progress. For the most up-to date version, please check the Climate Bonds website: <https://www.climatebonds.net/standard/taxonomy>.

The diagram also shows for which sectors there are Sector-Specific Certification Criteria, and which are under development. Sector Criteria are developed together with scientific and other technical and industry experts for the purpose of Certification under the Climate Bonds Standard, a labelling scheme for instruments that are 2°C-compliant.



For criteria under development see <https://www.climatebonds.net/standard/available-soon>



For criteria in public consultation see <https://www.climatebonds.net/standard/public-consultation/new>

Annex B: Green definitions for the Climate Bonds Initiative Green Bond Database

Energy



Solar and Wind	<ul style="list-style-type: none"> Offshore solar and wind power generation Onshore photovoltaic and concentrated solar heat & power generation, provided there is not substantial backup generation from fossil fuel sources Onshore wind power generation, provided there is not substantial backup generation from fossil fuel sources Dedicated infrastructure, manufacturing (supply chain), storage and transmission
Geothermal	<ul style="list-style-type: none"> Geothermal electricity (further considerations apply for some countries – see yellow) Dedicated infrastructure, manufacturing (supply chain), storage and transmission
Bioenergy	<ul style="list-style-type: none"> Facilities producing biofuel, biomass, biogas from wood industry by-products, waste or sustainable feed stocks (preferably certified under schemes such as RSB, RTRS, FSC and ISCC Plus or national schemes such as EU RED, UK Renewable Obligation) Power generation facilities, provided biofuel is sourced from sustainable feedstock (excluding timber), for example, biomass power station, heating/cooling facilities, combined heat and power (CHP) and electricity generation facilities (including those with CCS) Dedicated infrastructure, manufacturing (supply chain), storage and transmission
Hydro	<ul style="list-style-type: none"> Power generation facilities without a reservoir (e.g. run-of-river) or built without adding reservoirs, impoundment and pumped-storage facilities Power generation facilities with new reservoirs which have a high power density (preferably >5W/sqm or higher) or low emissions of electricity generated (preferably up to 100gCO₂e/kWh), unless controversial due to loss of habitat/biodiversity and/or displacement of people or with weak social / environmental impact assessment (if publicly available). Dedicated infrastructure, manufacturing (supply chain), storage and transmission
Marine renewables	<ul style="list-style-type: none"> Tidal, wave and other energy generation using ocean thermals, salinity, gradients, etc. Dedicated infrastructure, manufacturing (supply chain), storage and transmission Marine heating and cooling facilities using ocean thermals (assumed to provide reduction in gCO₂e/kWh compared to fossil fuel alternatives)
Transmission, distribution and storage	<ul style="list-style-type: none"> Transmission infrastructure needed to integrate renewable energy or energy efficiency systems and their load-balancing (e.g. overhead transmission lines, conductors, insulators, towers) and infrastructure (e.g. buildings, fences, earth mats, busbars) District heating network fed primarily by renewable energy Products such as smart systems/meters, smart grid, off-grid power units, home storage batteries, supercapacitors, hydro and thermal heat storage, voltage regulation equipment, transformers and switchgear Large scale energy storage facilities, batteries, Capacitors, compressed air and flywheel plants, supercapacitors and related manufacturing
Assets need further review	
Geothermal	<ul style="list-style-type: none"> Geothermal electricity in Turkey, New Zealand, US and Canada, where gas emission levels from extraction typically require further assessment Geothermal heat pump (GHP) technology
Bioenergy	<ul style="list-style-type: none"> Biofuel blending facilities Biomass power stations if GHG emissions are more than 100gCO₂e/kWh Supply chain facilities related to blending facilities

