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Second Party Opinion

# SpareBank 1 Sogn og Fjordane Green Bond Framework

**May 28, 2025**

**Location:** Norway **Sector:** Banks

## Alignment Summary

Aligned = ✓ Conceptually aligned = ○ Not aligned = ✗

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

See Alignment Assessment for more detail.


Primary contact

**Alexander Volden**
Oslo
alexander.volden
@spglobal.com


**Light green**

Activities representing transition steps in the near-term that avoid emissions lock-in but do not represent long-term low-carbon climate resilient solutions.

Our Shades of Green Analytical Approach >

## Strengths

**SpareBank1 Sogn og Fjordane (SSF) screens each building in its loan portfolio to ensure all are in the top 15% of energy efficient buildings in Norway.** To do so, it is leveraging data from Eiendomsverdi to ensure that this threshold is met. This approach offers greater consistency than relying on building codes because these buildings risk falling out of the top 15% threshold.

**SSF measures its scope 3 financed emissions and has set targets to achieve net-zero emissions by 2050.** It reports on its greenhouse gas emissions across all scopes and details its emissions in the loan portfolio. This makes the bank more advanced in its carbon accounting than local peers.

## Weaknesses

No weaknesses to report.

## Areas to watch

**All livestock farming entails material climate impacts.** Eligible projects generally help decarbonize the agricultural sector. But all livestock farming emits greenhouse gases and poses climate and environmental risks from land-use change and water consumption.

**Fish farming entails environmental risks, such as sea lice outbreaks, pollution from chemical treatments, and fish escapes.** But SSF will only finance farms certified by the ASC, which sets certain limits on sea lice, fish escapes, and other environmental risks.

**SSF analyzes physical climate risk exposure, but the green building category does not address the mitigation of these risks.** Although Norway's regulations consider these risks, there is no assurance they are adequately addressed. Also, financing mainly newer buildings may encourage construction, which could increase embodied emissions and biodiversity risks.

## Shades of Green Projects Assessment Summary

Over the three years following issuance of the financing, SSF expects to allocate 78% of the proceeds to green buildings, 11% to sustainable aquaculture and fisheries, 5% to environmentally sustainable management of living natural resources and land use, 4% to renewable energy, and the remaining 2% to clean transportation.

The issuer expects about one-third of total proceeds to be allocated to refinancing projects, and the rest to finance new projects.

Based on the project categories Shades of Green detailed below, the expected allocation of proceeds, and consideration of environmental ambitions reflected in SSF's Green Bond Framework, we assess the framework light green.

| **Green buildings** | **Light green** |
|---|---|
| Buildings built in 2021 or later | |
| Buildings built before 2021 | |
| Renovation of buildings | |

| **Renewable energy** | **Dark green** |
|---|---|
| Hydropower | |
| Solar photovoltaic (PV) | |

| **Environmentally sustainable management of living natural resources and land use** | **Medium green** |
|---|---|
| Renewable energy for local power generation | |
| Organic farming activities that are certified under the DEBIO certification scheme | |
| Improved farming methods | |

| **Sustainable aquaculture and fisheries** | **Light green** |
|---|---|
| Offshore aquaculture | |
| Onshore aquaculture | |
| Fisheries | |

| Clean transportation | Dark green |
|---|---|
| Vehicles/vessels with zero direct tailpipe carbon dioxide (CO2) emissions | |
| Charging infrastructure | |

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

SpareBank 1 Sogn og Fjordane (SSF) is a savings bank in Norway that was founded in 1988, with its head office in in Førde. It had assets of about Norwegian krone (NOK) 77.1 billion (about €6.519 billion) as of Dec. 31, 2024. The bank operates 12 branches in Sogn og Fjordane and has an additional branch located in Bergen. Bustadkreditt Sogn og Fjordane AS (BSF), a covered bond issuer, is wholly owned by SFF. Both SSF and BSF could issue under this framework.

SSF offers a range of financial products and services to retail customers, small and midsize enterprises (SMEs), the public sector, and financial sector. Its operations are divided primarily into two segments: Retail Market--predominantly residential mortgages, accounting for 75% of the bank's loan portfolio; and Corporate Market--accounting for the remaining 25% of the loan portfolio, covering various business sectors. The property management sector accounted for the largest share of the corporate loan market at 35%, followed by fishing and aquaculture industries at 18%. SSF has 302 employees.

