

Second-Party Opinion

Stora Enso Green Bond

Evaluation Summary

Sustainalytics is of the opinion that the Stora Enso’s Green Bond Framework is robust, credible and impactful, and aligns with the four pillars of the Green Bond Principles 2017¹. Some of its key strengths are that:



USE OF PROCEEDS The eligible categories for the use of proceeds – (i) sustainable forest management, (ii) renewable, low-carbon and eco-efficient products, product technologies and processes, (iii) energy efficiency, (iv) renewable energy and waste to energy, (v) sustainable water management, and (vi) waste management and pollution control – are aligned with those recognized as impactful by the Green Bond Principles. Sustainalytics considers these categories as creating environmentally sustainable benefits.



PROJECT EVALUATION / SELECTION Stora Enso’s project evaluation and selection process is aligned with market best practice, including the Sustainability Council, chaired by the Executive Vice President of Sustainability, which is responsible for project selection and evaluation.



MANAGEMENT OF PROCEEDS Stora Enso’s internal process for managing the proceeds is in line with market practice, including a separate register for the proceeds.



REPORTING Stora Enso intends to report allocation proceeds on an annual basis. In addition, Stora Enso committed to report impact indicators for the eligible categories on an annual basis, such as CO₂ avoided and percentage of land certified by FSC and PEFC.

Evaluation date	February 2018
Issuer Location	Helsinki, Finland

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¹ “The Green Bond Principles 2017”, dated 2 June 2017, issued by the International Capital Market Association (ICMA)

Introduction

Stora Enso Oyj (Stora Enso) is a Finnish forest product company producing paper and packaging solutions as well as pulp and solid wood products. Stora Enso's operations are concentrated in Europe, with most operations in Finland and Sweden, but it also has operations in China, Laos, India, Brazil, Uruguay, and the United States. The company was formed through a merger in 1998 and is headquartered in Helsinki, Finland.

Stora Enso has developed a green bond framework² ('Stora Enso Green Bond Framework') under which it plans to issue multiple green bonds to finance or refinance expenditures of projects or investments controlled and managed by Stora Enso, or within one of Stora Enso group controlled subsidiaries for the following categories:

- (i) Sustainable forest management,
- (ii) Renewable, low-carbon and eco-efficient products, product technologies and processes,
- (iii) Energy efficiency,
- (iv) Renewable energy and waste to energy,
- (v) Sustainable water management, and
- (vi) Waste management and pollution control

Stora Enso has engaged Sustainalytics to provide a Second-Party Opinion on its framework and the framework's environmental credentials.

As part of this engagement, Sustainalytics held conversations with the underwriter to understand the sustainability impact of Stora Enso's business processes and planned use of proceeds, as well as the management of proceeds and reporting aspects of Stora Enso's framework. Sustainalytics also reviewed relevant public documents and non-public information. Following this engagement, some elements of the Green Bond Framework were clarified to ensure alignment with the level of disclosure expected by the Green Bond Principles 2017.³

This document contains Sustainalytics' opinion of the Stora Enso Green Bond Framework and should be read in conjunction with that framework.

² Available online on Stora Enso's corporate website: <http://www.storaenso.com/investors/green-bonds>

³ The Green Bond Principles 2017, dated 2 June 2017, issued by the International Capital Markets Association (ICMA)

Sustainalytics' Opinion

Section 1: Sustainalytics' Opinion on the Stora Enso Green Bond Framework

Summary

Sustainalytics is of the opinion that the Stora Enso Green Bond Framework is robust, credible and impactful, and aligns with the four pillars of the Green Bond Principles 2017 (GBP). Some of its key strengths are that:

- The use of proceeds categories – (i) sustainable forest management, (ii) renewable, low-carbon and eco-efficient products, product technologies and processes, (iii) energy efficiency, (iv) renewable energy and waste to energy, (v) sustainable water management, and (vi) waste management and pollution control – are recognized by the GBP as environmentally impactful. Furthermore, Stora Enso has confirmed to Sustainalytics that proceeds will only be allocated to refinance projects with a look-back period of up to two years.
- Proceeds will be used for forests which have achieved external certification, including FSC and PEFC. FSC is considered to be the best certification system to ensure environmentally responsible, socially beneficial and economically viable management of forests⁴ and as such aligns with market best practice. See [Appendix 1](#) for Sustainalytics' assessment on these standards.
- Stora Enso's Investment Working Group, headed by the CFO, and the Sustainability Council as well as a dedicated green bond team are responsible for project selection and review, which is aligned with market best practice.
- Management of the proceeds is aligned with market practices, including a separate register of eligible projects and net proceeds of the combined green bond issuance.
- Stora Enso intends to report the allocation of proceeds on an annual basis. In addition, the company developed impact indicators for some of the eligible categories, such as avoided CO₂, which is aligned with market practice. Sustainalytics welcomes Stora Enso's commitment to develop relevant KPIs for the eligible project categories as the market and standards develop.

Alignment with Green Bond Principles 2017:

Sustainalytics has determined that the Stora Enso Green Bond Framework aligns to the four pillars of the GBP. For detailed information please refer to [Appendix 2](#): Green Bond/Green Bond Programme External Review Form.

Section 2: Sustainability Strategy of the Issuer

Contribution of framework to Stora Enso's sustainability strategy

Stora Enso's Sustainability Agenda is driven by its goal to "replace fossil-based materials with renewable solutions"⁵ and focuses on 10 salient issues, including: (i) Materials, water, and energy; (ii) Carbon dioxide; and (iii) Forests, plantations, and land use, with targets on certified forest management, GHG emissions reduction and targets to encourage GHG reduction targets in its supply chain. Stora Enso reports on the progress towards these targets, including explanations if targets were not achieved. Stora Enso's sustainability strategy is overseen at board-level⁶ and integrated into its wider business strategy, demonstrating the importance of sustainability in the company. Moreover, in December 2017 Stora Enso signed a new Revolving Credit Facility (RCF) loan which links the pricing of the loan to Stora Enso's ability to reduce GHG emissions, further underpinning the important role of sustainability in the company. Stora Enso's sustainability practices are considered leading⁷ given the company's ambitious science-based GHG-emission

⁴ WWF global: http://wwf.panda.org/about_our_earth/deforestation/forest_sector_transformation/forest_certification/

⁵ Stora Enso corporate website; accessed February 2018: <http://www.storaenso.com/about/purpose-and-values>

⁶ Stora Enso corporate website; accessed February 2018: <http://www.storaenso.com/investors/governance/board-of-directors/global-responsibility-and-ethics-committee>

⁷ Stora Enso was the first forest product company to set science based targets.

targets,⁸ approved by the Science Based Targets initiative.⁹ The company aims to reduce GHG emissions from its operations by 31% per tonne of pulp, paper and board produced by 2030 compared to a 2010 baseline.

Overall, Stora Enso's board-level responsibility for sustainability, the company's public commitments to combat climate change,¹⁰ and its sustainability strategy supported by company-wide policies and related targets are considered strong practices by Sustainalytics. Moreover, the categories in Stora Enso's Green Bond Framework align well with its vision to replace fossil-based products and production. Thus, Sustainalytics considers the issuance of a green bond under this Framework to be well aligned with Stora Enso's sustainability strategy and practices.

Management of potential social and environmental risks

Sustainalytics recognizes that the eligible projects defined in the Stora Enso Green Bond Framework are exposed to social and environmental risks related to biodiversity, water, genetically modified (GM) plants and human rights. Sustainalytics is of the opinion that Stora Enso is well positioned to mitigate these environmental and social risks, based on the following points:

- (i) Stora Enso has a comprehensive environmental management system that includes environmental impact assessments for new projects, ISO 14001 for all its production units,¹¹ and monitoring of its impact on biodiversity, soil, and water resources throughout the forest management cycle, which is considered best practice. Sustainalytics is of the opinion that Stora Enso should keep striving to maintain FSC certification for the majority of its forests, to ensure alignment with international best practices.
- (ii) Achievement of Forest Stewardship Council's® (FSC) certification for the majority of forests for which the proceeds are used, reducing the risk associated with the Endorsement of Forest Certification (PEFC), which has faced criticism from civil society organizations. FSC is considered to be the strongest forest certification system for sustainable forest management.¹² See [Appendix 1](#) for Sustainalytics' assessment of the relative strengths and weaknesses of FSC and PEFC.
- (iii) Stora Enso's human rights commitments and due diligence programme are considered strong, including commitments to respect indigenous rights and to include human rights considerations in its investment decisions. The company has due diligence processes to identify potential negative human rights impacts and risks prior to investments,¹³ traceability standards, and mechanisms to engage and consult with relevant stakeholders, reducing the risk of human rights violations in its operations and supply chain. Further, the company has taken measures to resolve past controversies related to community engagement and land rights in Guangxi (China), including the promise to correct contracts in 2012, renew contracts, and improve its leasing processes and community engagement activities.¹⁴ The company reports that, as of the end of 2015, 63% of contracts from the area were free from contractual defects, i.e. the ownership of land was clear or resolved. Stora Enso also reports that it plans to terminate remaining irreconcilable contracts in 2017.¹⁵
- (iv) Stora Enso has committed to ensure that no green bond proceeds will be allocated to the use of genetically-engineered/modified (GM) trees. While the company conducts research related to GM plants, it does not use GM plants in its operations, and no green bond proceeds will be used for activities related to GM plants.

⁸ Science based targets were developed in line with the level of decarbonization required to keep global warming at 2°C

⁹ The Science Based Targets Initiative is a collaboration between CDP, the United Nations Global Compact, World Resources Institute (WRI) and the WWF, which helps companies determine how much they must cut emissions to prevent the worst impacts of climate change: <http://sciencebasedtargets.org/>

¹⁰ Stora Enso joined the We Mean Business coalition, and signed a pledge to combat global warming in October 2017

¹¹ "All our production units are certified or in the process of being certified to the ISO 14001 environmental management system standard." Stora Enso Sustainability Report 2016

¹² WWF global: http://wwf.panda.org/about_our_earth/deforestation/forest_sector_transformation/forest_certification/

¹³ This includes all Stora Enso board, pulp, paper, or sawmills built on greenfield sites, industrial scale plantation projects, and any large-scale expansions of existing facilities.

¹⁴ Stora Enso corporate website, accessed February 2018: <http://www.storaenso.com/sustainability/community>

¹⁵ Stora Enso Sustainability Report 2016:

http://assets.storaenso.com/se/com/DownloadCenterDocuments/Sustainability_Report_2016.pdf#page=56

Given Stora Enso's (i) comprehensive environmental and social management approach, (ii) the use of FSC certification and (iii) an exclusion on GM trees from the use of proceeds, Sustainalytics is confident that Stora Enso is well prepared to manage potential environmental and social risks associated with the use of proceeds.

Section 3: Impact of Use of Proceeds

Importance of sustainability in the forest product sector

Forest products, includes the pulp and paper industry, which as one of the largest industrial sectors in the world, the pulp and paper industry has an enormous influence on global forests. Unsustainable pulpwood production can negatively impact climate by releasing carbon into the atmosphere, threaten fragile ecosystems and species, and cause soil erosion. The Agriculture, Forestry, and Land Use sector (AFOLU) contributed 24% of global GHG emissions in 2010.¹⁶ Moreover, in the EU, where the company procures most of its wood,¹⁷ forests absorbed 10% of the EU's GHG emissions in 2014,¹⁸ indicating the importance of forests in achieving EU's GHG reduction targets and the importance of managing these forests sustainably.

Impacts of GHG emission reductions in the forestry, forest product sector

Sustainalytics is of the opinion that, given the focus of Stora Enso's Green Bond Framework on sustainable forest management and technologies to improve energy efficiency, green bonds issued under the Framework will be impactful and contribute to reducing GHG emissions from the AFOLU sector.

