

# Framework for CICERO’s ‘Second Opinions’ on Green Bond Investments

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## Introduction and principles

### What is a green bond?

A green bond is a fixed-income financial instrument issued with the aim of financing climate or environmentally friendly projects. A fixed-income instrument is a debt instrument where the issuer is obliged to pay back the money on a schedule according to the terms of the bond. This is for instance opposed to variable-income instruments like equities (e.g. shares). Green bonds can be issued by governments, multinational banks or corporations. The issuer agrees to repay the bond plus a rate of return over a certain period.

Among environmental issues, climate change is dominant for its long term and global character. A prerequisite of green bonds is therefore that they should contribute to a low carbon and climate resilient future through financing mitigation and adaptation actions. In addition, green bonds should mitigate negative environmental impacts, such as local and regional air, water and soil pollution.

### What is a second opinion?

A second opinion is an independent, environmental quality check of the issuer's framework for selecting projects and investments for green bond funding. Second opinions produced by specialised environmental research institutions, with no economic interests in the outcome of the investments, increase the integrity and contribute to building confidence among investors in green bonds. Depending on the level of detail and scope of the green bond framework, second opinions can provide a bottom-up evaluation with significant technical detail, or a 'top-down' perspective focusing on the framework for selecting eligible projects. To date, most second opinions are top-down in nature, providing a review of the green bond framework at the time of issuance. A second opinion does not verify against *ex poste* climate or environmental impacts.

### CICERO's involvement and motivations

CICERO, as an interdisciplinary climate research institute, wants to put its knowledge and competence on climate change at the service of financial markets. Any meaningful effort to meet the climate change challenge will necessarily include an important financial element. The bond market has a volume that can make it into an important contributor to a 'climate solution'.

To date, we are a world-leading provider of so-called second opinions on green bonds. These are independent reviews and assessments of the rules, regulations and guidelines used by the issuer, with the aim of ensuring the climate and environmental integrity of the green bonds. CICERO considers the overarching framework for project selection, but does not validate or certify the environmental impacts of specific projects.

CICERO has established a global network of independent climate research institutes to increase its regional knowledge. Consisting of five reputable experts from across the globe – CICERO, the Basque Centre for Climate Change (BC3) in Spain, Sweden's Stockholm Environment Institute, China's Institute of Energy, Environment and Economy at Tsinghua University and Canada's International Institute for Sustainable Development (IISD), the ENSO network uses CICERO's methodology for second opinions. The ENSO network is the only research-based second opinion provider (see page 8).

## **CICERO Shades of Green approach**

CICERO applies a simple approach that nudges the bond market in a greener direction and improves transparency without creating undue transaction costs on the financial sector. We put emphasis on avoiding lock-ins of carbon emissions and long-term irreversible damage to the climate, in order to safeguard the climate and environment for future generations. We also try to lower or remove barriers to green investments by requesting clear and concise environmental information from the issuers.

Since March 2015, CICERO has applied the Shades of Green methodology. This methodology emerged from many years of experience in providing second opinions. We delivered our first second opinion in 2008, when the World Bank issued the first green bond.

Using three shades of green to classify our second opinions, our methodology is easy to understand for investors and enables them to compare our second opinions (for further detail see page 6). Our aim is to increase transparency on climate risks related to investment decisions in a long-term perspective. We understand climate risks as physical impacts from climate change, changes in policies and regulations (such as carbon price), and other non-physical aspects such as transformational, reputational and liability risks.

Our shading represents an overall, qualitative assessment of how well the issuers' green bond framework supports the transition to a low-carbon and climate-resilient society. We both assess the climate and environmental ambitions of the projects supported by the green bond and the robustness of the governance structure of the green bond framework.

As we formulate our second opinions, we work confidentially with issuers to improve the 'greenness' of their investment frameworks in various ways. This process is an important part of our work on second opinions, as it raises the environmental awareness in the issuing institutions. Our experience is that issuers appreciate this service as value added to the second opinion itself.