## Material Sustainability Factors

### Climate transition risk

Banks are highly exposed to climate transition risk through their financing of economic activities that affect the environment. Their direct environmental impact is small compared with their financed emissions, which stem mainly from power consumption. Generally, policies and rules to reduce emissions could raise credit, legal, and reputational risks for banks. Positively, financing the climate transition offers a growth avenue for banks through lending and other capital market activities. In Europe, climate and environmental regulations are relatively ambitious, and there is a strong push to integrate sustainability considerations into the regulation of banks and financial markets.

### Physical climate risk

Banks finance a wide array of business sectors that are exposed to physical climate risk. However, although climate change is a global issue, weather-related events are typically localized, so the magnitude of banks' exposure is linked to the geographic location of the activities and assets they finance. Similarly, banks' physical footprint (such as branches) may also be exposed to physical risks that might disrupt their ability to service clients in the event of a natural catastrophe. Banks could help mitigate the effects of physical climate risks by financing adaptation projects and climate-resilient infrastructure, as well as by investing in

solutions that support business continuity in exposed geographies. Key physical climate risks in Norway relate to an increase in extreme precipitation and flooding.

### Biodiversity and resource use

Banks contribute to significant resource use and biodiversity impacts through the activities they fund or invest in. For example, the real estate sector--which is a major recipient of bank financing--is a large consumer of raw materials for new construction, such as steel and cement. Similarly, bank-financed agricultural and aquacultural activities can have material biodiversity impacts.

### Access and affordability

Banks' large impact on society stems from their role in enabling access to financial services to individuals and businesses, and in ensuring the correct functioning of payment systems. Ensuring affordable access to financial services, especially for the most vulnerable members of the population, remains a challenge for the banking industry. However, banks have many opportunities to support economic development through financial inclusion, including by using new technologies.

# Issuer And Context Analysis

**The project categories in the green bond framework address climate transition risk, one of the key sustainability factors for SSF.** Green buildings, renewable energy, and clean transportation can help society manage and decarbonize its energy consumption, reducing transition risks for the bank. Furthermore, the bank has identified that agriculture, aquaculture, fisheries, and transport are the most emissions-intensive sectors it finances in its loan portfolio, making these projects important in managing climate transition risk. At the same time, the eligible projects introduce risks related to physical climate, biodiversity, and resource use.

**SSF's sustainability strategy for 2022-2024 aligns with Norway's national climate target to reduce emissions by at least 55% by 2030 compared to 1990 emissions levels.** Furthermore, the bank aims for climate neutrality by 2050 for both direct and indirect emissions, aligning with Norway's national targets. In 2024, SSF developed its climate transition plan based on European Sustainability Reporting Standards (ESRS) principles and updated its double materiality assessment. Both are requirements established by the EU's Corporate Sustainability Reporting Directive, which the bank will begin to comply with from 2025. SSF will also include ESRS in its annual report. SFF is also certified by Eco-Lighthouse, a Norwegian environmental management standard recognized by the EU as compliant with the eco-management and audit scheme, for its own operations and products.

**The bank reports on scopes 1, 2, and 3 emissions, and its short- and long-term targets to reduce greenhouse gas emissions are aligned with the Science Based Targets Initiative (SBTi)**. Because SSF is a credit institution, its most significant emissions stem not from its operations but from its lending portfolio. Scope 3 emissions account for 99% of its total emissions. Approximately 65% of these emissions come from climate-sensitive sectors within its lending portfolio, including real estate, agriculture, fisheries, aquaculture, maritime transport, and construction. SSF's short-term goal is to achieve a 2.5% annual reduction in its scope 3 emissions by 2030, with 2024 as the base year, while aiming for a long-term goal of achieving net-zero emissions by 2050. We view as positive that scope 3 categories 1–14 are aligned with the SBTi. For category 15, the bank adheres to sector-specific pathways, such as that of the Carbon Risk Real Estate Monitor for real estate, and International Maritime Organization for maritime transport. To assess financed emissions in its loan portfolio, SSF uses estimated values from Eiendomsverdi for residential properties, applies Finans Norge's methodology for agriculture, and the Partnership for Carbon Accounting Financials' emission factors for other sectors.

