

'Second Opinion' on Södra Skogsägarna's Green Bond Framework

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Summary

Overall, the Södra Skogsägarna Green Bond Framework provides a detailed and sound framework for climate-friendly investments. The Green Bond Framework lists eligible projects that are supportive of the objective of promoting a transition to low-carbon and climate-resilient growth and is supported by a strong governance structure.

Södra Skogsägarna possess a strong suite of environmental and sustainability policies which ensures that the balance of wood production with the protection of forest health, ecosystem functioning and habitats of biota. CICERO believes it is positive that individuals with environmental and sustainability expertise are involved in the project selection process and that they possess a veto within the decision-making context of the Green Bond Framework. Södra Skogsägarna's Green Bond Framework explicitly states that nuclear or fossil fuel projects are not eligible for green bond financing and is in line with our long-term view on how to mitigate climate change.

CICERO is encouraged to see that Södra Skogsägarna includes annual investor reporting in the Green Bond Framework. The annual investor newsletter will include a list of projects financed, a selection of project examples with impact reporting and a summary of Södra Skogsägarna's Green Bond development. Impact reporting is an important tool to enhance transparency concerning the projects economic risk from climate change and the environmental effectiveness of the projects. Södra Skogsägarna's Green Bonds can be used to finance new projects but also refinance projects.

Based on an overall assessment of the activities that will be financed by the green bond, Södra Skogsägarna's Green Bond framework gets the Dark Green shading. We do note that there may be negative impacts of bio-energy production on biodiversity and soil fertility.

1. Introduction and Background

As an independent, not-for-profit, research institute, CICERO (Center for International Climate and Environmental Research - Oslo) provides Second Opinions on institutions' framework and guidance for assessing and selecting eligible projects for green bond investments, and assesses the framework's robustness in meeting the institutions' environmental objectives. The Second Opinion is based on documentation of rules and frameworks provided by the institutions themselves (the client) and information gathered during meetings, teleconferences and e-mail correspondence with the client.

CICERO has established the global Expert Network on Second Opinions (ENSO), a network of independent non-profit research institutions on climate change and other environmental issues, to broaden the technical expertise and regional experience for Second Opinions. CICERO works confidentially with other members in the network to enhance the links to climate and environmental science, building upon the CICERO model for Second Opinions. In addition to CICERO, ENSO members currently include Basque Center for Climate Change (BC3), International Institute for Sustainable Development (IISD), Stockholm Environment Institute (SEI), and Tsinghua University's Institute of Energy, Environment and Economy. A more detailed description of CICERO can be found at the end of this report.

CICERO's Second Opinions are normally restricted to an evaluation of the mechanisms or framework for selecting eligible projects at a general level. CICERO does not validate or certify the climate effects of single

projects, and thus, has no conflict of interest in regard to single projects. CICERO is neither responsible for how the framework or mechanisms are implemented and followed up by the institutions, nor the outcome of investments in eligible projects.

This note provides a Second Opinion of Södra Skogsägarna's Green Bonds Framework and policies for considering the environmental impacts of their projects. The aim is to assess the Södra Skogsägarna's Green Bonds Framework as to its ability to support stated objective of promoting the transition to low-carbon and climate resilient growth.

CICERO takes a long-term view on activities that support a low-carbon climate resilient society. In some cases, activities or technologies that reduce near-term emissions result in net emissions or prolonged use of high-emitting infrastructure in the long-run. CICERO strives to avoid locking-in of emissions through careful infrastructure investments, and moving towards low- or zero-emitting infrastructure in the long run. Proceeds from green bonds may be used for financing, including refinancing, new or existing green projects as defined under the mechanisms or framework. CICERO assesses in this Second Opinion the likeliness that the issuer's categories of projects will meet expectations for a low carbon and climate resilient future.

Expressing concerns with 'shades of green'

CICERO Second Opinions are graded dark green, medium green or light green, reflecting the climate and environmental ambitions of the bonds and the robustness of the governance structure of the Green Bond Framework. The grading is based on a broad qualitative assessment of each project type, according to what extent it contributes to building a low-carbon and climate resilient society.