Energy continued	
	
Nuclear	<ul style="list-style-type: none"> Power plants and dedicated supporting infrastructure (excluding uranium mining) but safety and social aspects need to be considered Uranium mining and supporting infrastructure.
Ineligible assets	
Fossil fuels	<ul style="list-style-type: none"> Coal/oil/gas with or without carbon capture and storage (CCS) Coal/oil/gas powered combined heat and power (CHP) Coal/oil/gas mining/extraction, refining, processing and associated supply chain infrastructure
Energy efficiency	<ul style="list-style-type: none"> Efficiency upgrades to GHG-intensive power sources, e.g. so-called "clean coal" Energy savings in fossil fuel extraction activities and anything that helps to extend the life of fossil fuel usage
Transmission	<ul style="list-style-type: none"> District heating fed primarily by non-renewable energy sources
Bioenergy	<ul style="list-style-type: none"> Power generation facilities using timber (except for waste wood) Traditional biomass use, such as a three-stone fire for heating and cooking in the residential sector
Onshore solar & wind	<ul style="list-style-type: none"> Onshore solar generation facilities if more than 15% of the power generation is backed up by fossil fuel sources
Buildings	
	
Buildings and built environment	<ul style="list-style-type: none"> Buildings which are EDGE certified, net zero energy, Passivhaus or Living Building Challenge Certified Commercial, residential and special-purpose public properties (e.g. hospitals, schools) upgrades/retrofits aiming for a substantial energy performance improvements and/or improving emissions performance Buildings meeting well-established, widely used building industry certification schemes such as LEED, Miljöbyggnad, BREEAM, DGNB, China Green Building Label, CASBEE, NABERS), with the lowest level excluded for those that have levels. Properties achieving a substantial further reduction in energy use compared to the baseline requirements under the domestic building regulations/code Properties with EPC ratings of D and above in the EU (where A is the highest and G the lowest rating) and an equivalent level in other locations Assets and urban policies/regulations directed at climate change mitigation such as streetlighting upgrades, passive heating/cooling, car-free areas
Technology, products, systems and manufacturing for building efficiency	<ul style="list-style-type: none"> Products meeting industry certification schemes such as ENERGY STAR Manufacture of energy efficient components (e.g. LED lighting) Systems which increase overall energy efficiency (e.g. district heating) Low-carbon and alternative building materials (e.g. alternatives to cement or concrete) Building, maintaining or upgrading utility tunnels for cables and pipes which improve resource and energy efficiency
Assets need further review	
Buildings and built environment	<ul style="list-style-type: none"> Commercial, residential and special-purpose public properties (e.g. hospitals, schools) upgrades/retrofits not aiming for substantial energy performance improvements, provided there are other targets (e.g. water consumption reduction) and/or properties, previously subject to significant energy and water performance improvements Buildings meeting less well-known or local/regional certification schemes

Buildings continued



	Ineligible assets
Buildings and built environment	<ul style="list-style-type: none"> Buildings meeting only the lowest level of well-established, widely used industry certification schemes with levels (e.g. LEED Certified) Properties with EPC ratings of E and below in the EU (where A is the highest and G the lowest) and an equivalent level in other locations

Transport



Private, public and freight land transport	<ul style="list-style-type: none"> Electric vehicles (EVs), hybrids and hydrogen fuel cell vehicles Bicycle and public walking infrastructure and schemes Passenger trains; urban rail systems such as metro, light rail, cable cars, trams Freight railways and rolling stock, provided <50% fossil fuel transport Public transport buses and coaches, bus rapid transit (BRT) Dedicated infrastructure, energy efficient products (e.g. batteries, charging stations)
Passenger and cargo water transport	<ul style="list-style-type: none"> Electric powered or otherwise low carbon (sustainable biofuel, ammonia, hydrogen) Supporting infrastructure
Passenger and cargo aircraft and aviation	<ul style="list-style-type: none"> Electric powered or otherwise low carbon (sustainable biofuel, hydrogen, solar, etc) Supporting infrastructure
	Assets need further review
Passenger and cargo water transport	<ul style="list-style-type: none"> LNG and biofuel vessels factoring in design and operational energy efficiency improvements, level of GHG and total emission reductions, etc.
Transport logistics	<ul style="list-style-type: none"> Sorting centres, smart freight logistics, intermodal freight facilities, ports and associated facilities such as power from shore, multi-modal logistics hubs.
	Ineligible assets
Private, public and freight land transport	<ul style="list-style-type: none"> ICE and CNG passenger vehicles and supply chain (components) Rail lines/operators when fossil fuels account for more than 50% of freight New roads, bridges and upgrades, parking facilities, fossil fuel filling stations and other assets which prolong the life and/or increase the ease-of-use of ICE transport
Passenger and cargo water transport	<ul style="list-style-type: none"> Oil tankers, LNG carriers and other vessels transporting solely fossil fuels Heavy fuel vessels Support vessels such as jack up rigs, and supply vessels dedicated to the oil and gas industry
Passenger and cargo aircraft and aviation	<ul style="list-style-type: none"> Aircraft using fossil fuel

