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Second Party Opinion

Lantmännen's Green Bond Framework

March 8, 2024

Location: Sweden

Sector: Agriculture

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Alignment With Principles

Aligned = ✓ Conceptually aligned = ○ Not aligned = ✗

✓ Green Bond Principles, ICMA, 2021 (with June 2022 Appendix 1)

See [Alignment Assessment](#) for more detail.

**Medium
green**

Activities that represent significant steps towards a low-carbon climate resilient future but will require further improvements to be long-term low-carbon climate resilient solutions.

Our [Shades of Green Analytical Approach](#) >

Strengths

We view as positive the framework's inclusion of electric vehicles, in particular heavy machinery. Although the electrification of vehicles is becoming more prevalent, that of heavy agricultural equipment and machinery remains less common due to constraints related to their energy demand, size, and weight.

Weaknesses

No weaknesses to report.

Areas to watch

We see a lack of quantitative data and eligibility thresholds regarding the positive environmental impact of the technologies covered by the framework. Yet, the research and development activities being financed have potential to reduce agriculture's environmental impact in the future.

Use of, but no formal commitment to, forest management certification and lingering impacts from grain agriculture.

The former could allow wood pellets from uncertified wood residues in the future. Regarding the latter, Lantmännen now uses food waste as inputs rather than direct food crops, whereas the previous framework included food crops as inputs for bioethanol production. Yet grain agriculture will still have an impact on the environment, albeit reduced.

Lantmännen performs climate risk assessment and scenario analysis for individual food production facilities, but not currently at the farm level. We consider a farm-level assessment important in light of potential future changes in rainfall patterns where Lantmännen operates and the high impact on crop yields and the ecosystem's resilience.

Eligible Green Projects Assessment Summary

Eligible projects under Lantmännen's green bond framework are assessed based on their environmental benefits and risks, using our Shades of Green methodology.


Environmentally sustainable management of living natural resources and land use

 **Dark to Medium green**

Investment and expenditure related to research and development as well as the partnerships with farmers to develop cultivation in a more sustainable direction.

Procurement of wheat, rye, barley, oats, and other grain that are grown under the company's Climate & Nature program.

Eco-efficient and circular economy-adapted products, production technologies, and processes

 **Medium green**

Investment in production facilities and production lines to produce food, feed products, or crop production inputs with at least a 30% lower carbon dioxide (CO₂) impact than equivalent products.

Investments in non-chemically treated seed for organic and conventional cultivation.

Renewable energy

 **Dark green**

Facilities that produce electricity using solar photovoltaic (PV) technology and wind power.

Production facilities, including drying facilities, and manufacturing of solid, processed wood fuels based on waste products from the forestry and sawmill industries, such as shavings and sawdust.

Pollution prevention and control

 **Dark green**

Investments in recycling plants, where residues from the food industry are converted into raw material to produce bioethanol.

Green and energy efficient buildings

 **Light green**

Buildings that have, or are designed to achieve, certification in accordance with at least Miljöbyggnad Silver, combined with primary energy demand that is at least 20% lower than that required by the national building regulation.

Silos with fossil-free grain-drying facilities that are at least 20% more energy efficient than standard drying facilities.

Clean transportation

 **Dark green**

Purchase or lease of light- and heavy-duty electric vehicles.

See [Analysis Of Eligible Projects](#) for more detail.

Issuer Sustainability Context

This section provides an analysis of the issuer's sustainability management and the embeddedness of the financing framework within its overall strategy.

Company Description

Lantmännen is a Swedish agricultural cooperative, providing agriculture, machinery, bioenergy, and food products to both the domestic and foreign markets. Owned by 19,000 Swedish farmers, as of 2023, the company had 10,000 employees and operated in over 20 countries.

The company operates across three sectors and two business areas, and reported a total turnover of Swedish krona (SEK) 65.2 billion (about €5.9 billion) and EBITDA of SEK4.4 billion (about €0.4 billion) as of Dec. 31, 2023. The Agricultural sector (43%) is the highest contributor to revenue, followed by Food (32%), Energy (10%), and the two business areas: Swecon (14%) and Real Estate (1%).

