

Second-Party Opinion

Barry Callebaut Sustainability Bond Framework

Evaluation Summary

Sustainalytics is of the opinion that the Barry Callebaut Sustainability Bond Framework is robust, credible and impactful, and aligns with the Sustainability Bond Guidelines 2018. This assessment is based on the following:



USE OF PROCEEDS The eligible category for the use of proceeds is aligned with those recognized by both the Green Bond Principles (GBP) and Social Bond Principles (SBP). While the framework focuses on financing operational expenditures, Sustainalytics considers the purchase of responsibly sourced raw materials and financing for farmer support programmes to have positive environmental or social impacts and to advance the UN Sustainable Development Goals 1, 8, 12, 13 and 15.



PROJECT EVALUATION / SELECTION Barry Callebaut’s internal process of evaluating and selecting projects is aligned with market practice. Barry Callebaut’s Corporate Governance, Sourcing, Treasury, and Corporate Communications departments are responsible for project selection and evaluation.



MANAGEMENT OF PROCEEDS Aligned with market practice, Barry Callebaut’s Treasury department will track the use of proceeds for eligible projects. Pending full allocation, proceeds may be temporarily held in Barry Callebaut’s treasury liquidity portfolio, in cash or other short-term and liquid instruments or used to pay back a portion of its outstanding indebtedness.



REPORTING Barry Callebaut intends to report on allocation of proceeds and on impact in its Forever Chocolate progress reports and Cocoa Horizon reports on an annual basis until full allocation. Regarding impact, Barry Callebaut is committed to reporting on the percentage of sustainably sourced cocoa, the number of cocoa farmers lifted out of poverty, the number of cocoa farmers who have access to coaching, inputs such as tools and seedlings, or finance and the productivity improvement per hectare of these farmers. In Sustainalytics’ view, reporting on these metrics is in line with market practice.

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Introduction

Barry Callebaut is the world's leading manufacturer of high-quality cocoa and chocolate products measured by sales volume in fiscal year 2017/18. Its customers include food and beverage manufacturers and professional users of chocolate, including artisans, chocolatiers, pastry chefs and bakers. Though it does not own any cocoa plantations, Barry Callebaut is fully vertically integrated from raw material (cocoa bean) sourcing to chocolate production. The company sources a fourth of the world's cocoa bean production, while its ingredients find their way into a fourth of the world's chocolate and cocoa products.

Barry Callebaut has developed the Barry Callebaut Sustainability Bond Framework (the "framework") under which it is planning to issue sustainability bonds and/or Schuldscheindarlehen (SSD) and use the proceeds to finance and refinance, in whole or in part, existing and future expenditures related to the responsible sourcing of cocoa:

- Sustainable Cocoa Purchasing
 - Purchasing costs of sustainable cocoa from farmers who joined the Cocoa Horizons programme
 - Purchasing costs of sustainable cocoa with sustainability certifications by third parties, including:
 - Rainforest Alliance
 - UTZ
 - Fairtrade
 - EU Organic and USDA Organic
- Farmer Support Programmes
 - Investments and expenditures to advance cocoa farmer prosperity, including access to coaching, inputs for tools and seedlings, and/or financial solutions

Barry Callebaut engaged Sustainalytics to review the Barry Callebaut Sustainability Bond Framework and provide a second-party opinion on the alignment of the sustainability bond¹ with the Sustainability Bond Guidelines 2018 (the "SBG"), as administered by the International Capital Market Association (the "ICMA"),² and the framework's environmental and social credentials. This framework has been published in a separate document.

As part of this engagement, Sustainalytics held conversations with various members of Barry Callebaut's management team to understand the sustainability impact of their business processes and planned use of proceeds, as well as management of proceeds and reporting aspects of Barry Callebaut's sustainability bond. Sustainalytics also reviewed relevant public documents and non-public information.

This document contains Sustainalytics' opinion of the Barry Callebaut Sustainability Bond Framework and should be read in conjunction with that framework.

¹ Sustainability Bonds are aligned with the four core components of both the Green Bond Principles and Social Bond Principles, with the former being especially relevant to underlying Green Projects and the latter to underlying Social Projects.

² ICMA's Sustainability Bond Guidelines 2018 <https://www.icmagroup.org/green-social-and-sustainability-bonds/sustainability-bond-guidelines-sbg/>

Sustainalytics' Opinion

Section 1: Sustainalytics' Opinion on the Barry Callebaut Sustainability Bond Framework

Summary

Sustainalytics is of the opinion that the Barry Callebaut Sustainability Bond Framework is credible and impactful, and aligns with the four core components of the Green Bond Principles 2018 and Social Bond Principles 2018. Sustainalytics highlights the following elements of Barry Callebaut's sustainability bond framework:

- Use of Proceeds:
 - The use of proceeds falls under the GBP and SBP categories of (i) environmentally sustainable management of natural resources and land use and (ii) socio-economic advancement and empowerment, which are recognized as impactful by the GBP and SBP.
 - The bond will finance OPEX (operational expenditures) only, namely sustainable cocoa sourcing (purchasing) and farmer support programmes offered through the Cocoa Horizons programme, the company's internal sustainability programme focused on cocoa farmers. Given the nature of the projects, Sustainalytics believes that OPEX will be important to contribute to sustaining positive social and environmental impacts. Barry Callebaut is monitoring expenditures for sustainably sourced cocoa and for farmer support programmes per certification and can allocate and match these expenditures specifically to the bond proceeds, verifying that OPEX is directly tied to eligible assets (sustainable cocoa).
 - Barry Callebaut intends to source cocoa from certification schemes such as Fair Trade, Rainforest Alliance, UTZ and EU Organic and USDA Organic, as well as through its Cocoa Horizons programme, as explained in more detail below (Assessment of external certification schemes and Cocoa Horizons programme) and in Appendix 1. Sustainalytics recognizes that these initiatives differ in their standards, application and scale of impact. However, Sustainalytics views each as impactful overall, and notes that only an average of 23% of land used for cocoa cultivation has received certification to the above external standards.³ As such, Sustainalytics is of the opinion that there is significant scope through which purchasing sustainable cocoa can contribute to promoting the adoption of impactful practices in the industry either through certification or impactful company programmes. Sustainalytics notes that organic certifications that are not awarded in conjunction with other certifications account for less than 3% of annual purchases of sustainable cocoa purchases as of 2017/2018.
 - Barry Callebaut intends to disclose the amount of new and existing financing in its annual reporting.
- Project Selection Process:
 - Aligned with market practice, Barry Callebaut's Corporate Governance, Sourcing, Treasury, and Corporate Communications departments are responsible for project selection and evaluation and will ensure that all projects are aligned with the eligibility criteria of the Framework. Additionally, selected projects must comply with relevant local regulations and the Company's minimum ESG requirements.
- Management of Proceeds:
 - Aligned with market practice, Barry Callebaut's Treasury department will allocate proceeds to an eligible sustainability projects portfolio. Investments in eligible projects will be tracked by the company.
 - Pending allocation, proceeds may be temporarily held in Barry Callebaut's treasury liquidity portfolio, in cash or other short term and liquid instruments, or used to pay back a portion of its outstanding debt.
- Reporting:
 - Aligned with market practice, Barry Callebaut intends to report on an annual basis and until full allocation on the allocation of proceeds, including the amount of unallocated proceeds. Barry

³http://www.intracen.org/uploadedFiles/intracenorg/Content/Publications/State-of-Sustainable-Market-2017_web.pdf

Callebaut also intends to report on an annual basis and until full allocation on the impact of use of proceeds, including the percentage of cocoa sourced sustainably, the number of cocoa farmers lifted out of poverty, the number of cocoa farmers who have access to coaching, inputs such as tools and seedlings, or finance, and the productivity improvements per hectare of these farmers. Barry Callebaut already reports on these key impact indicators for sustainably sourced cocoa in its annual Forever Chocolate Progress report and on its website, and the sustainability bond reporting will be provided as part of these reports.

Alignment with Sustainability Bond Guidelines 2018

Sustainalytics has determined that the Barry Callebaut Sustainability Bond Framework aligns to the four core components of the Green Bond Principles 2018 and Social Bond Principles 2018. For detailed information please refer to Appendix 2: Sustainability Bond/ Sustainability Bond Programme External Review Form.

Assessment of external certification schemes and Cocoa Horizons programme

Sustainalytics has analyzed the initiatives for sustainable procurement using the following criteria:

- The impact of the initiative is clear
- The initiative establishes a minimum threshold for impact
- The initiative addresses key environmental and social risks
- Verification of programme participants' compliance with the initiative is conducted by an independent third party
- The initiative was developed with third party expertise and/or through a robust multi-stakeholder process

As per the criteria/framework described above, Sustainalytics is of the opinion that all of the included external cocoa certifications are, overall, impactful. However, Sustainalytics also acknowledges that certification schemes face challenges in achieving the level of impact envisioned through their standards. For example, farmer premiums or productivity gains may not always offset the cost of certification, and deforestation is addressed to different extents by the standards (see section 3: Impact of Use of Proceeds).⁴ Having said this, Sustainalytics notes that by promoting the purchase of certified cocoa, Barry Callebaut is contributing to the development of a market for cocoa that is grown with the aim of improving farmer livelihoods and promoting sustainable land use and resource management.

Barry Callebaut also intends to source cocoa from farmers participating in the Cocoa Horizons programme and to provide funding to the programme. Cocoa Horizons is Barry Callebaut's own initiative, aimed at generating positive socioeconomic impact in cocoa farming communities while promoting deforestation free cocoa farming and addressing the root causes of child labour. The Cocoa Horizons cocoa is purchased at a premium, part of which is paid directly to farmers and part of which is invested in community development programmes, productivity interventions, environmental projects and programme administration. The vision of the programme is fourfold:

- Professional cocoa farmers, which are self-driven and self-sustaining;
- The supply chain is free from deforestation, and includes activities to mitigate climate change, such as diversification of crops, carbon sequestration, and other environmentally friendly practices;
- Farmer groups are enabled to support and engage farmers on this trajectory, by initiating Farm Business Plans (FBPs) supported by Farm Finance and Farm Services; and
- Communities take responsibility for and have accountability on children's and human rights. There is a governance structure in place that enables them to address needs and lobby government support, to provide solutions to the root causes of child labour and human rights abuses.

The programme sets expectations of farmers and farmer groups in relation to six areas: (i) environment, (ii) good agricultural practices, (iii) management & performance, (iv) social aspects, (v) training, and (vi) transparency of premium flows. These expectations are defined by 244 requirements, which prescribe implementation guidance for farms and farmer groups. Furthermore, the programme requires its participants

⁴<http://documents.worldbank.org/curated/en/876071495118818649/pdf/115144-REVISED-20170530-Cocoa-final-updated.pdf>

to commit to key policies, including Barry Callebaut's Supplier Code, and the Cocoa Horizons Charter, Child Labour Charter and Declaration of Protected Forests.