Water



Water storage and management	<ul style="list-style-type: none"> ▪ Rainwater harvesting systems, aquatic ecosystems (lakes, wetlands), aquifer storage, groundwater recharge systems, water distribution systems, infiltration ponds ▪ Gravity-fed canal systems, hydrological restoration ▪ Water-efficient agricultural irrigation systems and water saving technology
Defences and storm water management	<ul style="list-style-type: none"> ▪ Flood, sea and drought defences including pumping stations, levees, gates, ecological retention systems, snowpack management, wetland storage ▪ Rainwater harvesting, constructed ecological retention ponds, erosion control systems, groundwater recharge, erosion control systems
Water treatment	<ul style="list-style-type: none"> ▪ Water treatment including desalination plants using renewable energy ▪ Water recycling, wastewater treatment, sewage, manure and slurry treatment ▪ Natural filtration systems such as wetlands, watersheds, forests and settling systems
Ecological restoration	<ul style="list-style-type: none"> ▪ Erosion control, hydrological restoration

Waste





Circular economy activities	<ul style="list-style-type: none"> ▪ Recycling of metals, plastics, glass, paper. Facilities for sorting and recovering materials. ▪ Facilities for the re-use of materials (recycled products, refurbishing, repairing, etc) ▪ Anaerobic digestion facilities to produce biogas from green waste. Composting facilities ▪ Waste-to-energy plants for solid waste incineration with energy capture, pyrolysis / gasification, plasma converter, anaerobic digestion outside the EU ▪ Collection of waste where it is specified that the waste is to be recycled
Waste disposal	<ul style="list-style-type: none"> ▪ Adding gas capture to existing, closed landfill facilities
Pollution control	<ul style="list-style-type: none"> ▪ Carbon capture and storage (excluded for fossil fuel energy)
	Assets need further review
Bioplastics and similar	<ul style="list-style-type: none"> ▪ Bioplastics and similar products that use biomaterials as a substitute for fossil fuels, unless these are derived from other waste products (e.g. sawdust, corn husks etc). This includes related production facilities as the concern is that bioplastics divert arable land away from food. ▪ Bioplastic assets /supply chain are only included where these are single polymer (e.g. PET) products that can be easily reused, or are home-compostable, or municipality compostable only where such facilities exist.
Nuclear waste	<ul style="list-style-type: none"> ▪ Radioactive waste disposal and nuclear power plant decommissioning
	Ineligible assets
Waste management	<ul style="list-style-type: none"> ▪ Collection of waste that is going to landfill and where it is not specified if the waste is to be recycled or sent to landfill ▪ Landfill without gas capture or if gas capture is used to extend landfill's life ▪ Waste-to-energy plants for solid waste incineration with energy capture, pyrolysis / gasification, plasma converter, anaerobic digestion in the EU ▪ Waste incineration without energy capture