The agricultural sector, Lantmännen's core business, offers a range of livestock and crop production products. The energy sector is one of Sweden's main producers of bioenergy products, operating in globally, but focusing mainly on Europe. The food sector produces flour, bread, breakfast products, pasta, and ready-made meals. Swecon offers a range of construction machinery, equipment, spare parts, training, servicing, and support through its 96 service facilities. The real estate business provides appropriate properties for the group's businesses while also managing externally leased properties. The company has a wide geographic presence, with the majority of sales in Sweden (44%), followed by Finland (15%), Germany (11%), Denmark (7%), the U.K., and Norway (4%) as of Dec. 31, 2022.

Material Sustainability Factors

Climate transition risks

Agriculture, forestry, and other land use is responsible for 22% of global greenhouse gas (GHG) emissions according to the Sixth Assessment report of the Intergovernmental Panel on Climate Change (IPCC). It is also a major contributor to emissions of nitrous oxide (a potent GHG), most of which comes from deforestation, raising livestock, and soil management. Carbon taxes or other stricter policies on land use, and changing consumer behavior, pose regulatory and reputational risks. Agribusinesses are at the early stages of addressing emissions in the value chain by reducing emissions from production. Enhancing carbon capture and recycling waste for biofuels represent opportunities for the sector with sufficient sustainability safeguards. Livestock feed and food product ingredients supply chains may have substantial climate impacts, including deforestation and other land use changes from the production of soy, palm oil, and other plant-based ingredients. Failure to address emissions may restrict market access and consumer demand, as well as increase the cost of capital.

Biodiversity and resource use

Practices to date have increased food production and enabled the industry to meet rising demand profitably, despite reducing biodiversity and increasing land use. The overuse of some chemicals harms soil and water health and excessive land use harms biodiversity by expanding into spaces of natural habitat. This has a negative impact on a wide number of stakeholders, including people that depend on the natural ecosystems for their livelihoods. We see mounting pressure on stakeholders to switch to more environmentally friendly methods, such as regenerative soil treatment, no tilling, and increasing the mix of organic crops.

Physical climate risks

Climate change affects agribusiness, with poor output--linked to volatile and more frequent and severe acute physical risks like drought, heatwaves, floods, and wildfires--harming crops and the supply of feed. Agricultural drought is almost twice as likely to occur now than before industrialization, according to the IPCC. The increasing frequency and severity of these events increase the likelihood of global shortages and/or inflated prices, alongside the potential for a shift in climate zones in many regions over time.

Waste and recycling

According to the United Nations Environment Program, food packaging is a major source of plastic waste, representing about 36% of all plastic produced used for packaging, including single-use food and beverage containers. About 85% of these single-use plastics end up in landfills or as unregulated waste. Moreover, food waste itself represents a challenge for the sector. According to the World Food Program, nearly one-third of all food produced is lost before consumption, leading to the waste of resources such as water, fertilizers, and crop land, as well as an increase in landfill waste.

Workforce health and safety

Certain harvest activities and initial-stage commodity processing in the agribusiness supply chain is often highly manual and can therefore result in workplace safety incidents. Other potential risks relate to the handling of heavy machinery, and exposure to pesticides and other chemicals, which can result in health risks in case of a lack of appropriate protective equipment during transportation and application.

Issuer And Context Analysis

The framework includes eligible projects linked to investments that address the company's most material sustainability factors: climate transition risks, biodiversity, and resource use.

Additionally, physical climate risk is a relevant concern for facilities and buildings being constructed, as well as for the agriculture value chain. Waste and recycling issues are addressed through investments in recycling plants, which use food residue as an input for the production of bioethanol, thereby reducing waste along the food value chain. The company's operations, and in particular, Swecon, which operates in construction machinery equipment, pose health and safety risks for workers.

Lantmännen aims to achieve climate neutrality in primary production by 2050. The company's Climate & Nature program enables grains to get to market with 30% to 45% less climate impact than via alternative means. It does so by scaling up existing technologies and cultivation methods, and the use of precision farming or digital tools, to increase production while reducing the impact on the environment. Furthermore, in 2023, fossil-free fertilizer was introduced as a way to support the decarbonization of direct activities and the food value chain. The company is also collaborating with other industry players in efforts to reduce its carbon footprint. For instance, its partnership with Yara will enable it to offer fossil-free mineral fertilizer produced using renewable energy instead of natural gas. Yet we note that Lantmännen Unibake and Cerealia, two subsidiaries, have set science-based validated targets, but this is not the case for the whole group.