The contribution of sustainable forest management and restoration of forests to reducing forest degradation/deforestation and mitigating GHG emissions from the AFOLU sector is supported by the IPCC. The IPCC has identified three primary strategies to mitigate GHG emissions from the sector:¹⁹

- (i) Reduction/prevention of emissions to the atmosphere by conserving existing carbon pools in soils or vegetation that would otherwise be lost or by reducing emissions of methane and other GHGs;
- (ii) Sequestration—enhancing the uptake of carbon in terrestrial reservoirs, thereby removing CO₂ from the atmosphere;
- (iii) Reducing CO₂ emissions by substituting fossil fuels or energy-intensive products for biological products.

Stora Enso's focus on sustainable forest management, including recognized certification by FSC and PEFC, contributes to GHG emission reduction and the protection of carbon terrestrial sinks. Moreover, the company's investment in research and development (R&D) for eco-efficient products, which are intended to replace fossil fuel products on the market, contributes to strategy (iii) stated above.

In the global forest industry, 55% of GHG emissions from forest products manufacturing is caused by fuel combustion at facilities and 39% comes from purchased electricity.²⁰ The production of pulp and paper is energy intensive,²¹ with studies suggesting that the reduction of GHG emissions in the industry over the long term depends on the adoption of key technologies such as energy efficiency, heat recovery techniques and bioenergy.²²

¹⁶ US Environmental Protection Agency, Global Green-house Gas Data: <https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data>

¹⁷ Stora Enso's wood procurement is to 36% from Finland, 26% Sweden, 14% Central Europe, 8% Russia and 5% Baltic Countries. <http://www.storaenso.com/sustainability/forests-plantations-land-use>

¹⁸ Eurostat, March 2017: <http://ec.europa.eu/eurostat/web/products-eurostat-news/-/EDN-20170320-1?inheritRedirect=true&redirect=%2Feurostat%2F>

¹⁹ IPCC assessment report: https://www.ipcc.ch/pdf/assessment-report/ar5/wg3/ipcc_wg3_ar5_chapter11.pdf

²⁰ FAO report: Impact of the global forest industry on atmospheric green-house gas, 2010: <http://www.fao.org/docrep/012/i1580e/i1580e00.pdf>

²¹ Climate Strategies; Sector analysis for the Climate Strategies Project on Inclusion of Consumption in Carbon Pricing; May 2016: https://www.diw.de/documents/dokumentenarchiv/17/diw_01.c.534645.de/cs-pulp-and-paper.pdf

²² Industrial decarbonization of the pulp and paper sector, Paul W. Griffin, Applied Thermal Engineering, 1 February 2018: A UK perspective: <https://www.sciencedirect.com/science/article/pii/S1359431117358210>

Stora Enso's focus on increasing the use of renewable energy, including waste to energy, will contribute to reducing GHG emissions from the sector. Sustainalytics welcomes Stora Enso's efforts to aim for a minimum threshold of 20% energy efficiency improvement for the projects in the eligible category of energy efficiency.

Importance of R&D to replace fossil fuel based products with bio-based products

The important role of wood-based fuels to replace fossil fuels has been highlighted by the EU and the FAO²³: Fostering a bio-based economy can provide "alternatives to fossil based products and energy and can contribute to the circular economy".²⁴ The EU's summary on position papers on the bio-based economy highlights the need for strong research and innovation to support the development of a bio-based economy.²⁵ The importance of research is further highlighted by the EU's increased financial support for research and innovation related to the bio-economy.²⁶

While it is difficult to estimate the positive future impact of R&D on the environment, Stora Enso provides several examples on its website of products that contribute to reducing fossil fuel use and contributing to a circular economy, including packaging that reduces energy used for transportation,²⁷ 100% recyclable food packaging,²⁸ building components from wood material²⁹ and reducing raw material use through innovations such as Micro Fibrillated Cellulose.

Given the examples provided by Stora Enso, Sustainalytics is of the opinion that Stora Enso's R&D in renewable³⁰, low-carbon and eco-efficient products and production processes has the potential to contribute to reducing the use of fossil based products. Sustainalytics recommends that Stora Enso provide detailed reporting on the goals of R&D financed by the green bond proceeds, the assumed positive environmental impact, as well as results of the R&D activities financed.