Though Cocoa Horizons is not a certification system, Sustainalytics notes that cocoa beans sold through the programme espouse a similar approach to a self-declaration, as outlined under ISO 14020 (Environmental Labels and Declarations), which are intended to communicate improvements in environmental performance and stimulate demand. The programme emphasizes impact through its Key Performance Indicators (KPIs). Sustainalytics considers the scope of this programme to be positioned for credible impact. Furthermore, Barry Callebaut has confirmed its intention to bring the programme's standard development process into conformance with the ISEAL Alliance Credibility Principles, which is used for many soft commodities such as Rainforest Alliance, UTZ, Bonsucro.⁵ Sustainalytics encourages Barry Callebaut to provide updates regarding the programme's alignment with ISEAL standards and ISO guidelines as it develops.

Barry Callebaut externally verifies impact metrics associated with its Cocoa Horizons programme and conducts internal audits for approximately one third of its 244 requirements. The KPIs associated with these audits are a mixture of compliance and progress-based metrics. Sustainalytics also notes that Barry Callebaut conducts internal audits on a subset of indicators on farms where it sources from directly. Barry Callebaut confirmed to Sustainalytics that it directly audits intermediaries, such as cooperatives, using a randomized sample of about 1/3 of the groups.

As of November 2018, approximately half of Cocoa Horizons' cocoa bean procurement was directly through owned direct sourcing operations and the other half directly from cooperatives. Furthermore, in cases of significant non-compliance, farmers are formally requested to remediate the issue. Failure to effectively remediate the issue results in the farmers' removal from the programme. With regards to less significant non-conformities, there is an expectation that farmer groups take action, and Barry Callebaut confirmed that a farmer group would be removed from the programme following repeated cases of non-conformity.

Cocoa Horizons promotes integrated pest management techniques and considers the use of pesticides as a last resort. Pesticides excluded from the programme include:

- Pesticides claiming active ingredients classified as "highly hazardous" by the FAO,
- Pesticides banned by the EU under Annex 1 of Regulation 649/2012/EC,
- Pesticides containing active ingredients classified as WHO 1a, or listed in the Montreal Protocol or the Stockholm Convention on Persistent Organic Pollutants.

Furthermore, the programme expects farmers to phase out pesticides containing active ingredients classified as WHO1B or listed in the Basel or Rotterdam Conventions within three years of joining. That said, in light of the environmental and health-related risks associated with harmful pesticides, Sustainalytics strongly encourages Barry Callebaut to continuously provide updates of its approved pesticides for Cocoa Horizons in line with international standards and the regulations of leading jurisdictions, such as the EU, US and Japan.

⁵ <https://www.isealalliance.org/credible-sustainability-standards/iseal-credibility-principles>

Section 2: Sustainability Performance of the Issuer

Contribution of framework to Barry Callebaut's sustainability strategy

Barry Callebaut's sustainability strategy, named "Forever Chocolate", is focused on four main areas: sustainable sourcing of raw materials, child labour eradication, farmers' livelihoods and carbon and forest footprint.⁶ The corporate sustainability programme and the related activities are overseen by a CSR Steering Committee, presided by the CEO. The committee meets quarterly to review the goals status and the progress of the sustainability strategy.⁷

Barry Callebaut has established specific objectives for each focus area of its sustainability programme. By 2025 the company aims to:

- lift more than 500,000 cocoa farmers out of poverty
- eradicate child labour from its supply chain
- be carbon and forest positive
- and to have 100% of sustainable ingredients used in its final products

In 2017/18, 44% of Barry Callebaut's cocoa beans were sourced sustainably through externally certified sources (e.g. UTZ, Rainforest Alliance, Fairtrade and Organic) or through the company's Cocoa Horizons programme.⁸ As part of Cocoa Horizons, Barry Callebaut also engages with NGOs, local governments and farmers to promote the development of the cocoa farming industry, with the aim of increasing productivity and generating positive social and environmental benefits for farmers' communities. For example, in 2017/18, 12,395 farmers took advantage of Barry Callebaut's Farm Services, and received coaching, inputs such as tools and seedlings or support to access financing.⁹ Furthermore, to tackle child labour practices, Barry Callebaut has begun rolling out a monitoring system to identify and remediate cases of child labour in its supply chain. In 2017/2018 the initiative covered 21 farmer groups and reached 12,018 farmers.¹⁰

Considering Barry Callebaut's overall sustainability commitment, the activities implemented under the "Forever Chocolate" programme and the time-bound objectives set for improving farmer livelihoods, working towards zero child labour, achieving a carbon and forest positive value chain and sourcing 100% of raw materials sustainably, Sustainalytics is of the opinion that Barry Callebaut is well-positioned to issue Sustainability Bonds and/or SSD and that the eligible category specified under Barry Callebaut's Sustainability Bond Framework will support the execution of the corporate sustainability strategy.

Well positioned to address common environmental and social risks associated with the projects

Although Sustainalytics recognizes that the proceeds from Barry Callebaut's Sustainability Bond Framework will be invested in Eligible Sustainability Projects aligned with the ICMA Green and Social Bond Principles, it is acknowledged that the eligible categories also entail social and environmental risks. The key risks are related to the potential for human rights abuses and child labour in the cocoa supply chain and biodiversity risks related to agricultural production and pesticide use.