## **Relationship to other green bond market developments**

The Green Bond Principles (GBPs), developed by a consortium of investment banks, provide useful, general voluntary guidance to issuers of green bonds. The GBPs include guidelines for information provision on sustainable investments, but do not provide details on the definition of 'green'. The GBPs also note that external expert reviews like second party opinions improve the integrity of information, however stopping short of requiring external environmental reviews.

The Climate Bonds Initiative (CBI), an environmental non-governmental organisation, has also played an important role in promoting the green bond market by developing a standard and establishing working groups with a variety of stakeholders, including industry and environmental watchdogs, to improve definitions and classification of green bonds.

CICERO's second opinions go further than the GBPs and differ from the CBI approach in several ways:

1. CICERO researchers review green bond frameworks beginning with the GBPs as loose guidance, but pushing much deeper on the definition of 'green' to reveal potential climate and environmental risks.

2. CICERO takes a dynamic approach, without fixed definitions, developing as science and the market evolves. Each green bond framework is reviewed in a tailored manner, with respect to its specific context and issuer. We cooperate with issuers to enhance transparency on climate risks and avoid the most environment-damaging investments.
3. CICERO is an independent research institution and our second opinions are issued independently of other stakeholders' influence. This integrity has been valued by the market.

Other initiatives and frameworks exist for environmental integrity in the green bond market, such as those developed by Ceres, Bloomberg, FTSE, Moody's, FSB, S&P, etc. Other second opinion providers in the market such as Oekom and Vigeo, have developed their own methods.

We are closely following other initiatives to regulate the green bond market and are looking for ways to collaborate with other initiatives, without compromising our flexible, independent and researched based and non-profit approach.

## Framework for second opinions

### How do we conduct a second opinion?

When an issuer orders a CICERO second opinion, CICERO requests documentation on the green bond framework and related environmental documents. These documents can include sustainability or environmental policies and regulations as well as reporting and measurement procedures and methods. CICERO reviews this information confidentially, and clarifies any areas that are unclear with the issuer. At the end of the process, CICERO issues a short report to share with investors that highlights the strengths and weaknesses of the green bond framework from a climate and environmental perspective.

### What is included in a second opinion?

So far, second opinions have focused on low-carbon and climate-resilient development, including some other environmental aspects. One could also include dimensions of social responsibility', such as ethical aspects, conditions for workers, local economic impacts, sustainable development, resource efficiency, environmental impacts, impacts on biodiversity, and mitigation of other greenhouse gases. Since the full environmental and social governance (ESG) perspective has so far not been included in most of the labelled green bonds, this has also remained beyond the scope of our second opinions. The paragraphs below detail what is included in CICERO Second Opinions.

### Standard structure and approach to a second opinion report

The standard outline of a second opinion consists of the following sections and components:

- Summary and recommendations, including an overall shading (a concise overview for investors)
- Introduction and background (aim and approach of the second opinion)
- Disclaimer (CICERO is not liable for specific project validation)
- A brief description of green bond framework and a list of documents
- Assessment of framework in terms of
  - Strengths

- Weaknesses, and
- Pitfalls (areas where issuer should be aware of potential challenges)
- References

The second opinions review the selection criteria for project categories that can be included in a green bond. We check how well the project categories meet the environmental objectives of the bond, and assess in particular the climate risks. CICERO does not review each project for investment, but assesses possible project categories for investment.

Firstly, we consider which sectors and technologies are included and whether these contribute to reducing greenhouse gas emissions. Typical examples are energy technologies with improved energy efficiency or using a higher share of renewable energy sources. Other examples include waste treatment and recycling, transportation infrastructure, sustainable buildings, and water management. We also analyse whether these project categories are climate-resilient, i.e. adapted to expected climate change and extreme weather.

Next, we check whether the framework includes minimum requirements, for example in terms of energy savings compared to an initial situation or an existing standard. If a framework includes specific criteria to measure, monitor and verify performance, this is beneficial for both investors and issuers of green bonds.