Inclusion of operational expenditures (OPEX)

Sustainalytics recognizes that the use of proceeds may be allocated to OPEX (operational expenditures) that is specific to eligible projects. Given the nature of the projects, Sustainalytics believes that OPEX will be important to maintain projects and will contribute to sustaining positive environmental impacts. Sustainalytics recommends that Stora Enso ensure that OPEX is tracked project-by-project and that OPEX is project specific, rather than general expenditures for the company.

²³ Use of wood and wood products in the light of the climate change discussion, March 2003:

http://www.unece.lu.edu/biofuels/documents/2003-2006/bf03_016.pdf

²⁴ Communication from The Commission to The European Parliament, The Council, The European Economic and Social Committee and the Committee of the Regions; Closing the loop - An EU action plan for the Circular Economy, December 2015:

<http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1452152692467&uri=CELEX:52015DC0614>

²⁵ European Commission; Bio-based economy in Europe: state of play and future potential - Part 2; May 2011:

<https://ec.europa.eu/research/consultations/bioeconomy/bio-based-economy-for-europe-part2.pdf>

²⁶ European Commission; Commission prepares to move its bio-economy efforts up a gear; November 2017:

<http://ec.europa.eu/research/index.cfm?na=na-161117&pg=newsalert&year=2017>

²⁷ Stora Enso corporate website, accessed February 2018: <http://www.storaenso.com/newsandmedia/eco-packaging-for-the-fish-industry>

²⁸ Stora Enso corporate website, accessed February 2018: <http://www.storaenso.com/newsandmedia/more-with-less-with-mfc>

²⁹ Stora Enso corporate website, accessed February 2018: <http://buildingandliving.storaenso.com/news/news-and-press-releases/launching-building-systems-by-stora-enso-across-europe>

³⁰ Stora Enso defines renewable products as wood based products. <http://www.storaenso.com/about/lahti-2017-press-eng>

Alignment with/contribution to SDGs

The Sustainable Development Goals (SDGs) were set in September 2015 and form an agenda for achieving sustainable development by the year 2030. Stora Enso's green bonds will advance the following SDG goals and targets:

Use of Proceeds Category	SDG	SDG target
Sustainable Forest Management	15. Life on Land	<p>15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally.</p> <p>15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species.</p>
Waste to energy / Energy from biomaterial and waste products	7. Affordable and Clean Energy	7.2 By 2030, increase substantially the share of renewable energy in the global energy mix.
Energy Efficiency	9. Industry, Innovation and Infrastructure	9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes.
Pollution prevention and control	12. Responsible Consumption	12.4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment.
Eco-efficient products, product technologies and processes	6. Clean Water and Sanitation	<p>12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.</p> <p>6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally.</p>

Conclusion

Stora Enso's Green Bond Framework aims to support the company's Sustainability Agenda and, through sustainable forest management, energy efficiency improvements and replacement of fossil-fuel based products, contribute to GHG reductions from the forestry and forest product sector. Moreover, the Framework's use of proceeds categories are recognized as impactful by the GBP. The company's processes for project selection and proceeds management are aligned with market best practices. In addition, the company developed KPIs for some categories and Sustainalytics welcomes Stora Enso's commitment to develop relevant KPIs for all eligible project categories as the market and standards develop. Overall, Sustainalytics considers Stora Enso's Green Bond Framework to be robust, credible and transparent.