**SSF conducts climate risk assessments for its SME clients, which represent one-fourth of its loan portfolio, while leveraging on physical climate risk data for its real estate portfolio**. The bank's credit risk assessment process is industry specific and includes a comprehensive review of clients' climate exposures, encompassing both transition and physical risks. We view as positive that SSF has a corporate social responsibility and sustainability policy for its Corporate Market segment. The policy stipulates that credit risk assessments will include extreme weather risk exposure to landslides, avalanche, and floods; verified implementation of management systems, environmental certifications, and energy labeling; a transition plan to be fossil free; and its sustainability reputation among other factors. To screen for physical climate risks, the bank uses governmental risk maps from the Norwegian Water Resources and Energy Directorate (NVE) for all corporate loans exceeding NOK3 million in credit and relies on data from Eiendomsverdi to screen its entire real estate portfolio, including for residential properties. Physical risks are assessed under both a low- and a high-emission scenario, corresponding to the Net Zero 2050 and Current Policies scenarios established by the Network for Greening the Financial Systems.

**SSF assesses biodiversity risks for its corporate customers using its environmental, social, and governance (ESG) model**. The bank's corporate loan portfolio can potentially affect local biodiversity, in particular loans to the agriculture, aquaculture, and commercial building sectors. When screening for biodiversity risks, the bank uses industry-specific criteria; for example, for real estate, it will screen for proximity to vulnerable species and ecosystems as well as assess the client's understanding of new and stricter biodiversity laws. Although financing renewable energy projects can introduce biodiversity risks, these are mitigated by NVE's strict regulations. For example, NVE requires an environmental impact assessment (EIA) for all projects in the power production sector. Additionally, SSF has committed to refraining from financing activities that harm the environment or the climate, in alignment with the U.N.'s environmental objectives.

# Alignment Assessment

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

## Alignment Summary

Aligned = ✓ Conceptually aligned = o Not aligned = ×

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

### ✓ Use of proceeds

We assess all the framework's green project categories as having a green shade, and the issuer commits to allocating the net proceeds issued under the framework exclusively to eligible green projects. Please refer to the Analysis of Eligible Projects section for more information on our analysis of the environmental benefits of the expected use of proceeds. SSF commits to allocating an amount equal to the net proceeds to finance or refinance a portfolio of loans dedicated to projects that meet the criteria outlined in the framework. However, we note that the framework does not include a look-back period for refinancing eligible loans, as is recommended by the Principles.

### ✓ Process for project evaluation and selection

The green bond framework outlines the process to select and approve eligible projects. SSF commits to establishing an internal sustainable finance committee (SFC) consisting of members of its sustainability, treasury, and business support departments. The SFC will meet at least quarterly and is responsible for project evaluation and selection in line with the criteria described in the framework. The bank assesses its portfolio for physical climate risks by using data from Eiendomsverdi and NVE maps and by adhering to the TCFD (Task Force on Climate-related Financial Disclosures) framework. Additional environmental and social risks are assessed as part of its ESG model in its credit assessment of corporate customers. The framework has a clear exclusion list outlining that green bonds will not be used to finance projects directed to fossil energy production, nuclear power

generation, weapons and defense, gambling, tobacco, pornographic material, or the production of narcotics (if not meant for medical purposes).

### ✓ Management of proceeds

SSF commits to tracking the net proceeds using the green registry and all the green bonds are to be managed on a portfolio basis. The bank will allocate the net proceeds within 24 months after issuance. Furthermore, SSF will ensure that the value of eligible assets will always exceed the total nominal amount of outstanding green bonds. If financed loans in the green registry are repaid or if the financed activities no longer meet the criteria in the framework, SSF will replace it them with other eligible loans. Unallocated proceeds will be managed in accordance with the bank's liquidity management.