Physical climate risk is key for Lantmännen due to high sectoral exposure. Storms, wildfires, flooding, extreme weather events, and droughts are common, particularly in Sweden, Finland, and the Baltic Sea region, where the company has a strong presence. The agricultural sector is highly dependent on the climate. Lantmännen addresses these issues for instance through plant breeding focusing on climate adaptation. The company analyzes climate risk scenarios for each production facility, though not yet at the farm level, which we view as best practice. However, this is being considered for future developments.

Production of food raw materials are associated with a risk of biodiversity losses. We view as positive that, in recent years, Lantmännen has only purchased RSPO-certified palm oil. It is also currently exploring alternative raw materials to soy, having identified synthetic amino acids as a

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successful way to reduce soy use and improve feed efficiency. Furthermore, its Climate & Nature Cultivation Program includes biodiversity criteria that are specific to agriculture. Nonetheless, we note that the company still uses conventional crop-protection products in its operations, which can harm the environment (air, water, and soil quality; as well as terrestrial and aquatic biodiversity) and human health.

Lantmännen is working on circular-economy practices through reusing the waste generated within its business operations. Its biorefinery sector uses food waste to produce ethanol, and there are guidelines in place for material collection. The company also aims to replace virgin fossil-based plastics with recycled and renewable materials by 2030.

Lantmännen has measures in place to manage its exposure to workforce health and safety issues. The company has a target of achieving an employee injury rate below 1 accident per million hours worked by 2030, and an intermediate target of less than 7 by 2025. As of 2022, the injury rate was 13.5 and, to meet its targets, among other measures, Lantmännen monitors significant risks and accidents for each sector or business area twice a year, and conducts investigations in case of any incidents, including an analysis of the underlying causes. We acknowledge that the proceeds to be financed under this framework do not directly address or focus on health and safety risks.

Alignment Assessment

This section provides an analysis of the framework's alignment to Green Bond principles.

Alignment With Principles

Aligned = ✓ Conceptually aligned = ○ Not aligned = ✗

✓ Green Bond Principles, ICMA, 2021 (with June 2022 Appendix 1)

✓ Use of proceeds

All the framework's green project categories are assessed as green, and the issuer commits to allocate the net proceeds issued under the framework exclusively to eligible green projects. Please see the Analysis of Eligible Projects section for more information on our analysis of the environmental benefits of the expected use of proceeds.

Lantmännen will allocate the net proceeds from instruments issued under the framework to finance or refinance eligible green projects, which include those relating to environmentally sustainable management of living natural resources and land use; eco-efficient and circular economy-adapted products, production technologies, and processes; renewable energy; pollution prevention and control; green and energy-efficient buildings; and clean transportation. Furthermore, the costs of sourcing sustainable raw materials have a maximum one-year look-back period.

✓ Process for project evaluation and selection

The framework outlines the process to select and approve eligible projects and assets. The company's Green Finance Committee manages the selection process and holds the right to exclude any eligible green project already funded if the project no longer meets the eligibility criteria defined in the framework. Furthermore, decisions to allocate net proceeds are made on a consensus basis. Environmental and social risks are managed through the company's annual enterprise risk management. Additionally, the management of environmental, social, corporate governance, and financial risks constitutes a core component of the decision-making process. We view as positive that Lantmännen clearly outlines an exclusion list, including fossil energy production, nuclear energy generation, weapons and defence, potentially environmentally harmful resource extraction (such as rare earth elements or fossil fuels), gambling, and tobacco.

✓ Management of proceeds

Lantmännen will use a register to track and monitor the allocation of proceeds issued under the framework. Furthermore, if projects and assets are sold, or no longer in line with the framework's eligibility criteria, the proceeds will be monitored through this register and reallocated to other eligible green projects. The unallocated proceeds will be held in the liquidity reserve. However, the framework does not disclose a specific time frame for reallocating proceeds in such a situation to a new eligible green category, which is viewed as a best practice.