Appendices

Appendix 1: Sustainalytics' Analysis of FSC and PEFC Certifications

FSC and PEFC are both based on rigorous standards and on a multi-stakeholder structure. Both organizations are in line with international norms such as the International Labor Organization (ILO) conventions, the Convention on Biological Diversity (CBD), and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). In addition to compliance with laws in the country of certification, both schemes have a set of minimum requirements that companies are required to meet to obtain and maintain certifications. These requirements include compliance with standards around sustainable management of forests, management of environmental impact of operations, preservation of biodiversity, management of socio-economic and community relations, and sourcing of sustainable wood (chain of custody). Furthermore, both FSC and PEFC require external annual audits to ensure compliance, and achieve and maintain certification. Despite these similarities, PEFC has faced certain criticisms from civil society actors. These are highlighted below:

- (i) *Type of organization:* Since the FSC is an international labelling and certification system, it sets its own global standards. The PEFC, in contrast, is not a standard setter, but a mutual recognition scheme. The PEFC sets sustainability benchmarks according to international norms, and endorses national certification schemes that comply with these benchmarks. A common criticism of this model is that it allows for more flexibility in the interpretation of international PEFC benchmarks as per regional, cultural, and socio-economic context, and results in the endorsement of less rigorous national certification schemes. However, the process for being endorsed by the PEFC is thorough; any national certification system seeking to obtain PEFC endorsement must submit to a comprehensive assessment process, including independent evaluation and public consultation. This evaluation of compliance with international PEFC benchmarks is carried out by independent, accredited certification organizations.
- (ii) *Indigenous People's Rights:* FSC and PEFC both identify indigenous rights as an important standard in forest management. Both certification schemes require that forest management activities consider and do not infringe on indigenous people's rights, and the activities are carried out using frameworks ensuring their free and informed consent. A criticism of PEFC is that it requires only engagement with indigenous people in forest management decisions, while the FSC provides performance-oriented targets, and requires forest managers operating on indigenous lands to obtain indigenous people's consent through binding agreements.
- (iii) *Sourcing wood from non-certified sources:* Both FSC and the PEFC have established standards around sourcing wood from non-certified and controversial sources. FSC's standards direct forest managers to avoid wood harvested in violation of traditional and civil rights. A criticism of the comparable PEFC standard is that it limits identification of controversially sourced wood to situations where the local legislation is violated. However, PEFC standards explicitly reference the violation of local, national, and international legislation with regards to worker's and indigenous people's rights as being a controversial source of wood.

Appendix 2: Green Bond / Green Bond Programme - External Review Form

Section 1. Basic Information

Issuer name:	Stora Enso
Green Bond ISIN or Issuer Green Bond Framework Name, if applicable: <i>[specify as appropriate]</i>	
Review provider's name:	Sustainalytics
Completion date of this form:	February 28, 2018
Publication date of review publication: <i>[where appropriate, specify if it is an update and add reference to earlier relevant review]</i>	February 28, 2018

Section 2. Review overview

SCOPE OF REVIEW

The following may be used or adapted, where appropriate, to summarise the scope of the review.

The review assessed the following elements and confirmed their alignment with the GBPs:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Use of Proceeds | <input checked="" type="checkbox"/> Process for Project Evaluation and Selection |
| <input checked="" type="checkbox"/> Management of Proceeds | <input checked="" type="checkbox"/> Reporting |

ROLE(S) OF REVIEW PROVIDER

- | | |
|---|--|
| <input checked="" type="checkbox"/> Consultancy (incl. 2 nd opinion) | <input type="checkbox"/> Certification |
| <input type="checkbox"/> Verification | <input type="checkbox"/> Rating |
| <input type="checkbox"/> Other <i>(please specify)</i> : | |

Note: In case of multiple reviews / different providers, please provide separate forms for each review.

EXECUTIVE SUMMARY OF REVIEW and/or LINK TO FULL REVIEW *(if applicable)*

Please refer to the summary above.

Section 3. Detailed review

Reviewers are encouraged to provide the information below to the extent possible and use the comment section to explain the scope of their review.

1. USE OF PROCEEDS

Overall comment on section (*if applicable*):

Sustainalytics is of the opinion that the use of proceeds helps advance Stora Enso's sustainability to "replace fossil-based materials with renewable solutions"³¹ and that the company is well positioned to issue a green bond. The use of proceeds will be allocated to the following eligible categories:

- (i) Sustainable forest management,
- (ii) Renewable, low-carbon and eco-efficient products, product technologies and processes,
- (iii) Energy efficiency,
- (iv) Renewable energy and waste to energy,
- (v) Sustainable water management, and
- (vi) Waste management and pollution control

The categories are aligned with the green bond categories for green bonds recognized by the Green Bond Principles 2017.