We also consider weaknesses in a green bond framework, i.e. whether sectors or technologies have an uncertain long-term effect on greenhouse gas emissions, especially when considering possible 'lock-in' effects and life-cycle perspectives. One example of a weak project category are investments in increased efficiency of fossil fuel based energy production, e.g. coal-fired power. Whereas this might reduce emissions in the short term, it might contribute to a lock-in of carbon emissions in the long term. Another example of a potential weak point in a framework are nuclear power projects, not because of climate change concerns, but due to safety and waste challenges (from the issuers' perspective, there may also be concerns about social acceptance). There may be circumstances where weaker project types with respect to the environment are an appropriate choice given regional circumstances, but all cleaner possibilities for investment will need to be explored thoroughly.

## Reporting and disclosure

Procedures for reporting and disclosure of green bond investments are vital to build confidence that green bonds are contributing towards a sustainable and climate-friendly future, both among investors and in society. Therefore, second opinions emphasize reporting procedures.

CICERO is concerned that information about green bond procedures and investments is both transparent and accessible to investors and the public. Second opinions, as explained above, increase transparency. In addition we recommend issuers to make information on their green bonds, including second opinions, easily and publicly available for investors and other interested parties, for example on their website. For issuers with the means available, we encourage impact reporting.

## Boundary of assessments

CICERO Second Opinions also consider potential impacts of green bond investments beyond the specific projects, the so-called macro impacts of investments.

For instance, an investment might alter transportation patterns of travellers, customers or tenants, thus influencing the environmental impact of a project. Supply chains to construction sites can also have much wider environmental and climate impacts.

Rebound effects represent another category of macro impacts. For example, improved energy efficiency of a dwelling and lower energy costs may induce tenants to increase the indoor temperature, partly offsetting the initial anticipated energy and carbon dioxide savings. While one could argue that these issues should rather be tackled through carbon pricing, it is important that issuers are aware of these potential rebound effects and seek to minimize them. In some cases, issuers may be able to mitigate this effect: e.g. building owners or developers could encourage tenants to use clean energy.

Even though drawing the line which impacts are relevant for a project is not straightforward, CICERO intends that issuers should at least be aware of potential negative macro-impacts and aim to minimize them.

### CICERO's Shades of Green

CICERO assesses how well the issuers' green bond framework supports the transition to a low-carbon and climate-resilient society. CICERO Second Opinions allocate three different shades of green to a green bond framework:

- Dark green for projects that today already apply the low carbon and climate-resilient solutions of the future;
- Medium green for projects and solutions that represent steps towards the long-term vision, but are not quite there yet; and
- Light green for projects and solutions that are environmentally friendly but do not by themselves contribute to the long-term vision.

The Shades of Green are applied for each of the project types in the framework, and then an overall shading for the green bond is given, based on the project types as well as the governance and transparency. The table below gives some example considerations for typical project types:

Project category		Cautions and considerations
Mitigation	Energy generation	<ul style="list-style-type: none"> <li>• Minimize environmental impacts of large hydro</li> <li>• Minimize lifecycle emissions for biofuels</li> <li>• No fossil fuel investment</li> </ul>
	Energy efficiency including buildings	<ul style="list-style-type: none"> <li>• Avoid extended lifetimes of fossil fuel plants</li> <li>• Achieve highest certification levels and supplement with land-use and other climate considerations</li> <li>• Consider rebound effects</li> </ul>
	Agriculture and forestry	<ul style="list-style-type: none"> <li>• Consider trade-offs with biomass energy, carbon storage, and biodiversity</li> </ul>
	Waste	<ul style="list-style-type: none"> <li>• Consider recycling and overall waste management</li> </ul>
	Transport	<ul style="list-style-type: none"> <li>• Consider fuel type and competition with other modes</li> </ul>
Adaptation	Flood protection	<ul style="list-style-type: none"> <li>• Adaptation measures should be considered together with mitigation measures (e.g. impacts of water security on hydro power)</li> </ul>
	Flood security	
	Sustainable forest management	