✓ Reporting

Lantmännen commits to disclose the allocation and impact of proceeds annually, in its Green Bond Report until full allocation. Allocation reporting will include information on the nominal amount of outstanding green bonds, the balance of projects in the green register, total aggregated proportion of green bond net proceeds used per green project category, distribution between new financing and refinancing, and the amount of unallocated proceeds. Lantmännen will also report on the actual environmental impact of eligible projects financed under the framework, and intends to disclose specific key performance indicators (KPIs). The KPIs include the GHG emissions reduction achieved (in tonnes of CO2 equivalent); annual renewable energy generation; the type of waste collected, prevented, or recycled before and after the project; building certification; and annual energy use avoided; among others. We regard as positive that the issuer commits to receiving limited assurance from a professional accountant on the allocation of the net proceeds on an annual basis and until full allocation.

Analysis Of Eligible Projects

This section provides details of our analysis of eligible projects, based on their environmental benefits and risks, using the Shades of Green methodology.

Lantmännen expects to allocate 30% to 35% of issuance proceeds to environmentally sustainable management of living natural resources and land use, 30% to 35% to eco-efficient and circular economy-adapted products, production technologies, and processes, 10% to 15% each to renewable energy and pollution prevention and control, and the remaining 5% to 10% to green buildings.

The company expects about 30% of the proceeds to be allocated to refinancing projects, and about 70% to finance new projects.

Overall Shades of Green assessment

Based on the project categories' shades of green detailed below, and consideration of the environmental ambitions reflected in Lantmännen's green bond framework, we assess the framework as Medium green.

Medium
green

Activities that represent significant steps towards a low-carbon climate resilient future but will require further improvements to be long-term low-carbon climate resilient solutions.

Our [Shades of Green Analytical Approach](#) >

Green project categories

Environmentally sustainable management of living natural resources and land use

Assessment

 **Dark to Medium green**

Description

Sustainable cultivation

- Investment and expenditure related to research and development (R&D), as well as partnerships with farmers to develop cultivation in a more sustainable direction. This involves carrying out R&D in areas such as plant breeding, digitalization, precision farming, climate adaptation, carbon sequestration, biodiversity, and biological plant protection.
- Procurement of wheat, rye, barley, oats, and other grain that are grown under the Climate & Nature program by Lantmännen's farmers and have at least a 30% lower CO₂ impact than equivalent products.

Costs of sourcing sustainable raw material have a look-back period of maximum one year.

Analytical considerations

- We assess the investments in R&D as Dark green, since they support the issuer in developing know-how and technologies to help reduce agriculture's environmental impact in the future. Nevertheless, despite the potential for environmental benefits, including the protection of biodiversity, we note that no quantitative threshold is currently available for other environmental factors, such as water use. This limitation partly constrains our assessment. Previous investments in R&D, such as breeding plants resistant to the Nordic climate and software for environmentally efficient farming, demonstrated the company's commitment to innovation and developing climate resilience, while reducing food waste and resource use. However, it is unknown whether all potential impacts on biodiversity and crop diversity from investments in plant breeding are monitored. Future investments will also be directed toward measures such as digitalization, precision farming, and plant breeding, but also climate adaptation and carbon sequestration, further strengthening Lantmännen's efforts to reduce its carbon footprint.
- Related to the procurement of wheat, rye, barley, oats, and other grain as part of the Climate & Nature program, we assess these activities as Medium green. This factors-in various elements, including precision farming and fossil-free fuel on land, which result in Lantmännen's agricultural products generating 30% lower CO₂ emissions than equivalent products. The company targets a further 20% reduction of emissions in the next few years through the adoption of fossil-free fertilizers and electrified agriculture machinery. The program also includes biodiversity considerations for improving coexistence between species, for instance, through dedicated areas where skylarks can access nutrients, and through multifunctional protection zones, where diverse herb and grass strips help wild pollinators while reducing the need for pesticides. Moreover, cooperative farmers are increasingly adopting a steam-based seed treatment, which reduces reliance on chemicals, albeit not excluding post-planting pesticide use. Regarding water and irrigation efficiency, it is not clear what current benefits are achieved through precision farming, given the absence of quantitative thresholds, albeit water stress isn't generally a major risk in Sweden. We also consider that, in Sweden, land use changes for agricultural purposes generally pose a lower risk to the environment than in other EU countries. Sweden is characterized by abundant forest cover, stringent land-use regulations, and a stable agricultural sector with low population density, reducing the demand for new agricultural land.
- Lantmännen's facilities, consistent with the description provided in the other project categories, underwent a physical risk assessment in 2023 by the Swedish Meteorological and Hydrological Institute (SMHI) in line with national regulation, encompassing 260 sites globally. The company has indicated that it intends to conduct similar assessments at farm level in the future. In addition, Lantmännen identifies groupwide climate risk--including at the cultivation stage--as the second most important risk in its enterprise risk management process. It reports that it works to continuously improve its quantification and reinforce the mitigation measures in place, from investment in crop resilience research, to increased drying capabilities. Yet, we consider that more granular physical risk assessments, including climate scenarios at farm level, would be important, considering potential future changes in rainfall patterns in Sweden, and that such changes could lead to shifts in cropping periods to earlier dates, necessitating additional considerations for irrigation needs in agriculture.
- Based on the above information, we assess the whole category as being in a range of Dark green to Medium green, primarily capturing the relevant role played by the R&D initiatives in fostering technological developments, and currently achieved CO₂ reduction, which support the issuer's sustainable farming vision.