Sustainalytics believes that the use of proceeds from Stora Enso's green bond will contribute reduce GHG emission in the forestry and forest products sector and replace fossil based products and processes, as well as contribute to the sustainability of forest as important carbon sinks.

Use of proceeds categories as per GBP:

- | | |
|--|---|
| <input checked="" type="checkbox"/> Renewable energy | <input checked="" type="checkbox"/> Energy efficiency |
| <input checked="" type="checkbox"/> Pollution prevention and control | <input checked="" type="checkbox"/> Environmentally sustainable management of living natural resources and land use |
| <input type="checkbox"/> Terrestrial and aquatic biodiversity conservation | <input type="checkbox"/> Clean transportation |
| <input checked="" type="checkbox"/> Sustainable water and wastewater management | <input type="checkbox"/> Climate change adaptation |
| <input checked="" type="checkbox"/> Eco-efficient and/or circular economy adapted products, production technologies and processes | <input type="checkbox"/> Green buildings |
| <input type="checkbox"/> Unknown at issuance but currently expected to conform with GBP categories, or other eligible areas not yet stated in GBPs | <input type="checkbox"/> Other (<i>please specify</i>): |

If applicable please specify the environmental taxonomy, if other than GBPs:

2. PROCESS FOR PROJECT EVALUATION AND SELECTION

Overall comment on section (if applicable):

³¹Stora Enso corporate website, accessed February 2018: <http://www.storaenso.com/about/purpose-and-values>

Stora Enso's Investment Working Group (IWG), which is headed by the CFO, reviews all projects financed with the green bond's proceeds. The project approval is conducted by the Sustainability Council and which reviews the projects alignment with the use of proceeds categories. In addition, a dedicated green bond team was formed for evaluation and selection, which aligns with market best practice.

Evaluation and selection

- | | |
|--|---|
| <input checked="" type="checkbox"/> Credentials on the issuer's environmental sustainability objectives | <input checked="" type="checkbox"/> Documented process to determine that projects fit within defined categories |
| <input checked="" type="checkbox"/> Defined and transparent criteria for projects eligible for Green Bond proceeds | <input checked="" type="checkbox"/> Documented process to identify and manage potential ESG risks associated with the project |
| <input checked="" type="checkbox"/> Summary criteria for project evaluation and selection publicly available | <input type="checkbox"/> Other (<i>please specify</i>): |

Information on Responsibilities and Accountability

- | | |
|--|--|
| <input checked="" type="checkbox"/> Evaluation / Selection criteria subject to external advice or verification | <input type="checkbox"/> In-house assessment |
| <input type="checkbox"/> Other (<i>please specify</i>): | |

3. MANAGEMENT OF PROCEEDS

Overall comment on section (*if applicable*):

Stora Enso will keep and monitor a separate register of eligible projects and net proceeds of the combined green bond issuance. Unused proceeds from the green bond will be invested according to Stora Enso's liquidity and/or liability management activities, which is aligned with market practice.

Tracking of proceeds:

- Green Bond proceeds segregated or tracked by the issuer in an appropriate manner
- Disclosure of intended types of temporary investment instruments for unallocated proceeds
- Other (*please specify*):

Additional disclosure:

- | | |
|---|---|
| <input type="checkbox"/> Allocations to future investments only | <input checked="" type="checkbox"/> Allocations to both existing and future investments |
| <input type="checkbox"/> Allocation to individual disbursements | <input type="checkbox"/> Allocation to a portfolio of disbursements |
| <input checked="" type="checkbox"/> Disclosure of portfolio balance of unallocated proceeds | <input type="checkbox"/> Other (<i>please specify</i>): |

4. REPORTING

Overall comment on section (if applicable):

Stora Enso committed to provide annual updates on its activities related to the green bonds issued under the Stora Enso Green Bond Framework, including the allocation of proceeds to eligible categories, the amount of unallocated proceeds and impact metrics, which is aligned with market standards. Sustainalytics welcomes Stora Enso's commitment to develop relevant KPIs for the eligible project categories as the market and standards develop.