### ✓ Reporting

SSF commits to yearly reporting of the allocation and impact of proceeds, through its annual report, until all outstanding green bonds mature. Reporting will be available on the bank's website. The allocation report will include a summary of outstanding green bonds, a brief description of the projects, the amount of net proceeds that have been allocated to eligible projects, the balance of unallocated proceeds, and the proportion of proceeds used for financing and refinancing. It will also report on the aggregate environmental impacts of green loans financed by green bonds. Where possible, the bank will measure the impacts, and in other cases, the impacts will be estimated. We view as positive that it will do so using ICMA's Harmonized Framework for Impact Reporting, and the Nordic Public Sector Issuers' Position Paper on Green Bonds Impact Reporting. Furthermore, it is also positive that SSF intends to publish the methodologies as well as the assumptions and baselines used to determine the impact indicators. Additionally, the bank commits to receiving limited assurance from an independent external auditor on the allocation of the net proceeds on an annual basis and until all proceeds are allocated.

# Analysis Of Eligible Projects

This section provides details of our analysis of eligible projects, based on their environmental benefits and risks, using the "Analytical Approach: Shades Of Green Assessments".

## Overall Shades of Green assessment

Based on the project category shades of green detailed below, the expected allocation of proceeds, and consideration of environmental ambitions reflected in SSF's Green Bond Framework, we assess the framework light green.

**Light green**

Activities representing transition steps in the near-term that avoid emissions lock-in but do not represent long-term low-carbon climate resilient solutions.

Our Shades of Green Analytical Approach >

## Green project categories

## Green buildings

| Assessment | Description |
|---|---|
| Light green | Loans to finance or refinance residential and commercial buildings in Norway that meet either of the following criteria:<br><br>1. Buildings built in 2021 or later: Energy Performance Certificate (EPC) classification A or the primary energy demand (PED) of the building is at least 10% lower than the threshold for nearly zero-energy buildings (NZEB) in Norway.<br><br>2. Buildings built before 2021: EPC class A or within the top 15% most energy efficient buildings in Norway in terms of PED.<br><br>3. Major renovations leading to an improvement in energy efficiency of at least 30%. For the full building to qualify after the renovation, it must meet the criteria above for buildings built before or after 2021.<br><br>Buildings larger than 5,000 m2 must have a demonstrated life-cycle global warming potential (described by Eurostat as the relative potency, molecule for molecule, of a greenhouse gas, taking account of how long it remains active in the atmosphere) and, upon completion, the buildings undergo testing for airtightness and thermal control.<br><br>If the energy label certification is updated or a national definition for the top 15% most energy efficient buildings becomes available during the period of this framework, SSF will refer to the new definitions.<br><br>Loans to buildings with direct fossil-fuel heating or buildings in the oil and gas value chain are not in scope of this framework. |

**Analytical considerations**

- The International Energy Agency (IEA) emphasizes that achieving net-zero emissions in buildings requires major strides in energy efficiency and fossil fuel phase out. All financed properties must achieve high energy performance. New properties should also cut emissions from building materials and construction. Additionally, addressing physical climate risks is key to strengthening the climate resilience of all buildings in the portfolio.
- SSF expects 50% of the proceeds under this category to finance existing buildings, 40% new buildings, and 10% renovation projects. In addition, 80% of the category's total proceeds will be earmarked for residential properties and the remaining 20% for commercial properties. Of the 50% financing of existing buildings, the issuer expects most of it will finance residential buildings built before 2021 with EPC class A, or PED within the top 15% of the national or regional building stock. SFF will not directly invest in construction projects, only in the refinancing of loans for existing buildings. The framework does not have specific requirements beyond energy performance for residential buildings, though we note that, as part of the lending process, these may be taken into consideration. As a result, we assign the overall project category a Light green shade.
- SFF informs us that, to identify buildings within Norway's top 15% most energy efficient, it will rely on buildings adhering to Norway's current building code (TEK17), and additionally screen buildings using a database provided by Eiendomsverdi. The database screens buildings using the platforms' suggested thresholds and energy data on individual buildings. Currently, there is an ongoing process to establish a formal national definition for the top 15% in Norway; various proxies have been used in the absence of an official definition. We believe the definition SFF uses is stronger than in other practices, since it requires the screening of each individual building rather than solely relying on the year of construction. Once a formal national definition is established, the bank will adopt the updated criteria for that definition.
- However, a limitation in SFF's approach is that it is only open to financing recently constructed buildings under the framework. Adherence to TEK17 means that only buildings constructed after 2019 are eligible and are expected to represent about 90% of the use of proceeds under the green building category. Although energy performance is essential to effectively decarbonizing the sector, it is crucial to also focus on improving older buildings while minimizing construction-related emissions. In the Nordic context, building materials typically account for half of a building's life cycle emissions. SFF's current framework lacks specific criteria to address emissions associated with the embodied emissions from financed projects. In addition, newer buildings, especially those constructed on greenfield land, may pose significant biodiversity risks. Although