Eco-efficient and circular economy-adapted products, production technologies, and processes

Assessment

 **Medium green**

Description

Production

- Production facilities and production lines to produce food and feed products or crop production inputs, with at least at a 30% lower CO₂ impact than equivalent products, for example, fossil free fertilizer, low-carbon grain, and legume-based products such as pea-based protein.
- Investments in non-chemically treated seed for organic and conventional cultivation.

Analytical considerations

- We view this category as Medium green because the production facilities under its scope represent a significant step toward a low carbon climate resilient future, in particular due to the reduction of CO₂ emissions, and considering the issuer's steps to minimize biodiversity risks along the value chain. Nonetheless, we note that the production process itself will not generate energy efficiency gains compared to standard processes. Moreover, Lantmännen's Climate & Nature program represents an improvement by generating lower GHG emissions, but does not completely mitigate other environmental risks, such as water use or pollution caused by fertilizer and crop-protection products. The production facilities are necessary to bring cultivated crops to the market, therefore we note a significant link with the first project category, outlined above.
- Reduction of CO₂ emissions is achieved along the value chain, including at the cultivation and production stages. According to the issuer, most of the climate impact (about 41%) occurs during cultivation, in particular through leaching of nitrogen from farmland and about 33% through the production of nutrients and at other agri-supply levels. While we view as positive that the Climate & Nature program tackles risks linked to GHG emissions, and includes biodiversity considerations, Lantmännen's involvement in conventional cultivation practices implies remaining environmental risks linked to the use of chemical crop-protection products, including contamination of the soil and water, and impacts on biodiversity.
- We understand that investments in non-chemically treated seeds refer solely to Thermoseed, a thermal seed disinfection method that is an alternative to chemical treatment in both organic and conventional agriculture. We view as positive the company's ability to replace chemical seed treatment, thereby reducing the negative impact on biodiversity and pollution of soil and water. However, because non-chemically treated seeds can also be used for conventional cultivation, its use does not fully addressing environmental risks linked to conventional crop-protection products, including pesticides.
- Palm oil products, used as an ingredient in food and feed products, are associated with sustainability risks, including land degradation, harm to biodiversity, and deforestation. As of 2023, all palm oil purchased by Lantmännen is RSPO-certified, with a high proportion (98%) being segregated, which we view favorably because certified ingredients are kept separate from non-certified ingredients. The RSPO certification comprises environmental and social criteria that companies must comply with, including related to reduction of GHG emissions, workplace safety, and labor and human rights. Lantmännen's Climate & Nature program also contains criteria for biodiversity in the agricultural landscape, including skylark plots and flower zones.
- In 2023, the SMHI assessed Lantmännen's facilities for physical climate risks. New facilities included under this category have also been assessed for physical risk during the building permit process according to Swedish law. According to the issuer, any risks identified will be addressed through its yearly enterprise risk management process.

Renewable energy

Assessment

 Dark green

Description

Solar and wind power

- Facilities that produce electricity using solar PV technology
- Facilities that produce electricity from wind power.

Bioenergy

- Production facilities, including drying facilities, and manufacturing of solid, processed wood fuels based on waste products from the forestry and sawmill industries, such as shavings and sawdust.