Land Use and Marine Resources



Agriculture	<ul style="list-style-type: none"> ▪ Sustainable agriculture within the categories of growing non-perennial and perennial crops, animal production, mixed farming, and controlled environment agriculture, that reduces carbon and GHG emissions, increases soil-based carbon sequestration and improves climate resilience ▪ Reduced water and energy use, verifiable reduced fertilizer use ▪ Supply systems for seed production, distribution and access ▪ Storage for agricultural produce ▪ Equipment, intelligent management systems and technology to manage sustainable agriculture
Commercial forestry	<ul style="list-style-type: none"> ▪ Natural forests and forest plantations certified under internationally accepted sustainability standards such as FSC or PEFC for large-scale forestry and otherwise sustainably managed forests for small-scale forestry ▪ Production facilities using energy- and water-efficient pulping processes, biorefineries, use of recyclates ▪ Storage for sustainable forestry produce ▪ Primary processing for FSC, PEFC and other certified forestry produce ▪ Equipment, intelligent management systems and technology to manage sustainable forestry
Natural ecosystems	<ul style="list-style-type: none"> ▪ Natural ecosystem land (managed and unmanaged) ▪ Land remediation, afforestation, re-vegetation that creates habitat appropriate for the location ▪ Reduced emissions from deforestation and degradation (REDD) ▪ Wild fisheries and sustainable fish farms, machinery and equipment to sustainably harvest fisheries as well as related primary processing and storage facilities ▪ Marine reserves and marine conservation ▪ Equipment, intelligent management systems and technology to manage ecosystems
Resilience infrastructure	<ul style="list-style-type: none"> ▪ Dedicated infrastructure for climate resilience including coastal infrastructure
	Assets need further review
Green spaces	<ul style="list-style-type: none"> ▪ Landscaping of recreational parks/gardens, golf courses and similar green spaces are unlikely to be included unless carbon sequestration impact is significant and/or their preservation/creation protects biodiversity ▪ Sustainable drainage systems should be evaluated
Agriculture & forestry	<ul style="list-style-type: none"> ▪ Primary processing for agricultural produce ▪ Primary processing for sustainable forestry produce
	Ineligible assets
Agriculture & forestry	<ul style="list-style-type: none"> ▪ All agricultural production and commercial forestry on peatland ▪ Timber harvesting except for certified and otherwise sustainably managed forests

Industry 	
Energy-efficient products and processes	<ul style="list-style-type: none"> Facilities and equipment dedicated to manufacturing energy-efficient components, such as motors and automation systems Facilities and equipment dedicated to manufacturing energy-efficient products, such as household appliances and equipment (particularly white goods) Eco-efficiency improvements/cleaner production, e.g. related to cement (e.g. reduced clinker content), iron, steel, chemicals and glass production Related supply chain manufacturing facilities
Non-energy GHG reductions	<ul style="list-style-type: none"> Carbon scrubbers Carbon capture and storage products (except for fossil fuel power generation)
	Assets need further review
Heavy industry	<ul style="list-style-type: none"> Manufacture of steel, aluminium, cement, chemicals, etc
Non-heavy industry	<ul style="list-style-type: none"> Manufacturing and processing of other commodities and goods
	Ineligible assets
Energy-efficient products and processes	<ul style="list-style-type: none"> Facilities and equipment dedicated to manufacturing polystyrene and other non-recyclable plastics
Information and Communications Technology (ICT) 	
Broadband networks, IT solutions	<ul style="list-style-type: none"> Teleconferencing, telecommuting software and services Fibre optic and cable networks and exchanges Renewable energy-powered data centres or with low to zero energy usage for cooling
Power management	<ul style="list-style-type: none"> Dedicated infrastructure, software and hardware for remote and in situ power management, such as load balancing, energy monitoring and automatic switching off power systems
	Assets need further review
Broadband networks, IT solutions	<ul style="list-style-type: none"> Data centres not powered by renewable energy or not cooled naturally and related hardware and supply chain manufacturing facilities
	Ineligible assets
ODS refrigerant based cooling systems	<ul style="list-style-type: none"> ICT facilities that use ODS (Ozone depleting chemicals)