This Second Opinion will allocate a 'shade of green' to the green bond framework of Södra Skogsägarna:

- Dark green for projects and solutions that are realizations today of the long-term vision of a low carbon and climate resilient future. Typically this will entail zero emission solutions and governance structures that integrate environmental concerns into all activities.
- Medium green for projects and solutions that represent steps towards the long-term vision, but are not quite there yet.
- Light green for projects and solutions that are environmentally friendly but do not by themselves represent or is part of the long-term vision (e.g. energy efficiency in fossil based processes).
- Brown for projects that are irrelevant or in opposition to the long-term vision of a low carbon and climate resilient future.

The project types that will be financed by the green bond primarily define the overall grading. However, governance and transparency considerations also factor in, as they can give an indication whether the institution that issues the green bond will be able to fulfil the climate and environmental ambitions of the investment framework.

2. Brief Description of Södra Skogsägarna's Green Bond Framework and Rules and Procedures for Climate-Related Activities

Södra Skogsägarna, trading as Södra, is an economic association of 50 000 forest owners located in Southern Sweden. Södra is based in Växjö, Sweden and possesses 3 600 employees in various areas such as forestry management, environmental conservation, accounting, sales and product development. The Group is organised into three business areas namely Södra Skog (timber raw products, forestry services), Södra Wood (wood products and interior wood products) and Södra Cell (paper pulp). The business activities of Södra are locally based in 19 geographic forestry operations and 36 forestry districts.

According to Södra's Annual Report, Sustainability is the "fundamental change parameter" in Södra's Group strategy until 2020. The strategic focus areas are a climate-positive business, sustainable forestry, resource efficiency, responsible employer and engaged employees, responsible business and sustainable innovation. These strategic focus areas were formulated in consultation with prioritized stakeholders.

Green Bond eligible projects include both mitigation and adaptation projects. Furthermore, to a smaller extent (max 20%), projects which are related to environmental preservation rather than directly to climate change will also be eligible under the framework. Eligible project types are determined in consensus between the finance department and the sustainability department.

To enable investors to follow the development and provide insight to prioritised areas, Södra will provide an annual investor letter to investors that includes a list of projects financed, a selection of project examples with impact reporting and a summary of Södra's Green Bond development. This investor letter and the opinion of the internal auditor will be made publically available on Södra's web page.

Södra Skogsägarna's Green Bonds can be used to finance new projects but also refinance eligible projects in accordance to the Green Bond Framework. The ambition is however to use the majority of the Green Bond proceeds to finance new projects.

The table below lists the documents that formed the basis for this Second Opinion:

Table 1: Documents Reviewed

Document Number	Document Name	Description
1	Södra Skogsägarna Green Bonds Framework	Description of Södra Skogsägarna Green Bonds Framework
2	Årsredovisning	Södra Skogsägarna's Annual Report summarizing management, sustainability, financial and corporate governance information for 2015.
3	Hållbarhetspolicy	Södra Skogsägarna's Sustainability Policy illuminates on how sustainability is integrated into the business model and operations. The policy also illuminates on Södra's future sustainability ambitions related to employee expectations, business ethics and environmental responsibility.
4	Uppförandekod	Södra Skogsägarna Conduct Guidelines.
5	Leverantörskod	Södra Skogsägarna's Supply Code elaborates on the policies, guidelines and principles regarding business, work conditions and the environment that need to be met by those supplying Södra with goods and services.
6	Naturvårdspolicy	Södra Skogsägarna's Environmental Protection Policy elaborates on guidelines and procedures related to air pollution, timber from protected forests, imported woods, environmentally friendly products and others.
7	ISO 14001	ISO is an independent, non-governmental international organization which develops market based international