Use of proceeds reporting:

- | | |
|--|--|
| <input type="checkbox"/> Project-by-project | <input checked="" type="checkbox"/> On a project portfolio basis |
| <input type="checkbox"/> Linkage to individual bond(s) | <input type="checkbox"/> Other (<i>please specify</i>): |

Information reported:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Allocated amounts | <input type="checkbox"/> Green Bond financed share of total investment |
| <input type="checkbox"/> Other (<i>please specify</i>): | |

Frequency:

- | | |
|---|--------------------------------------|
| <input checked="" type="checkbox"/> Annual | <input type="checkbox"/> Semi-annual |
| <input type="checkbox"/> Other (<i>please specify</i>): | |

Impact reporting:

- | | |
|--|--|
| <input type="checkbox"/> Project-by-project | <input checked="" type="checkbox"/> On a project portfolio basis |
| <input type="checkbox"/> Linkage to individual bond(s) | <input type="checkbox"/> Other (<i>please specify</i>): |

Frequency:

- | | |
|---|--------------------------------------|
| <input checked="" type="checkbox"/> Annual | <input type="checkbox"/> Semi-annual |
| <input type="checkbox"/> Other (<i>please specify</i>): | |

Information reported (expected or ex-post):

- | | |
|---|---|
| <input checked="" type="checkbox"/> GHG Emissions / Savings | <input checked="" type="checkbox"/> Energy Savings |
| <input checked="" type="checkbox"/> Decrease in water use | <input checked="" type="checkbox"/> Other ESG indicators (<i>please specify</i>): |
| | - Total land area certified to FSC and PEFC |
| | - Ecolabels |
| | - Externally validated life cycle calculations such as product carbon footprints |
| | - Amount of waste reduced |

Means of Disclosure

- | | |
|---|--|
| <input type="checkbox"/> Information published in financial report | <input checked="" type="checkbox"/> Information published in sustainability report |
| <input type="checkbox"/> Information published in ad hoc documents | <input checked="" type="checkbox"/> Other (please specify): Corporate website |
| <input type="checkbox"/> Reporting reviewed (if yes, please specify which parts of the reporting are subject to external review): | |

Where appropriate, please specify name and date of publication in the useful links section.

USEFUL LINKS (e.g. to review provider methodology or credentials, to issuer's documentation, etc.)

SPECIFY OTHER EXTERNAL REVIEWS AVAILABLE, IF APPROPRIATE

Type(s) of Review provided:

- | | |
|--|--|
| <input type="checkbox"/> Consultancy (incl. 2 nd opinion) | <input type="checkbox"/> Certification |
| <input type="checkbox"/> Verification / Audit | <input type="checkbox"/> Rating |
| <input type="checkbox"/> Other (<i>please specify</i>): | |

Review provider(s):

Date of publication:

ABOUT ROLE(S) OF REVIEW PROVIDERS AS DEFINED BY THE GBP

- i. Consultant Review: An issuer can seek advice from consultants and/or institutions with recognized expertise in environmental sustainability or other aspects of the issuance of a Green Bond, such as the establishment/review of an issuer's Green Bond framework. "Second Party Opinions" may fall into this category.
- ii. Verification: An issuer can have its Green Bond, associated Green Bond framework, or underlying assets independently verified by qualified parties, such as auditors. In contrast to certification, verification may focus on alignment with internal standards or claims made by the issuer. Evaluation of the environmentally sustainable features of underlying assets may be termed verification and may reference external criteria.
- iii. Certification: An issuer can have its Green Bond or associated Green Bond framework or Use of Proceeds certified against an external green assessment standard. An assessment standard defines criteria, and alignment with such criteria is tested by qualified third parties / certifiers.
- iv. Rating: An issuer can have its Green Bond or associated Green Bond framework rated by qualified third parties, such as specialised research providers or rating agencies. Green Bond ratings are separate from an issuer's ESG rating as they typically apply to individual securities or Green Bond frameworks / programmes.

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