Analytical considerations

- We assess Lantmännen's investments in wind and solar power as Dark green, since these projects support the modelled pathways that limit global warming to well below 2 degrees Celsius. These pathways imply that almost all electricity is generated by zero- or low-carbon sources by 2050. Though lacking specific mandates for low reliance on critical minerals and recycled components, the issuer encourages suppliers to reduce their emissions while fostering efficient use of resources through a dedicated code of conduct. We also assess the issuer's expected investments in bioenergy as Dark green. Bioenergy, including through burning pellets from certified wood-waste sources, can contribute to the transition to low-emission energy systems. Moreover, exclusive reliance on waste sources for bioenergy and local sourcing to shorten transport distances, further decrease lifecycle emissions.
- Related to bioenergy, Lantmännen aims to finance the necessary facilities and machineries dedicated to increasing Scandbio's pellet production capacity, such as the drying facilities. Scandbio, a subsidiary, focuses on pellet manufacturing. These facilities run on several renewable fuel sources, including biofuels, such as hydrotreated vegetable oil. However, we note remaining reliance on fossil fuels (diesel).
- When biomass is used for energy generation, CO₂ is emitted during the combustion process. Nonetheless, if replenishing biomass absorbs a corresponding amount of CO₂, bioenergy can achieve lower lifecycle emissions than fossil-based alternatives. This is contingent upon the implementation of sustainable forestry practices that either maintain or enhance carbon sinks. In this regard, Scandbio's production system relies on wood-waste biomass, such as sawdust and shavings, wood chips, and other residues from forestry, mitigating land use change and biodiversity risks while reducing associated climate emissions. We view as positive that Scandbio requires its suppliers to provide information about wood's origin and legal procurement documents, prioritizing wood residues certified by the Forest Stewardship Council and the Program for the Endorsement of Forest Certification. However, we see a risk that some of the wood residues may not be certified.
- The supply base is mainly in Sweden and Latvia, with minor supply from Norway, Finland, and Lithuania, which helps reduce transport distances and associated GHG emissions. This also complies with the EU's Renewable Energy Directive II, which requires lifecycle emissions improvements and further environmental safeguards during feedstock production.
- The wood pellets generated are sold to both private and business customers. The latter category comprises energy companies, real estate developers, and greenhouses, aiding clients in reducing their energy-related emissions.
- The issuer's facilities, consistent with the description provided in the other project categories, underwent a physical risk assessment in 2023, conducted by the SMHI, encompassing 260 sites globally. The new facilities included in this green bond framework also underwent a physical risk assessment during the building permit process, in compliance with Swedish law.

Pollution prevention and control

Assessment

 Dark green

Description

Recycling plants

- Investments in recycling plants, where residues from the food industry are converted into raw material to produce bioethanol.

Analytical considerations

- Bioethanol can replace fossil fuels in many sectors, including hard-to abate industries. This reduces GHG emissions, although how much depends on the sustainability and lifecycle emissions benefits of the biofuel, sector, and geography. According to Lantmännen, its bioethanol can reduce CO₂ emissions by up to 98% compared to gasoline. Considering the projects' key contribution to climate mitigation, and sufficient safeguards against risks of negative environmental impacts from biofuel production, we assign this project category a Dark green shade. The input for bioethanol production will be restricted to residues from the food industry. This represents an upgrade from the previous framework, since Lantmännen now uses only food waste, which poses lower climate and environmental risks than direct food crop inputs, particularly from land use change.
- Using residues from the food industry to produce bioethanol means that otherwise discarded biomass is transformed into a resource, introducing an element of circularity. We view as positive that the input for biomethanol production does not include grains that could be used for consumption and have higher land use change risks with associated climate and biodiversity impacts. The issuer has informed us that it strives to minimize its food waste and has an economic incentive to follow the waste hierarchy and prevent food waste, even before using it to make bioethanol.
- The transportation of waste can be fossil-fuel intensive. We view as positive the target to reduce emissions from purchased transport by 50% in relation to net sales versus that in 2019, and to use fossil-free transport and service vans in Sweden by 2030. The company aims to achieve these targets through more sustainable fuel choices and more efficient transport flows, including local transport, when possible.
- Regarding the origin of the energy that fuels the production facilities, within the Climate & Nature program. it is mandatory to run all machineries on bioenergy. This includes the drying of crops. Within Lantmännen's own operations, 85% of the energy consumed is from renewable sources.
- Lantmännen has gone beyond regulatory requirements in mitigating the environmental impact of its facilities, which we view as positive. It has achieved International Sustainability and Carbon Certification, which requires compliance with specific environmental, social, and traceability criteria, including having a reduced carbon footprint, meeting minimum social standards, avoiding harvesting from highly biodiverse or carbon-rich areas and adhering to international fair labor practices.