		<p>standards. ISO 14001:2015 sets out the criteria for an environmental management system and can be certified. Södra Skogsägarna's has the following ISO 14001 certifications:</p> <ul style="list-style-type: none"> – Manufacture and sale of sawn and processed wood products and by-products; – Manufacturing and sales of customized wooden products for residential and commercial purposes; – Manufacture and sale of customized wood for homes and public spaces; – Purchases, sales and terminal handling of biofuels and the production and sales of peat; – Purchase, transfer and import of timber, forestry services, logging, transportation, nursery operations and port operations; – Development and production of bleached kraft pulp; and, – Development and Production of bleached sulfate pulp.
8	ISO 9001	ISO 9001:2015 specifies requirements for a quality management system.
9	ISO 50001	<p>ISO 50001:2011 specifies requirements for establishing, implementing, maintaining and improving an energy management system. Södra Skogsägarna's has the following ISO 50001 certifications:</p> <ul style="list-style-type: none"> – Development and production of bleached kraft pulp; and, – Manufacture and sale of sawn and processed wood products and by-products.
10	OHSAS 18001 Certifications	The OHSAS 18001 outlines the minimum requirements for occupational health and safety management best practice.
11	FSC and PEFC Certifications	The PEFC and FSC certification are standards that aims to ensure that forestry and forestry-related products come from well-managed forests that provide environmental, social and economic benefits.
12	CE-märkning	Södra Skogsägarna's possesses the mandatory markings required for certain productions sold within the European Economic Area.
13	<p>Building Standards</p> <ul style="list-style-type: none"> – Miljöbyggnad; – GreenBuilding; – BREEAM; – LEED; and, – Ü-merke. 	Various building standards used by Södra Skogsägarna for buildings and for production of building materials.
14	<p>Other environmental standards</p> <ul style="list-style-type: none"> – Miljövarudeklarationer; – F4 star; – Nature plus; – Byggsvarubedömningen och 	Various environmental standards used by Södra Skogsägarna for production of building materials.

	Byggvarudeklaration; – SundaHus; – European Timber Regulation (EUTR); – Registration, evaluation, authorisation and restriction of chemicals (REACH); – Möbelfakta; and – BASTA.	
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3. Assessment of Södra Skogsägarna’s Green Bond framework and environmental policies

Overall, the Södra Skogsägarna green bond framework provides a detailed and sound framework for climate-friendly investments. The framework and procedures for Södra Skogsägarna’s green bond investments are assessed and their strengths and weaknesses are discussed in this section. The strengths of an investment framework with respect to environmental impact are areas where it clearly supports low-carbon projects, whereas the weaknesses are typically areas that are unclear or too general. Pitfalls are also raised in this section to note areas where issuers should be aware of potential macro-level impacts of investment projects.

Eligible projects under the Green Bond Framework

At the basic level, the selection of eligible project categories is the primary mechanism to ensure that projects deliver environmental benefits. Through selection of project categories with clear environmental benefits, green bonds aim to provide certainty to investors that their investments deliver environmental returns as well as financial returns.

Table 2 Eligible project categories

Category	Eligible project types	Green Shading and some concerns ¹
Energy Efficiency	<ul style="list-style-type: none"> • Investments leading to substantial energy efficiency improvements in production; • Investments in clean technology production facilities; • R&D in clean technology; and, • Fuel switching. 	Dark Green <ul style="list-style-type: none"> ✓ Södra plans to double energy production to 700 million kWh, which will increase the share of bio-energy to the grid and allow less heat to be produced. ✓ Even though only 1.2% of Södra’s fuels are fossil-derived, fuel switching has been included should Södra acquire any other companies. Moreover, fuel switching has been included should it be possible to shift from fossil fuels to wood in the

¹ Note: An investment category that includes projects and solutions that are realizations today of the long-term vision of a low carbon and climate resilient future are dark green. Typically this will entail zero emission solutions and governance structures that integrate environmental concerns into all activities. Medium green covers projects and solutions that represent steps towards the long-term vision, but are not quite there yet. Projects and solutions that are environmentally friendly but do not by themselves represent or is part of the long-term vision (e.g. energy efficiency in fossil based processes) are graded light green.