Sustainalytics is of the opinion that Barry Callebaut has adequate policies and programmes in place to mitigate the main environmental and social risks linked with the use of proceeds, as follows:

- i. Barry Callebaut explicitly condemns child labour¹¹ and requires its suppliers, through its Supplier Code, to adopt the International Labour Organization (ILO) conventions No. 138, on the minimum age for admission to employment and work, and No. 182, on the worst forms of child labour. As part of the supplier code, non-farmer suppliers are required to undergo a SMETA audit and share it with Barry Callebaut through Sedex.¹² At the farm level, to identify and remediate cases of child labour, Barry

⁶ https://www.barry-callebaut.com/system/files/download/progress_report_2016_17_6.pdf

⁷ <https://www.barry-callebaut.com/sustainability/sustainable-cocoa-products/governance>

⁸ Barry Callebaut Annual Report 2017/2018

⁹ Barry Callebaut Annual Report 2017/2018

¹⁰ Barry Callebaut Annual Report 2017/2018

¹¹ https://www.barry-callebaut.com/system/files/download/coc_2016_english.pdf

¹² SMETA is an audit methodology designed for suppliers to share one audit with multiple customers, meeting multiple customer requirements and reducing duplication in ethical auditing.

Sedex is a not for profit, membership organisation. Through its online data base, Sedex shares ethical supply chain data so that brands and retailers can see how their suppliers are meeting their social and ethical responsibilities.

Callebaut is in the process of implementing its own Child Labour Monitoring and Remediation System (CLMRS), promoted by agencies like the International Cocoa Initiative (ICI). The company tracks the percentage of farmers in its supply chain, having in place a system to prevent, monitor and remediate child labour abuses.¹³ In addition, the company recognizes that addressing root-causes of poverty is a long-term solution to child labor and supports female empowerment, education for children in cocoa growing communities and awareness training for farmers. Through initiatives like Cocoa Horizons it collaborates with local governments and communities to provide the education infrastructure and the financial support to encourage farming families to send their children to school.¹⁴ Barry Callebaut confirmed to Sustainalytics that these interventions are targeted at the most at risk areas in the company's Cocoa Supply chain, as identified through a risk assessment that is conducted at the farmer and community level. Sustainalytics is of the opinion that these efforts by Barry Callebaut contribute to mitigating child labour in an industry and region with a high level of related exposure. However, Sustainalytics encourages Barry Callebaut to implement time-bound targets for achieving supply chain traceability and full roll-out of its child labour monitoring and remediation activities.

- ii. Regarding risk related to biodiversity and land degradation, Barry Callebaut contributed to the development of the Cocoa and Forest Initiative Frameworks for Action, an agreement aiming to prevent activities that cause or contribute to deforestation or forest degradation in cocoa farming, signed during the UN Climate Conference (COP23) in 2017.¹⁵ To mitigate potential negative environmental impacts, such as biodiversity loss and soil degradation, the company uses sustainability certifications such as UTZ, Rainforest Alliance, Fairtrade, Organic and its own Cocoa Horizons criteria from which Barry Callebaut procured 44% of its raw cocoa in 2017/18 (36% in 2016/17).¹⁶ Through Cocoa Horizons, the company also engages with its suppliers to train them on good agricultural practices. Barry Callebaut requires the cooperatives it collaborates with to pledge not to source or buy cocoa from protected areas. Member farmers of the cooperatives are only eligible for inclusion if their land has not been deforested since 2005. The Cocoa Horizons programme also has the aim of being forest and carbon positive and promotes progress in this direction through training and incentivizing farmers to increase the density of cocoa trees, planting non-cocoa trees, promote carbon sequestration and limit agricultural emissions. Barry Callebaut's Supplier Code of Conduct includes a clause on suppliers' implementation of monitoring, compliance and remediation activities as they relate to deforestation, which is also subject to a SMETA audit for non-farmer suppliers.¹⁷ Barry Callebaut is currently looking for partners to implement reforestation initiatives.

Section 3: Impact of Use of Proceeds

The use of proceeds for Responsible Sourcing is recognized as impactful by the GBP and SBP. Sustainalytics has focused below on where the impact is specifically relevant in the local context.

Sustainable cocoa's contribution to Socio-economic advancement and empowerment

Estimates from the World Cocoa Foundation (WCF) indicate that approximately two-thirds of the cocoa farmers operating in West Africa (a region responsible for around 69% of the global raw cocoa supply) live in extreme poverty, i.e. with less than USD1.9 per day,¹⁸ as defined by the World Bank, with child labour being one of the consequences of poverty.¹⁹ This indicates the need to improve the socio-economic position of cocoa farmers in the region.

Barry Callebaut's sustainable volume of cocoa beans from the Cocoa Horizons Programme and external certification schemes like UTZ, Rainforest Alliance and Fairtrade are expected to have a positive socioeconomic impact in cocoa producing regions. In 2017/2018 the programme included almost 108,000 farmers, from Côte d'Ivoire, Ghana and Cameroon.²⁰ Through a focus on increasing productivity and

Barry Callebaut Supplier Code

¹³ https://www.barry-callebaut.com/system/files/download/forever_chocolate_plan_book.pdf

¹⁴ https://www.barry-callebaut.com/system/files/download/gri_standards_core_option_report.pdf

¹⁵ <https://www.worldcocoafoundation.org/initiative/cocoa-forests-initiative/>

¹⁶ Barry Callebaut Annual Report 2017/2018

¹⁷ Barry Callebaut Supplier Code

¹⁸ <https://web.archive.org/web/20111013152355/http://www.worldcocoafoundation.org/learn-about-cocoa/documents/CocoaMarketUpdateasof5.18.10.pdf>