Green and efficient buildings

Assessment

 Light green

Description

Buildings and silos

- Buildings that have, or are designed to achieve, certification in accordance with at least Miljöbyggnad Silver, combined with primary energy consumption at least 20% lower than the level required by the national building regulation.
- Silos with fossil-free grain drying facilities that are at least 20% more energy efficient than standard drying facilities.

Analytical considerations

- The issuer has informed us that projects under this category consist solely of new construction. Other than silos, the buildings to be financed include machine workshops and offices, located in Sweden. In new construction, improving energy performance and reducing emissions associated with building materials are, in our view, key topics to address from a low-carbon perspective. Moreover, mitigating the exposure to physical climate risks is crucial to improving climate resilience. Our assessment of Light

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green reflects the lack of stringency on how the issuer will address aspects such as embodied emissions and the impacts of physical climate risks.

- The Miljöbyggnad certification is overseen by the Swedish Green Building Council and comprises criteria such as lower energy consumption than the average building, avoidance of harmful chemicals in construction materials, as well as adequate indoor natural light and noise insulation. The issuer has informed us that both the Miljöbyggnad certification versions 4.0 and 3.2 will be considered. Although Miljöbyggnad Silver version 4.0 includes consideration regarding embodied emissions, version 3.2 does not. Moreover, the certification at "Silver" does not require a physical risks assessment using scenario analysis, a requirement of the "Gold" level. We view as positive that this certification must be combined with a primary energy demand being at least 20% lower than the level required by the national building regulation.
- Lantmännen is considering reducing embodied emissions by investigating the possibility of using low-carbon materials, such as green concrete, for its silos. Nonetheless, we note a lack of certainty and clear commitment with regards to Lantmännen's approach to embodied emissions in the construction of silos. However, the drying facilities will not use fossil fuel and have energy efficiency measures, which we consider positive.
- In line with the previous project categories, buildings and silos included under this category have also been assessed for physical risk during the building permit process, according to Swedish law. However, Lantmännen lacks scenario-based physical climate risk assessments for the assets being financed under this framework.

Clean transportation

Assessment

 Dark green

Description













Electrified transportation

- Purchase/lease of light and heavy-duty electric vehicles.

Analytical considerations

- According to the IPCC, electric vehicles (EVs) powered by low-emission electricity offer the largest decarbonization potential for land-based transport, on a life cycle basis. EVs are therefore key for decarbonizing the transportation sector, with net-zero-by-2050 targets in mind. The Dark green assessment reflects that EVs will be part of a low-carbon future.
- The issuer intends to fund the acquisition and leasing of EVs and electric machinery, including those used in agricultural settings such as tractors and trailers. This initiative aligns with the objectives of Lantmännen's Climate & Nature cultivation program, aimed at reducing the emissions intensity of its operations. Yet, there are indirect carbon emissions from a life-cycle perspective, through materials sourcing and manufacturing, for example.
- Although financing electric fleets is becoming more prevalent in the market, the electrification of heavy agricultural equipment and machinery remains less common, due to constraints related to their energy demand, size, and weight. Therefore, we view this inclusion as a positive development because it aids in the decarbonization of the agriculture sector, which in 2022, together with the other sectors constituting agriculture, forestry, and other land use, contributed almost 17% of Sweden's total CO₂-equivalent emissions.
- Our assessment considers transparency within the value chain, including the origin of environmentally sensitive battery materials and the lifecycle emissions of vehicles. Though Lantmännen has limited visibility on batteries' lifecycle emissions compared to car manufacturers, it encourages suppliers to reduce their emissions while fostering efficient use of resources through a dedicated code of conduct.