		<p>future.</p> <ul style="list-style-type: none"> ✓ Be aware of rebound effects and potential lock-in of obsolete technologies.
Renewable Energy	<ul style="list-style-type: none"> • Supply of certified forest waste for biomass energy production • Bio-energy production for own operations 	<p>Dark Green</p> <ul style="list-style-type: none"> ✓ Certified forest waste is supplied to others for biomass energy production, while some forest waste is retained by Södra for their own bio-energy production. ✓ The use of forest waste as a feedstock for bio-energy is notable and negates any impacts on food security and crop production; ✓ Potential negative impacts to biodiversity and soil fertility; ✓ Potential lifecycle emissions.
Sustainable Forestry	<ul style="list-style-type: none"> • FSC or PEFC certified forestry production 	<p>Dark Green</p> <ul style="list-style-type: none"> ✓ This includes the production of raw timber products, wood products and paper pulp. ✓ Afforestation and reforestation will ensure enhanced carbon sequestration and storage; ✓ FSC and PEFC are the most recognized standards for forest products.
Sustainable Transportation	<ul style="list-style-type: none"> • Investments in transportation/logistics solutions with renewable fuels. 	<p>Dark Green</p> <ul style="list-style-type: none"> ✓ Transportation accounts for 71% of Södra's GHG emissions. Considering that trucks mostly deliver raw materials, the inclusion of transportation with renewable fuels could substantially reduce Södra's carbon footprint. ✓ It is positive to see that only transportation solutions using renewable fuels such as hydrated vegetable oil will be considered.
Waste Management	<ul style="list-style-type: none"> • Recycling and re-use, rehabilitation of contaminated areas 	<p>Dark Green</p> <ul style="list-style-type: none"> ✓ Certain forest wastes cannot be used in the bio-energy production: It is important that this waste (such as "vedaskor") be brought back to the forest, to avoid lifecycle emissions. ✓ It is positive that certified waste is recycled internally as well.
Water	<ul style="list-style-type: none"> • Water and wastewater management 	<p>Dark Green</p> <ul style="list-style-type: none"> ✓ Wastewater initiatives can help

Management		<p>separate harmful contaminants such as sulfates from wastewater, which reduces the effects of discarded grey water on the environment.</p> <p>✓ Water and wastewater management is important given climate change scenarios and higher frequency of extreme weather conditions exacerbating water risk.</p>
Sustainable Buildings	<ul style="list-style-type: none"> • Certified new commercial properties with an energy use that is at least 25% below the level required by applicable codes and regulations and with certification of at least: <ul style="list-style-type: none"> a) Miljöbyggnad Silver b) Svanen c) LEED gold d) BREEAM very good • Major renovation of commercial properties leading to an energy efficiency improvement of at least 35%. 	<p>Medium Green</p> <p>✓ There is no mention of adaptation measures, which is integral to long term sustainable development and climate change resilience.</p> <p>✓ It is positive to see additional energy efficiency criteria to ensure environmental integrity of projects.</p> <p>✓ Even though, the accepted building criteria is robust, however they may not represent best available practices (e.g. Miljöbyggnad Gold).</p>
Environmental Preservation	<ul style="list-style-type: none"> • Nature Conservation; • Biodiversity; • Development of non-toxic environments; • Investments in new processes that improve resource efficiency; and • Improving ecosystem services. 	<p>Dark Green</p>

Strengths

Södra Skogsägarna has strong internal environmental and sustainability policies in place. This is supplemented by international certifications such as the Forest Stewardship Council (FSC) and Programme for the Endorsement of Forest Certification (PEFC). The various certification schemes required intrinsically means that eligible projects will adhere to a higher environmental standard, which also strengthens the Green Bond Framework. Södra's Green Forest Management plans help to create forest biomass that combine wood production and protected environments for plant and animal life. These procedures ensure that Södra maintains their forest's health and ecosystem functioning in the long-term while rejecting products from illegal or unsustainable sources. Södra is working to achieve fossil-free production and to reduce its CO₂ emissions. In 2015, the total CO₂ emissions from production and transportation amounted to 4.4 million tonnes of CO₂e. As per 2015, 1.2% of the fuel consumed by the group was fossil-derived while 83% of fuel used for transportation was fossil-derived. Södra do not have any adaptation policies in place; however, they do recognize its importance and suggest that adaptation investments may be funded with proceeds under the water management and environmental preservation project categories.

Södra Skogsägarna's Green Bond Framework explicitly states that nuclear or fossil fuel projects are not eligible for green bond financing and in line with CICERO's long-term view on how to mitigate climate change. From a governance perspective, it is also positive to see that individuals with environmental expertise are involved in the selection of eligible projects.