¹⁹ <https://www.dol.gov/agencies/ilab/resources/reports/child-labor/c%3%B4te-dlvoire>

²⁰ <https://www.cocoahorizons.org/sites/www.cocoahorizons.org/files/Mid-Year%20Review%20-%202017-18%20-%20English.pdf>

community empowerment, the programme has expanded farmers' access to training, planting materials and business support programmes, while supporting children's education and female empowerment.²¹ Farmers are paid a premium when selling their beans through cocoa horizons, and participants are able to access financial tools, such as mobile banking technology which facilitates remote payment.²² Similarly, positive impact is achieved through the purchase of externally certified raw materials. UTZ, Rainforest Alliance and Fairtrade incorporate key social elements into their criteria that aim to address farmer livelihoods. While the approach to farmer livelihoods is not consistent across these schemes and there is debate as to whether economic benefits of selling certified crops adequately offset certification costs in all cases where certification is pursued,²³ some key strategies include improving crop productivity, farm efficiency and crop quality and providing farmers with a premium for their crops, for example. Through its sustainable purchasing activities, Barry Callebaut estimates that it helped lift 169,460 cocoa farmers out of poverty in 2017/2018.²⁴ Given the above, Sustainalytics is of the opinion that purchasing sustainable cocoa, as defined in the eligibility criteria of the Barry Callebaut Sustainability Bond Framework can contribute to improving the socio-economic situation of cocoa framers.

Sustainable cocoa's contribution to the sustainable land use and natural resource management

Cocoa farming takes place in tropical regions, and cocoa production is estimated to have resulted in approximately two to three million hectares of deforestation between 1998-2008.²⁵ Low crop productivity is viewed as an important factor in cocoa driven deforestation, as farmers with limited economic resources to invest in new technologies and training opt to open new land to increase their harvests and boost their incomes.²⁶ It is estimated that the global cocoa harvest stands at less than one third of its potential due to limited inputs and extension services for farmers,²⁷ suggesting that volumes can expand significantly while limiting pressure on forests.

Given this context, Barry Callebaut's sustainable volume of cocoa beans from the Cocoa Horizons Programme and external certification programmes is expected to have a positive impact in the regions where raw materials are sourced. Barry Callebaut's flagship programme for sustainable cocoa, Cocoa Horizons, addresses deforestation directly through supporting replanting. Additionally, to limit pressure on forests, the programme emphasizes increasing the density of cocoa plants on farms. The three main certification schemes used by Barry Callebaut, UTZ, Rainforest Alliance and Fairtrade, similarly include environmental criteria related to deforestation. Rainforest Alliance forbids the destruction of forests and natural ecosystems, a requirement which extends to secondary forests as well as high conservation value primary forests. UTZ and Fairtrade are less strict in this regard, as they limit deforestation of primary forests, but allow for farmers to develop secondary forest and degraded land under certain circumstances.²⁸ This point is significant when considering that secondary forests account for 92% and 90% of forests in Ghana and Cote D'Ivoire respectively.²⁹ However, Sustainalytics believes that these programmes' focus on promoting productivity, improving farmer livelihoods and fostering the implementation of sustainable agriculture techniques provides a framework for contributing to a reduction in cocoa driven deforestation.

In addition to addressing deforestation and environmental issues directly through planting techniques and restrictions on land development, Cocoa Horizons, UTZ, Rainforest Alliance and Fairtrade all target the underlying socio-economic factors driving deforestation. The relevant elements of these initiatives overlap with those mentioned above in the context of socio-economic advancement and empowerment. In 2016/2017 Cocoa Horizons accredited 560 community professionals on farming practices and 20,706 farmers received at least one productivity intervention through the programme.³⁰ Furthermore, productivity packages were delivered to 3,888 farmers.

²¹ <https://www.cocoahorizons.org/sites/www.cocoahorizons.org/files/Mid-Year%20Review%20-%202017-18%20-%20English.pdf>

²² <https://www.cocoahorizons.org/productivity>

²³ <http://documents.worldbank.org/curated/en/876071495118818649/pdf/115144-REVISED-20170530-Cocoa-final-updated.pdf>

²⁴ <https://annual-report-2017-18.barry-callebaut.com/>

²⁵ <http://documents.worldbank.org/curated/en/876071495118818649/pdf/115144-REVISED-20170530-Cocoa-final-updated.pdf>

²⁶ <https://resourcetrade.earth/stories/cocoa-trade-climate-change-and-deforestation#section-183>

²⁷ http://www.intracen.org/uploadedFiles/intracenorg/Content/Publications/State-of-Sustainable-Market-2017_web.pdf

²⁸ <http://documents.worldbank.org/curated/en/876071495118818649/pdf/115144-REVISED-20170530-Cocoa-final-updated.pdf>

²⁹ <http://documents.worldbank.org/curated/en/876071495118818649/pdf/115144-REVISED-20170530-Cocoa-final-updated.pdf>

³⁰ <https://www.cocoahorizons.org/sites/www.cocoahorizons.org/files/2016-17%20Assurance%20Verification%20Report.pdf>

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. This sustainability bond advances the following SDG goals and targets:

Use of Proceeds Category	SDG	SDG target
Socio-economic advancement and empowerment	1. No Poverty	1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance
	8. Decent Work and Economic Growth	8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services
	12. Responsible Consumption and Production	12.2 By 2030, achieve the sustainable management and efficient use of natural resources
Environmentally sustainable management of natural resources and land use	13. Climate Action	13.1 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning
	15. Life on land	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

Conclusion

Barry Callebaut has developed the Barry Callebaut Sustainability Bond Framework, under which it intends to issue sustainability bonds and/or SSD, with the intention to finance the purchase of sustainable cocoa and fund farmer support programmes, specifically the Cocoa Horizons programme. The framework defines sustainable cocoa as cocoa purchased through Cocoa Horizons or certified to UTZ, Rainforest Alliance, Fairtrade, EU or USDA organic requirements. Sustainalytics considers the framework's exclusive focus on OPEX as meaningful, as OPEX will be linked to the purchase of sustainable Cocoa and farmer support programmes. Furthermore, Barry Callebaut will be able to verify that OPEX is linked to specific eligible assets, sustainable cocoa.