The **dark green** shading applies the 2050 perspective today. It is typically allocated to zero-emission solutions, such as renewable energy investments (e.g. solar, wind, and hydro). CICERO strives to avoid fossil fuel elements, and locking-in of greenhouse gas emissions in infrastructure investments. The longer time perspective, the more sustainable solutions will be required. This implies it is more difficult to achieve a dark green shading for investment with a long time horizon (such as new buildings and major renovation projects). For buildings, it is expected that energy efficiency will greatly improve by 2050, thanks to retrofitting of existing buildings and passive housing standards. For building projects to get a dark green shading they need to have such low carbon 2050 perspective already today. In the waste sector, incineration with energy recovery is a sound environment- and climate-friendly option to reduce landfilling. To be graded dark green, waste incineration should be combined with ambitious recycling policies, e.g. turning fossil fuel waste such as plastics into new materials.

**Medium green** is allocated to bridging solutions towards the long-term vision, for example investments in sustainable buildings with good but not the best energy efficiency ratings. Assessing sustainability in the transport sector is not straightforward. The largest amount of carbon savings come from switching from inefficient modes of transport (e.g. private cars) to public transport. However, improvements in environmental performance depend on the fuel type and efficiency. Public transport projects that use fossil fuels like hybrid buses are typically shaded medium green.

**Light green** is allocated to projects and solutions that are environmentally friendly but have no place in a low-carbon society, for example, energy efficiency investments in fossil fuel-based processes.

We also consider the issuer's broader climate and environmental policies (goals) and achievements to understand the context of the green bond framework. An issuer that has adopted strong climate and environmental policies (including approaches on how to deal with climate risks) and implemented these broadly in the organisation (e.g. including policies for subcontractors), has better chances to receive a dark green shading. The environmental goals and policies (including internal environmental goals) are directly relevant for the shading when a green bond supports general purposes of a green businesses rather than specific projects.

In addition, governance factors in for the shading. We look at how climate and environmental expertise is involved in the selection of eligible projects. Who has the final word in the selection process? A dark green shading indicates procedures that give climate and environmental experts within the organisation a right to veto projects. An issuer that uses lifecycle analysis and considers rebound effects in their project screening is more likely to get a dark green shading for its green bond framework.

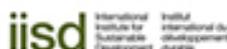
The overall shading also depends on considerations of transparency, reporting and verification of impacts. These issues are key to enable investors to follow the implementation of green bond programs. A list of all financed projects should be publicly available. Impact reporting gives important information about the economic risk from climate change and the environmental effectiveness of the projects. If case of doubt about the shading, good procedures for impact reporting could secure a dark green shading.

## Further development of second opinions

In order to increase investor confidence, frameworks and procedures for green bonds should become more similar and transparent. This would help the further development and branding of green bonds as a well-specified financial instrument, reduce transaction costs and facilitate comparison and evaluation across issuers, projects, sectors and technologies.

## Scaling-Up: Expert Network on Second Opinions (ENSO)

To meet the changing green bonds market, CICERO cooperates with other researchers with supplemental expertise in other environmental issues and regional and language capabilities. Led by CICERO, the Network includes four other independent, non-profit research institutions and reputable experts on climate change and other environmental issues, with a global reach:



ENSO offers a one-stop window for high-quality second opinions to the financial market, providing clear and concise environmental information to investors. ENSO members support the aim of shifting the bond market towards more climate-friendly and greener investments and improved transparency, without creating undue transaction costs on the financial sector. The partners emphasize avoiding lock-ins of carbon emissions in infrastructure and long-term irreversible damage to the climate.

ENSO works confidentially with issuers to improve the ‘greenness’ of their investment frameworks, building on the trusted CICERO approach to second opinions. The network operates independently from the financial sector and other stakeholders to preserve the unbiased nature and high quality of second opinions.