Norway's regulations mitigate these risks to some extent, by requiring EIAs, all deforestation adversely affects the climate. Current practices may not adequately address biodiversity and climate risks, even within stringent regulatory environments. SFF will not finance new construction projects under this framework, nor consider these risks in its selection process. By prioritizing the financing of newer buildings, it may however indirectly contribute to biodiversity impacts.

- In the transition to a low-carbon society, renovating and upgrading existing properties is important. Renovations that achieve at least a 30% reduction of primary energy consumption demonstrate a solid commitment to reducing energy intensity. Although SSF expects to finance a minor share of renovations, we find it positive that renovations will be financed.
- Given the fixed nature of buildings, improving their resilience to physical climate risk is key to the transition to a low-carbon future. However, the issuer will screen for highly exposed assets using Eiendomsverdi data and its ESG model for corporate lending. The framework does not have specific criteria related to mitigating physical climate risks of the financed assets. In general, buildings are highly exposed to physical climate risks, and though building regulations currently consider such risks in Norway, there is no guarantee that they are properly addressed. An increase in precipitation, flooding, and landslides are key risks in Norway.

## Renewable energy

| Assessment | Description |
|---|---|
| Dark green | Loans to finance or refinance the construction or operation of electricity generation activities that meet either of the following criteria:<br>1. Produce electricity from hydropower and meet one of the following criteria:<br>• The electricity generation facility is a run-of-river plant and does not have an artificial reservoir.<br>• The power density of the electricity generation facility is above 5 watts per square meter.<br>• Life cycle greenhouse gas emissions from the generation of electricity from hydropower are lower than 50 grams of CO2 equivalent per kilowatt hour (gCO2e/kWh).<br>2. Produce electricity using solar PV technology.<br>Loans to finance or refinance infrastructure (transmission or storage) related to the above sources of renewable energy. |

### Analytical considerations

- Renewable energy projects such as hydroelectric and solar PV are key to limiting global warming to well below 2ºC, provided their negative impacts on local environments, and physical risks, are sufficiently mitigated. According to the IEA, most of Norway's electricity supply comes from hydropower (88%), alongside an increasing contribution from wind (10%). As of 2022, renewables accounted for 98.5% of power generation, with the remainder from natural gas and waste.
- SSF's loans to hydropower and solar PV projects support the Paris Agreement's modelled pathways. These imply that almost all electricity is supplied by zero- or low-carbon sources by 2050. In addition, SSF requires all of it customers to adhere to all applicable environmental laws, including Norwegian legislation related to EIAs, to address relevant environmental risks. Furthermore, the issuer's ESG assessment is required for all companies with credit that exceeds NOK3 million, which includes--among others--physical and biodiversity risk considerations. The issuer expects 100% of the proceeds within this project category to go toward hydropower and expects to primarily refinance and upgrade existing facilities. No projects will have exclusive direct connections to high-emitting sectors. As a result, we assess these projects as Dark green.
- Hydropower projects can produce notable emissions during construction and from water reservoirs. We view as positive that the framework includes thresholds for life-cycle emissions or power density for facilities that are not run-of-river and involve reservoirs. The criteria draw on the EU Taxonomy's guidelines for a significant contribution to mitigating climate change and is more ambitious by requiring lifecycle emissions to be below 50gCO2e/kWh, versus 100gCO2e/kWh in the EU Taxonomy.