S&P Global Ratings' Shades of Green

| Assessments | | | | | |
|--|---|---|--|---|--|
|  Dark green |  Medium green |  Light green |  Yellow |  Orange |  Red |
| Description | | | | | |
| Activities that correspond to the long-term vision of an LCCR future. | Activities that represent significant steps toward an LCCR future but will require further improvements to be long-term LCCR solutions. | Activities representing transition steps in the near-term that avoid emissions lock-in but do not represent long-term LCCR solutions. | Activities that do not have a material impact on the transition to an LCCR future, or, Activities that have some potential inconsistency with the transition to an LCCR future, albeit tempered by existing transition measures. | Activities that are not currently consistent with the transition to an LCCR future. These include activities with moderate potential for emissions lock-in and risk of stranded assets. | Activities that are inconsistent with, and likely to impede, the transition required to achieve the long-term LCCR future. These activities have the highest emissions intensity, with the most potential for emissions lock-in and risk of stranded assets. |
| Example projects | | | | | |
|  Solar power plants |  Energy efficient buildings |  Hybrid road vehicles |  Health care services |  Conventional steel production |  New oil exploration |







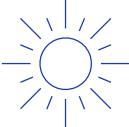
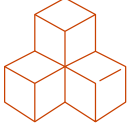

Note: For us to consider use of proceeds aligned with ICMA Principles for a green project, we require project categories directly funded by the financing to be assigned one of the three green Shades.

LCCR--Low-carbon climate resilient. An LCCR future is a future aligned with the Paris Agreement; where the global average temperature increase is held below 2 degrees Celsius (2 C), with efforts to limit it to 1.5 C, above pre-industrial levels, while building resilience to the adverse impact of climate change and achieving sustainable outcomes across both climate and non-climate environmental objectives. Long term and near term--For the purpose of this analysis, we consider the long term to be beyond the middle of the 21st century and the near term to be within the next decade. Emissions lock-in--Where an activity delays or prevents the transition to low-carbon alternatives by perpetuating assets or processes (often fossil fuel use and its corresponding greenhouse gas emissions) that are not aligned with, or cannot adapt to, an LCCR future. Stranded assets--Assets that have suffered from unanticipated or premature write-downs, devaluations, or conversion to liabilities (as defined by the University of Oxford).

Mapping To The U.N.'s Sustainable Development Goals

Where the financing documentation references the Sustainable Development Goals (SDGs), we consider which SDGs it contributes to. We compare the activities funded by the financing to the International Capital Markets Association's (ICMA's) SDG mapping and outline the intended linkages within our SPO analysis. Our assessment of SDG mapping does not affect our alignment opinion.

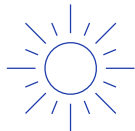
This framework intends to contribute to the following SDGs:

| Use of proceeds | SDGs |
|--|---|
| Environmentally sustainable management of living natural resources and land use | <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>2. Zero hunger*</p> </div> <div style="text-align: center;">  <p>12. Responsible consumption and production*</p> </div> <div style="text-align: center;">  <p>13. Climate action</p> </div> <div style="text-align: center;">  <p>15. Life on land*</p> </div> </div> |
| Eco-Efficient & Circular economy adapted products, production technologies and processes | <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>12. Responsible consumption and production*</p> </div> <div style="text-align: center;">  <p>15. Life on land</p> </div> </div> |
| Renewable energy | <div style="text-align: center;">  <p>7. Affordable and clean energy*</p> </div> |
| Pollution prevention and control | <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div> |

**9. Industry,
innovation and
infrastructure**

**12. Responsible
consumption and
production***

Green and energy efficient
buildings



**7. Affordable and
clean energy**

Clean transportation



**9. Industry,
innovation and
infrastructure**

*The eligible project categories link to these SDGs in the ICMA mapping.

Related Research

- [Analytical Approach: Second Party Opinions: Use of Proceeds](#), July 27, 2023
- [FAQ: Applying Our Integrated Analytical Approach for Use-of-Proceeds Second Party Opinions](#), July 27, 2023
- [Analytical Approach: Shades of Green Assessments](#), July 27, 2023
- [S&P Global Ratings ESG Materiality Maps](#), July 20, 2022

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Second Party Opinion: Lantmännen's Green Bond Framework

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