The inclusion of bio-energy production is encouraging as renewable energy is directly targeting the climate problem, and can generate beneficial spinoffs by reducing entry barriers to renewable energy technologies

among investors by reducing the information and other transaction costs. The production of bio-energy from forest waste also negates any negative impacts on food security and crop production although there still may be impacts in the form of losses to soil fertility and biodiversity. Södra plans to double energy production from the Värö mill to 700 million kWh. This is positive, as it will increase the share of bio-energy into the grid.

In terms of building standards, some of these certification systems (LEED gold, BREEAM very good, Miljöbyggnad silver and the Nordic Swan) do provide some level of measurement of the environmental footprint of a building, including energy efficiency measures. LEED includes aspects important to long-term sustainable development, e.g. site selection and consideration of brownfields, urban density and planning, and access to public transportation. However, a LEED Gold rating does not guarantee a climate friendly building. Points can be earned for activities that do not have a direct impact on the climate or the environment. Likewise, it is possible to achieve the highest ratings with little consideration of climate change issues. Another similar system originating in the United Kingdom is the BREEAM ratings. BREEAM SE (BREEAM, 2013) is the Swedish adaptation of this system. BREEAM also includes a comprehensive consideration of environmental and energy issues associated with buildings, including a category on land use and site selection. A rating is issued based on points earned, similar to LEED, with minimum requirements for some environmental issues. Consequently, the sustainable buildings category receives a medium green shading.

The inclusion of transportation solutions, which use renewable fuels, is positive considering that 71% of Södra's carbon footprint can be attributed to the freight of raw materials.

Weaknesses

We find no weaknesses within the Södra Skogsägarna Green Bond Framework.

Pitfalls

Impacts beyond the project boundary

Due to the complexity of how socio-economic activities impact the climate, a specific project is likely to have interactions with the broader community beyond the project borders. These interactions may or may not be climate-friendly, and thus need to be considered concerning the net impact of climate-related investments. Life-cycle perspectives and supply chain considerations are helpful in that regard. Currently, Södra do not have procedures in place for Life Cycle Assessments (LCA) although assessments for projects are done case by case. CICERO encourages the use of LCA to reduce emissions through a project's design, construction and operation phases.

Rebound effects

Efficiency improvements may lead to rebound effects. When the cost of an activity is reduced there will be incentives to do more of the same activity. From the project categories in Table 2 an example is improved energy efficiency, which in part may lead to more energy use. Södra Skogsägarna should be aware of such effects and possibly avoid Green Bond funding of projects where the risk of rebound effects is particularly high.

Transparency, monitoring, reporting and verification

Transparency, reporting and verification are key in order to enable investors to follow the implementation of the Södra Skogsägarna Green Bond Program. Without becoming too burdensome impact reporting enhances transparency in regard to the projects economic risk from climate change and the environmental effectiveness of the projects.

Södra Skogsägarna has in place good procedures for monitoring and reporting of green bond projects. Södra Skogsägarna will provide an annual newsletter to the green bond investors, which will include a list of projects financed, a selection of project examples with impact reporting and a summary of the Södra's Green Bond development. The management of proceeds will be assured by Södra Skogsägarna's internal auditors. The investor letter and the opinion of the internal auditor will be made publically available on Södra Skogsägarna's web page.

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Appendix: About CICERO

CICERO (Center for International Climate and Environmental Research – Oslo) is Norway’s foremost institute for interdisciplinary climate Research. We deliver new insight that help solve the climate challenge and strengthen international climate cooperation.

We help to solve the climate problem and strengthen international climate cooperation by predicting and responding to society’s climate challenges through research and dissemination of a high international standard. Our researchers collaborate with top researchers from around the world, and publish their work in recognized international journals, reports, books and periodicals.

CICERO has garnered particular attention for its research on the effects of manmade emissions on the climate, society’s response to climate change, and the formulation of international agreements. We have played an active role in the IPCC since 1995. In recent years we have also developed considerable expertise in climate financing and is currently a lead provider of Second Opinions on Green Bonds.

CICERO has a national role in promoting knowledge about climate change and is internationally recognised as a driving force for innovative climate communication. We are in constant dialogue about the responses to climate change with public and private decision makers, government administration and civil society.

See: <http://www.cicero.uio.no/en/posts/news/cicero-grades-climate-friendly-bonds-with-shades-of-green>