- Hydropower can pose risks to biodiversity and ecosystems, such as altering water flows and disrupting fish migration. In Norway, these issues are addressed during the licensing process, which involves relevant authorities and includes EIAs for new plants as well as regulations for waterway management. Local impacts can vary, and some older plants operating under outdated licenses may lack effective ecosystem preservation measures, such as provisions for fish migration. Run-of-river plants without artificial reservoirs, which are also included in this framework, generally have a smaller impact on local biodiversity. In our view, the NVE and local municipalities' criteria adequately manage the negative effects on biodiversity.
- Although SSF does not expect to finance solar PV under this category, it informs us that, if solar panels were to be financed, it expects most of them to be installed on rooftops. If ground installations were to take place, they would be at a small scale, and the issuer intends to lend to borrowers that follow applicable Norwegian law, which dictates that an EIA is carried out and biodiversity risks are considered.
- Given the ongoing and future impacts of a changing climate, which in the bank's region include extreme precipitation, flooding, landslides, and avalanche, the resilience of hydropower assets is crucial. Such aspects are covered in the licensing process and regulation of such assets in Norway, while the bank also considers physical climate risk in its credit assessment model for qualifying loans that exceed NOK3 million, which is sector specific.

**Environmentally sustainable management of living natural resources and land use**

| Assessment | Description |
|---|---|
| Medium green | Loans to finance or refinance agricultural activities or projects that meet the following criteria:<br>1. Renewable energy for local power generation:<br>• Solar PV installed on rooftops or on the ground (any ground installations must be brownfield or noncultivated and forest-free fields).<br>• Bioenergy using locally sourced residues or biowaste as feedstock.<br>• Wind power (onshore wind turbines installed at farms).<br>2. Organic farming activities that are certified under the DEBIO certification scheme.<br>3. Improved farming methods that meaningfully contribute to achieving greenhouse gas emission reduction targets set out in “Landbrukets klimaplan 2021-2030,” with a documented effect demonstrated through for example, use of the "Klimakalkulator."<br>Fossil-fuel-powered machinery and the industrial production of meat are not in scope of this framework. |

**Analytical considerations**

- In 2023, agriculture accounted for about 9.6% of Norway's total greenhouse gas emissions. Most emissions from this sector stem directly from livestock, which produces methane, and from nitrous oxide released during fertilizer application and crop cultivation. Emissions from fossil-fuel-powered machinery are less significant. On a global scale, land-use changes related to animal feed production significantly contribute to emissions throughout the value chain. Animal-based foods, especially from livestock, which is included under this framework, generally have a much larger carbon footprint than plant-based alternatives. Additionally, at a local level, the sector affects the environment through, for example, nitrogen runoff from farmland and the depletion of soil nutrients. Agricultural practices that reduce climate emissions from crop and livestock farming and enhance soil health, water quality, and ecosystem integrity are crucial for a low-carbon, climate-resilient future. Sustainable inputs and farming practices, as well as shifting to more plant-based and lower-emission protein sources, contribute to a green transition for this sector.
- The issuer expects to direct 50% of the category’s proceeds toward renewable energy for local power generation, 35% to organic farming activities, and the remaining 15% to improved farming methods. Our overall Medium green shade for the category reflects the varying climate benefits of the underlying projects. We assess 50% of proceeds allocated to renewable energy as Dark green because of the focus on offering long-term, low-carbon solutions to the agricultural sector. We consider the remaining 50% that goes to organic farming and improved farming methods to be Light green due to their

transitional aspects of decarbonizing the agricultural sector. Consequently, when viewed together, we assess the entire project category as Medium green.