Annex C: The Climate Bonds Standard and Certification Scheme

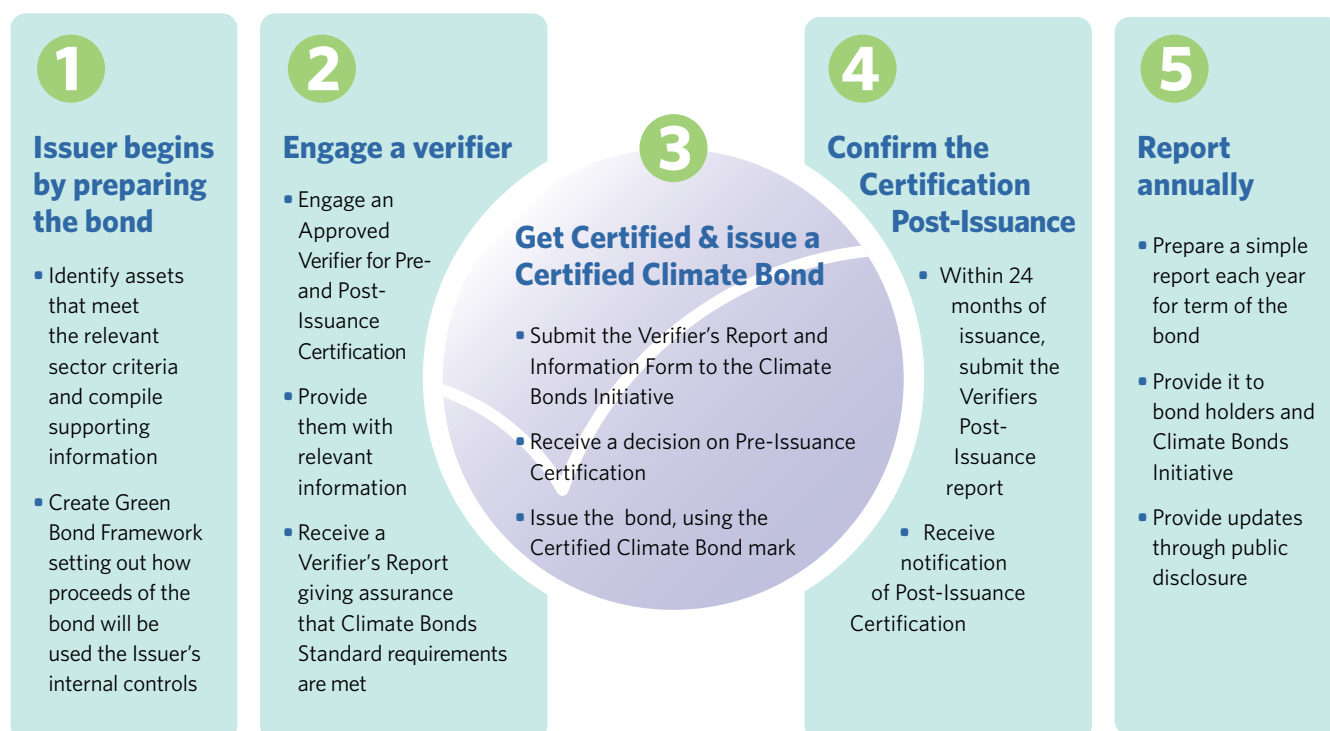
The Climate Bonds Standard and Certification Scheme is a labelling scheme. The scheme is used globally by bond issuers, governments, investors and the financial markets to prioritise investments which genuinely contribute to addressing climate change.

Rigorous scientific criteria ensure that it is consistent with the 2°C warming limit set in the Paris Agreement. Sector Criteria are developed by dedicated working groups of technical and industry experts, coordinated by the Climate Bonds Standards team. The certification scheme and criteria development is overseen by a Climate Bonds Standard Board representing institutional investors and environmental NGOs. The Standard Board reports to the Governors of the Climate Bonds Initiative.