Sustainalytics recognizes the myriad challenges associated with cocoa production, including farmer poverty, child labour exposure and deforestation risks, but is confident that Barry Callebaut's approach will promote sustainability in the cocoa industry by ensuring a market for cocoa grown with the intention of promoting socioeconomic and community development while mitigating social and environmental risks. In this regard, Sustainalytics encourages Barry Callebaut to continuously update the environmental and social criteria of Cocoa Horizons to reflect leading standards with regards to key issues such as pesticides, human rights, environmental protection and deforestation.

Barry Callebaut's Corporate Governance, Sourcing, Treasury, and Corporate Communications departments are responsible for project selection and evaluation and proceeds will be tracked by the Treasury department. Barry Callebaut will also report on a range of impact metrics associated with sustainable sourcing volumes, productivity and poverty alleviation.

Based on the above, Sustainalytics is confident that Barry Callebaut is well-positioned to issue sustainability bonds and/or SSD, and that the Barry Callebaut Sustainability Bond Framework is robust, transparent, and in alignment with the Green Bond Principles 2018 and Social Bond Principles 2018.

Appendices

Appendix 1: Raw Material Sourcing Initiatives Overview

	<i>Cocoa Horizons</i>	<i>Rainforest Alliance</i>	<i>UTZ</i>	<i>FAIRTRADE</i>	<i>EU Organic</i>	<i>USDA Organic</i>
Background	The Cocoa Horizons' Programme was introduced by Barry Callebaut through the Cocoa Horizons Foundation, an independent, non-profit organization that was established in 2015 with the mission to improve the livelihoods of cocoa farmers and their communities. To strengthen traceability and transparency, data is managed and tracked on registered farms and cocoa from farm to warehouse.	The Rainforest Alliance Seal is a global certification system for Agriculture, Forestry and Tourism. The Rainforest Alliance certification indicates compliance with the organization's standards for environmental, social and economic sustainability. Rainforest Alliance merged with UTZ in January 2018.	The UTZ Label is a global certification system for coffee, cocoa, tea and hazelnuts. The UTZ certification incorporates environmental, social, farm management and farming practices considerations. UTZ merged with Rainforest Alliance in January 2018.	The FAIRTRADE Mark is a global certification system that seeks to address power imbalances in trading relationships. Organizations certified to Fairtrade standards must meet general, trade, product and business development requirements.	The EU Organic Farming is a European wide label organized under the European Commission's Council Regulation (EC) no 834/2007. The regulation covers the organic production and labelling of organic products including live or unprocessed agricultural projects, processed agricultural products for use of food, feed, and vegetative propagating material and seeds for cultivation.	The USDA Organic label is a US certification system overseen, administered and enforced by the National Organic Program of the United States Department of Agriculture. The US Organic label is regulated by the US Organic Foods Production Act of 1990 and involves input from the National Organic Standards Board (a Federal Advisory Committee made up of 15 members of the public) and the public.
Clear positive impact	Promoting productivity and community development through sustainable cocoa farming.	Promoting sustainable practices in agriculture, forestry and tourism.	Promoting sustainable practices in Coffee, Cocoa Tea and Hazelnut farming and trading.	Promoting sustainable practices for agricultural products, consumer goods and gold.	Promotion of a sustainable management system that respects nature's systems, contributes to biological diversity, uses energy responsibly, respects high animal welfare standards.	Promoting sustainable farming practices that improve water quality, conserve energy, increase biodiversity and contribute to soil health.
Minimum standards	Cocoa Horizons provides farmers with training on good agricultural practices, Farmer Business Plans, encourages pesticide use as a last resort and facilitates child labour awareness raising, monitoring and remediation. The	Rainforest alliance establishes a minimum threshold for impact through critical criteria, and requires farmers to go beyond by demonstrating improved sustainability on 14 continuous improvement criteria.	UTZ establishes a minimum threshold for impact through mandatory points and additional points, and requires farmers to go beyond by demonstrating compliance with an	Fairtrade has a set of core requirements that must be met and development requirements that are intended to foster continuous improvement and which certified	The EU Organic Farming system prohibits the use of GMOs (minimum 95% GMO free), the use of ionizing radiation and sets core requirements for plant production, production rules for seaweed, livestock production rules, production rules for aquaculture animals.	The USDA Organic seal sets strict production and labeling requirements: <ul style="list-style-type: none"> • produced without genetic engineering, ionizing radiation or sewage sludge • produced using allowed substances based on a comprehensive list of authorized synthetic and non-synthetic substances