- Renewable energy projects for local power generation align with a low-carbon, climate-resilient future and therefore typically receive a Dark green shade. SSF's criteria for its solar panel loans are defined as being installed on rooftops or on the ground at the farm and any ground installations are to be built on brownfield or noncultivated and forest-free fields. The bank does not consider projects that involve clearing new land to develop ground-based solar PV plants. A strength of the framework is that it requires ground-based solar installations to not be constructed on cultivated and cleared areas to reduce the impacts on biodiversity. We view it as a positive that bioenergy will be produced using locally sourced waste-based feedstocks from farms because this will allow for circular waste management and lower transport emissions. The issuer informs us that the waste will be from animal manure, agricultural waste and residues, and sewage sludge.
- We assign SSF's loans to organic farming activities certified under the DEBIO certification scheme as Light green, due to the mix of environmental risks and benefits of organic certification and the inclusion of emissions-intensive livestock. According to the issuer, the farms it intends to finance will produce crops, dairy, and a small share of livestock, including pigs and sheep, and it will exclude the financing of activities that would lead to an increase in livestock herds, which we view as positive. We view organic farming as having some environmental benefits, such as reduced chemical inputs and improved manure management. At the same time, the overall impact on greenhouse gas emissions for this subcategory remains uncertain. Livestock production remains a highly emissions-intensive method of food production. Organic livestock farming is often similar to or, in some cases, more emissions intensive than conventional practices, due to longer livestock lifespans and greater land use, contributing to the Light green shade.
- The improved farming methods subcategory encompasses a range of initiatives aimed at enhancing on-farm environmental performance, such as methane-reducing feed additives, near infrared spectroscopy technology (which improves crop quality, productivity, and overall efficiency through supporting precision agriculture), and replacing fossil-fuel-powered machinery (such as, tractors) with machinery running on electricity or hydrogen, for which we assign the majority of activities a Light green shade. We view as positive that the issuer has excluded any financing of fossil fuel machinery in the framework and has included electric farming machinery.
- Physical climate considerations are considered in the bank's ESG credit model for qualifying loans that exceed NOK3 million, which is sector specific. The bank informs us that, for agricultural loans, it considers among other factors biodiversity, forest conservation, and sustainable management of uncultivated land.

**Sustainable aquaculture and fisheries**

| Assessment | Description |
|---|---|
| Light green | Loans to finance or refinance aquaculture activities that meet either of the following criteria:<br>1. Aquaculture facilities that are certified by the Aquaculture Stewardship Council (ASC).<br>2. Onshore aquaculture facilities with recirculating aquaculture systems.<br>Only aquaculture activities that use 100% sustainable and deforestation-free feed, certified through either the MarinTrust Standard or Marine Stewardship Council (MSC; for the marine ingredients) and through ProTerra or RTRS certification (for the soy ingredients), or similar certification schemes with equivalent requirements, can be financed under this framework.<br>Loans to finance or refinance fishery activities certified by the MSC. |

**Analytical considerations**

- Aquaculture can provide a lower-emission protein alternative to livestock farming. However, the potential climate benefit depends on the sustainability of feed sourcing and product transportation emissions. Biodiversity and ecosystem risks, such as pollution from fish waste, feed, and chemical treatments, as well as wild population impacts from fish escapes and parasites or disease transfer, must also be carefully managed at offshore sites. We assess the project category as Light green, based on criteria for certifications addressing feed-sourcing sustainability and biodiversity safeguards in operations, and a focus on reducing the carbon footprint of these operations. There are still large risks attached to the operation of aquaculture farms, particularly in the issuer's region, which as of 2024 received a red environmental status by the Norwegian

Ministry of Trade, Industry, and Fisheries due to high amounts of sea lice, which can harm local ecosystems and species. This indicates the need for aquaculture farmers to reduce production capacity and growth ambition for the coming years.

- Production of fish feed is often associated with large risks of biodiversity loss and climate emissions, mainly due to soy farming practices, where there is a possibility that demand for soy used in fish feed may drive up deforestation and associated direct and indirect land-use change emissions. As part of the financing criteria in the framework, SSF specifies that any lending under this category to aquaculture farms must ensure compliance with 100% deforestation-free feed, accompanied by certifications such as ProTerra, RTRS, or similar. Additionally, fish feed can also imply biodiversity loss risks when considering overfishing and risks of harmful fishing practices. SSF's criteria for funding aquaculture operations requires ASC certification, which applies limits on the use of wild fish as ingredients while also requiring a responsibly managed source, preferably certified. SSF also addresses these risks by requiring fish-feed inputs to be sourced using the MarinTrust Standard for all marine ingredients used as feed.
- SSF's environmental safeguards and criteria for its loans to the region's aquaculture and fishery sectors rely primarily on lending only to ASC-certified fish farms and MSC-certified fisheries. In our view, these sustainability certifications cover many important environmental topics, such as biodiversity and ecosystem protections, feed sourcing or target fish population sustainability, and pollution management. Although these criteria can contribute to improved fish farming and fishery practices, certification systems vary significantly in how stringently they cover different topics, can contain loopholes, and, in many cases, cannot adequately address larger systemic issues. For these reasons, we assess the criteria within this project category as Light green. Sector-specific physical climate considerations are considered in the bank's ESG model for qualifying loans that exceed NOK3 million. Additionally, the bank informs us that it will screen for risks of sea lice and fish escapes on individual farms receiving lending.