Up-to-date information on the criteria available for Certification and in development is provided at: <https://www.climatebonds.net/standard/sector-criteria>

Certification requires that issuers identify eligible assets and projects, collate relevant metrics to determine that these are on a trajectory to decarbonisation by 2050, and obtain a verification by a third party to this effect. On an annual basis, they are required to reconfirm compliance through post-issuance verification.

The infographic below summarises the Certification process and disclosure requirements.



Annex D: Eligible projects and assets under the Climate Bonds Standard

Eligible assets and projects under Climate Bonds Standard version 3.0 (NEW, BEING PHASED IN)

ELIGIBLE PROJECTS & ASSETS: Parts or collections of the following (given alignment with definitions above):

1. Physical assets or projects owned by the Issuer, and/or
2. Debt or other financing arrangements provided by the Issuer to finance projects or physical assets, and/or
3. Related and supporting expenditures for projects or physical assets, where the projects or physical assets meet the relevant Sector Eligibility Criteria provided in the Climate Bonds Standard.

Physical assets or projects include:

- Physical assets: existing and operational equipment, machinery, infrastructure, buildings or land
- Projects: equipment, machinery, infrastructure and/or buildings in construction, redevelopment, (upgrades, expansion) and similar asset value creation or enhancement activities.

Debt or other financing arrangements provided to finance projects or physical assets, including:

- Capital expenditure undertaken to increase the value and/or lifetime of the physical assets or projects
- Acquisition costs/purchase price for an entity (company, division or similar) which holds physical assets or projects or share thereof which approximately corresponds to the Market Value of the physical asset or projects holdings
- Leasing structures resulting in Right of Use assets and liabilities and long leaseholds on land, buildings and infrastructure
- Loans and mortgages
- Subsidies, tax and other incentives, credit schemes and grants, and other similar arrangements provided by public entities or agencies, including local and national governments.

Related and supporting expenditures include:

- Relevant installation and routine maintenance expenditure and upgrades undertaken to maintain the value and/or lifetime of the asset
- Relevant performance monitoring costs with respect to tracking climate credentials (e.g. GHG emissions) and climate information services (e.g. satellite monitoring and emissions testing)
- Relevant research and development, training and programme implementation costs and expenditures, where there is a definable future asset, product and/or process that can be linked to climate benefits under the relevant Sector Criteria.

Nominated Projects & Assets: Eligible Projects & Assets that are associated with the bond, loan or other debt instrument. These projects or physical assets may be existing, under construction, or yet to be deployed.

Climate Bonds Initiative Market Intelligence Team

For data partnership enquiry please contact:

partnerships@climatebonds.net

Design: **Godfrey Design**

© Published by Climate Bonds Initiative, October 2020

www.climatebonds.net



Prepared by Climate Bonds Initiative.

Disclaimer: The information contained in this communication does not constitute investment advice in any form and the Climate Bonds Initiative is not an investment adviser. Any reference to a financial organisation or debt instrument or investment product is for information purposes only. Links to external websites are for information purposes only. The Climate Bonds Initiative accepts no responsibility for content on external websites. The Climate Bonds Initiative is not endorsing, recommending or advising on the financial merits or otherwise of any debt instrument or investment product and no information within this communication should be taken as such, nor should any information in this communication be relied upon in making any investment decision. Certification under the Climate Bond Standard only reflects the climate attributes of the use of proceeds of a designated debt instrument. It does not reflect the credit worthiness of the designated debt instrument, nor its compliance with national or international laws. A decision to invest in anything is solely yours. The Climate Bonds Initiative accepts no liability of any kind, for any investment an individual or organisation makes, nor for any investment made by third parties on behalf of an individual or organisation, based in whole or in part on any information contained within this, or any other Climate Bonds Initiative public communication.