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	company requires members to make commitments related to child labour and deforestation and other social and environmental issues outlined in its supplier policy code, child labour charter and declaration of protected forests		increasingly large proportion of both mandatory and additional points.	producers must make progress on.		overseen by a USDA NOP authorized agent
Scope of certification or programme	The programme incorporates general expectations for farms, farmer groups and programmes and requires key commitments with regards to child labour and deforestation. Programme criteria (244 indicators) cover six areas: (i) environment, (ii) good agricultural practices, (iii) management & performance, (iv) social aspects, (v) training and (vi) transparency of premium flows.	Rainforest alliance addresses key risks such as human rights, child labour, pesticide use and biodiversity use through its criteria.	UTZ addresses key risks such as human rights, child labour, pesticide use and biodiversity use through its criteria.	Fairtrade addresses key risks through its requirements, including child labour, forced labour and pesticide use.	The EU Organic Farming system addresses key risks such as substance use (e.g. pesticides, soluble fertilizers, soil conditioners or plant protection products), the maintenance and enhancement of soil life, natural soil fertility, soil stability and biodiversity, preventing and combating soil damage (compaction, erosion).	The USDA Organic system addresses key risks such as substance use through the regulation of synthetic and non-synthetic substances to preserve soil quality and in line with federal guidelines on animal raising practices, pest and weed control and the use of additives.
Verification of standards and risk mitigation	Barry Callebaut conducts internal audits on a subset of programme criteria. Barry Callebaut confirmed that a farmer group would be removed from the programme following continuous non-conformities with limited actions to address the issue. The programme uses a combination of compliance and progress-based performance indicators.	Certified entities undergo third party verification to ensure compliance with criteria and continuous improvement.	Certified entities undergo third party verification to ensure compliance with criteria and continuous improvement.	Certified entities undergo audits to ensure compliance with criteria and continuous improvement.	Certified entities undergo audits to ensure compliance with criteria and continuous improvement at least once a year, or more often based on a risk assessment.	The USDA seal has a twofold enforcement mechanism, one by Organic Certifiers and one by the USDA Agricultural Marketing Services. The two bodies undergo audits to ensure compliance with criteria and continuous improvement at least once a year or unannounced.
Third party expertise and multi-stakeholder process	The Cocoa Horizons programme was developed with expert input in relation to general expectations	Standard setting is aligned with the ISEAL Standard Setting Code.	Standard setting is aligned with the ISEAL Standard Setting Code.	Standard setting is aligned with the ISEAL Standard Setting Code.	The EU Organic Farming is a government-based standard resulting from public consultations and third-party deliberations in line	The USDA Organic seal is organized by the National Organic Program which develops the rules and regulations for the production, handling, labeling and enforcement

	<p>related to environmental issues. Furthermore, Barry Callebaut has confirmed its intention to bring the programme's standard development process into conformance with the ISEAL standards setting code.</p>				<p>with the European Commission's typical legislative approach.</p>	<p>of all USDA organic products. This process receives input from the national Organic Standards Board (a Federal Advisory Committee made of 15 members of the public) and the general public.</p>
Performance Display						
Third-party verified	<p>Barry Callebaut externally verifies impact metrics associated with its programme via PWC.</p>	<ul style="list-style-type: none"> Africert Conservacion y Desarrollo Certified S.A. Imaflora IMO India CERES IBD Indocert NaturaCert Productos y Procesos Sostenables, A.C. NEPCon 	<ul style="list-style-type: none"> 60 UTZ approved certification bodies split by country and by relevant commodity (coffee, cocoa, tea, hazelnut, herbals, Rooibos) 	<ul style="list-style-type: none"> FLO-CERT GmbH. FLO-CERT is the largest certifier for Fairtrade, responsible for the certification of all producers and most traders. 	<p>Every Member State must designate one or more private and/or public control authorities in charge for the organic production and labelling of organic products in the EU Member States.</p>	<p>80 certifying agents are USDA accredited and authorized to certify operations under the USDA organic standards. 48 of the 80 certifying authorities are US based and 32 are in foreign countries. Most certifying agents are directly accredited by the USDA National Organic Program, with an additional 21 members being officially authorized through recognition agreements between US and other governments.</p>

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Qualitative considerations	N/A	Global recognition across 76 countries around the world. There are 763 Rainforest Alliance certified products and more than 1,354,057 people which have conducted training, certification and verification under the Rainforest Alliance standard. Rigorous on the enforcement of minimum standards and strong governance over the implementation of social and environmental mitigation processes.	Global recognition across 131 countries around the world. There are 987,000 UTZ Certified farmers in the UTZ programme with more than 368,000 workers on the UTZ certified farms in 41 producing countries and more than 3.4 million hectares of UTZ certified crops. The UTZ name or label is present on more than 15,000 products in 131 countries worldwide. Rigorous on the enforcement of minimum standards and strong governance over the implementation of social and environmental mitigation processes.	Global recognition across 74 countries present in the Fairtrade System. The system covers 1.4 million farmers and workers in 1,140 producer organizations. The Fairtrade certification scheme is less strict on the scope of the environmental and social requirements as it does not cover human rights issues and impact on biodiversity.	The EU Organic Farming system is widely recognized across all 28 Member States. Currently, 11.9% million hectares are currently certified under the system, with the whole organic area representing 6.2% of the total utilized agricultural area in the European Union.	Under the USDA Organic seal, the US federal legislation allows three levels of organic foods, namely: purely organic products made entirely with certified organic ingredient and labeled 100% organic, products with at least 95% organic ingredients. Both categories are allowed to be certified USDA Organic. A third category with at least 70% organic ingredients may be labeled as "made with organic ingredients", but cannot display the USDA Organic seal.
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Appendix 2: Sustainability Bond / Sustainability Bond Programme - External Review Form