**Clean transportation**

| Assessment | Description |
|---|---|
| Dark green | Loans to finance or refinance any electric transportation solutions, systems, or processes (e.g., fully electric vessels, light- and heavy-duty vehicles, and construction vehicles or machinery), and any related or supporting infrastructure. |

**Analytical considerations**

- Electrification and supporting infrastructure play a key role in decarbonizing the transport sector to align with a low-carbon, climate-resilient future by 2050. However, there are also potential risks related to indirect emissions from a life-cycle perspective (materials sourcing and manufacturing). According to the IEA, in Norway, the transport sector is responsible for 39% of national emissions as of 2022, which will need to decrease significantly if national targets are to be reached by 2030 and beyond.
- SSF may finance projects such as fully electric vehicles (EVs) and vessels, heavy-duty vehicles such as electric buses, electric trucks, electric construction equipment (excavators, dozers, and lifts), and supporting charging infrastructure for both vehicles and vessels. EVs are essential for the transport industry's shift toward a low-carbon future in accordance with the Paris Agreement. Life-cycle savings from EVs depend on the energy mix of the grid that powers them. Norway is well positioned in this regard, since its electricity production is almost entirely from renewable sources, resulting in a low grid emission factor. For these reasons, we assess the project category with as Dark green.
- Due to the rareness of fully-electric-powered heavy machinery, we view this element of the issuer's framework criteria as a strength. Additionally, we view as positive that the issuer will dedicate proceeds under this category to charging infrastructure that is specific to electric vessels in the region, such as local ferries, and has informed us the infrastructure cannot be used by any vessels serving the offshore oil and gas sector.
- There are no requirements regarding lifecycle emissions as part of the procurement process for financed assets and activities. In particular, the production of batteries for EVs and the sourcing of raw materials can have substantial climate and environmental impacts along the value chain.
- Physical climate considerations are considered in the bank's ESG model for qualifying loans that exceed NOK3 million, which is sector specific.

## 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 |

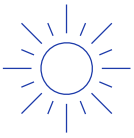
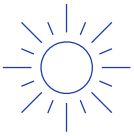
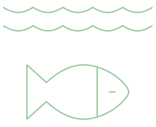
Note: For us to consider use of proceeds aligned with ICMA Principles for a green project, we require project categories directly funded by the financing to be assigned one of the three green Shades.

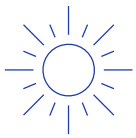
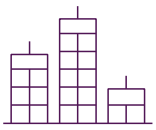
LCCR--Low-carbon climate resilient. An LCCR future is a future aligned with the Paris Agreement; where the global average temperature increase is held below 2 degrees Celsius (2 C), with efforts to limit it to 1.5 C, above pre-industrial levels, while building resilience to the adverse impact of climate 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 (ICMA) 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 |
|---|---|
| Green buildings |  **7. Affordable and clean energy**  **11. Sustainable cities and communities***  **13. Climate action** |
| Renewable energy |  **7. Affordable and clean energy***  **13. Climate action** |
| Environmentally sustainable management of living natural resources and land use |  **2. Zero hunger**  **15. Life on land*** |
| Sustainable aquaculture and fisheries |  **2. Zero hunger**  **14. Life below water*** |

| | | | |
|---|---|---|---|
| Clean transportation |  |  |  |
| | **7. Affordable and clean energy** | **11. Sustainable cities and communities*** | **13. Climate action** |

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

# Related Research

- Analytical Approach: Second Party Opinions, Mar. 6, 2025
- FAQ: Applying Our Integrated Analytical Approach For Second Party Opinions, Mar. 6, 2025
- Analytical Approach: Shades Of Green Assessments, Jul. 27, 2023

# Analytical Contacts

Primary contact

**Alexander Volden**
Oslo
alexander.volden
@spglobal.com

Secondary contacts

**Pierre-Brice Hellsing**
Stockholm
+46 84 40 5906
Pierre-brice.hellsing
@spglobal.com

**Elizabeth Chacko**
Mumbai
elizabeth.chacko
@spglobal.com

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