Section 1. Basic Information

Issuer name: Barry Callebaut

Sustainability Bond ISIN or Issuer Sustainability Bond Framework Name, if applicable: Barry Callebaut Sustainability Bond Framework
[specify as appropriate]

Review provider's name: Sustainalytics

Completion date of this form: 20 November 2018

Publication date of review publication: *[where appropriate, specify if it is an update and add reference to earlier relevant review]*

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 and SBPs:

- | | |
|--|--|
| <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 Executive 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*):

The eligible category for the use of proceeds is aligned with those recognized by both the Green Bond Principles and Social Bond Principles. While the framework focuses on financing operational expenditures, Sustainalytics considers the purchase of responsibly sourced raw materials and financing for farmer support programmes to have positive environmental or social impacts and to advance the UN Sustainable Development Goals 1, 8, 12, 13 and 15.

Use of proceeds categories as per GBP:

- | | |
|---|---|
| <input type="checkbox"/> Renewable energy | <input type="checkbox"/> Energy efficiency |
| <input 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 type="checkbox"/> Sustainable water and wastewater management | <input type="checkbox"/> Climate change adaptation |
| <input 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:

Use of proceeds categories as per SBP:

- | | |
|--|---|
| <input type="checkbox"/> Affordable basic infrastructure | <input type="checkbox"/> Access to essential services |
| <input type="checkbox"/> Affordable housing | <input type="checkbox"/> Employment generation (through SME financing and microfinance) |
| <input type="checkbox"/> Food security | <input checked="" type="checkbox"/> Socioeconomic advancement and empowerment |
| <input type="checkbox"/> Unknown at issuance but currently expected to conform with SBP categories, or other eligible areas not yet stated in SBPs | <input type="checkbox"/> Other (please specify): |

If applicable please specify the social taxonomy, if other than SBPs:

2. PROCESS FOR PROJECT EVALUATION AND SELECTION

Overall comment on section (if applicable):

Barry Callebaut's internal process of evaluating and selecting projects is aligned with market practice. Barry Callebaut's Corporate Governance, Sourcing, Treasury, and Corporate Communications departments are responsible for project selection and evaluation.

Evaluation and selection

- | | |
|---|---|
| <input checked="" type="checkbox"/> Credentials on the issuer's social and green 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 Sustainability 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 checked="" type="checkbox"/> In-house assessment |
| <input type="checkbox"/> Other (please specify): | |

3. MANAGEMENT OF PROCEEDS

Overall comment on section *(if applicable)*:

Aligned with market practice, Barry Callebaut's Treasury department will track the use of proceeds for eligible projects. Pending full allocation, proceeds may be temporarily held in Barry Callebaut's treasury liquidity portfolio, in cash or other short-term and liquid instruments or used to pay back a portion of its outstanding indebtedness.

Tracking of proceeds:

- | |
|---|
| <input checked="" type="checkbox"/> Sustainability Bond proceeds segregated or tracked by the issuer in an appropriate manner |
| <input type="checkbox"/> Disclosure of intended types of temporary investment instruments for unallocated proceeds |
| <input type="checkbox"/> Other <i>(please specify)</i> : |

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)*:

Barry Callebaut intends to report on allocation of proceeds and on impact in its Forever Chocolate progress reports and Cocoa Horizon reports on an annual basis until full allocation. Regarding impact, Barry Callebaut is committed to reporting on the percentage of sustainably sourced cocoa, the number of cocoa farmers lifted out of poverty, the number of cocoa farmers who have access to coaching, inputs such as tools and seedlings, or finance and the productivity improvement per hectare of these farmers. In Sustainalytics' view, reporting on these metrics is in line with market practice.

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:

- Allocated amounts
- Sustainability Bond financed share of total investment

Other (please specify):

Frequency:

- Annual
- Semi-annual

Other (please specify):

Impact reporting:

- Project-by-project
- On a project portfolio basis
- Linkage to individual bond(s)
- Other (please specify):

Frequency:

- Annual
- Semi-annual

Other (please specify):

Information reported (expected or ex-post):

- GHG Emissions / Savings
- Energy Savings
- Decrease in water use
- Number of beneficiaries
- Target populations
- Other ESG indicators (please specify): % of sustainably sourced cocoa, Number of cocoa farmers lifted out of poverty, Number cocoa farmers who have access to coaching, inputs such as tools and seedlings, or finance, Productivity improvement per hectare of these farmers

Means of Disclosure

- Information published in financial report
- Information published in sustainability report
- Information published in ad hoc documents
- Other (please specify): Barry Callebaut's Forever Chocolate Progress Reports
- 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 AND THE SBP**

- i. Consultant Review: An issuer can seek advice from consultants and/or institutions with recognized expertise in environmental and social sustainability or other aspects of the issuance of a Sustainability Bond, such as the establishment/review of an issuer's Sustainability Bond framework. "Second Party Opinions" may fall into this category.
- ii. Verification: An issuer can have its Sustainability Bond, associated Sustainability 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 and socially sustainable features of underlying assets may be termed verification and may reference external criteria.
- iii. Certification: An issuer can have its Sustainability Bond or associated Sustainability Bond framework or Use of Proceeds certified against an external green and social 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 Sustainability Bond or associated Sustainability Bond framework rated by qualified third parties, such as specialised research providers or rating agencies. Sustainability Bond ratings are separate from an issuer's ESG rating as they typically apply to individual securities or Sustainability Bond frameworks / programmes.

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For more information, visit www.sustainalytics.com

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