

Second-Party Opinion

Banco de Desenvolvimento de Minas Gerais (BDMG) Sustainability Bond Framework



Evaluation Summary

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



USE OF PROCEEDS The eligible categories for the use of proceeds – Sustainable Agriculture and Sustainable Management of Living Natural Resources, Renewable Energy and Energy Efficiency, Sustainable Water and Wastewater Management, Clean Transportation, Pollution Prevention and Control, Access to Essential Services - Health, Access to Essential Services - Education, Socioeconomic Empowerment - Gender inclusion, Employment Generation - Micro and small enterprises, Affordable Basic Infrastructure - Inclusive and sustainable urbanization, and Access to Essential Services - Economic recovery after disasters – are aligned with those recognized by both the Green Bond Principles and Social Bond Principles. Sustainalytics considers that the eligible categories will lead to positive environmental or social impacts and advance the UN Sustainable Development Goals, specifically SDG Goals 3, 4, 5, 6, 7, 8, 9, 11, 12 and 15.



PROJECT EVALUATION / SELECTION BDMG's Credit and Renegotiation Committee will be responsible for evaluating and approving projects against the eligibility and exclusionary criteria and in alignment with the Bank's internal socio-environmental policies. The Committee is comprised of representatives from various departments including, Credit Analysis, Operations, Credit Management, Products, Risks and Internal Control, Finance and Legal. Sustainalytics considers the project selection process in line with market practice.



MANAGEMENT OF PROCEEDS BDMG's Financial Management department will oversee the management of proceeds, which will be registered as a unique source by the Bank's established internal accounting functions. Pending allocation, proceeds will be held in the Bank's cash account or invested in high-liquidity and low-risk instruments, and will in no case be invested in projects which are misaligned with the goals of the Framework. This is in line with market practice.



REPORTING BDMG intends to report on both the allocation and impact of proceeds on an annual basis. Allocation reporting will include a breakdown by eligibility category and region, while impact reporting will include relevant KPIs, presented on an aggregate level per use of proceeds category, as well as representative case studies. BDMG has committed to providing at least one impact indicator for each eligible category. This is in line with market practice.

Evaluation date	May 28, 2020
Issuer Location	Belo Horizonte, State of Minas Gerais, Brazil

Report Sections

Introduction.....	2
Sustainalytics' Opinion	3
Appendices.....	12

For inquiries, contact the Sustainable Finance Solutions project team:

Zach Margolis (Toronto)

Project Manager
zach.margolis@sustainalytics.com
(+1) 647 695 4341

Tina Ghaemmaghami (Toronto)

Project Support
tina.ghaemmaghami@sustainalytics.com
(+1) 647 264 6680

Paramjot Kaur (New York)

Client Relations
susfinance.americas@sustainalytics.com
(+1) 646 518 9623

Introduction

The Banco de Desenvolvimento de Minas Gerais (“BDMG”, the “Bank”, or the “Issuer”) is a state-owned development bank in Brazil, with the goal of supporting economic, financial, and social development in the state of Minas Gerais. Founded in 1962, the Bank provides financing for businesses of all sizes in numerous sectors as well as for public infrastructure projects.

BDMG has developed the BDMG Sustainability Bond Framework (the “Framework”) under which it intends to issue sustainability bond(s) and use the proceeds to finance and/or refinance, in whole or in part, loans to eligible projects or operations that generate clear social and environmental benefits in all economic sectors.

The Framework defines eligible green categories in the following areas:

1. Sustainable Agriculture and Sustainable Management of Living Natural Resources
2. Renewable Energy and Energy Efficiency
3. Sustainable Water and Wastewater Management
4. Clean Transportation
5. Pollution Prevention and Control

The Framework defines eligible social categories in the following areas:

1. Access to Essential Services - Health
2. Access to Essential Services - Education
3. Socioeconomic Empowerment - Gender inclusion
4. Employment Generation - Micro and small enterprises
5. Affordable Basic Infrastructure - Inclusive and sustainable urbanization
6. Access to Essential Services - Economic recovery after disasters

This Framework builds upon the Bank’s 2018 Green Bond Framework, and includes recategorization in some areas and an overall expansion of eligible green projects and activities, while the social categories are all new entries.

BDMG engaged Sustainalytics to review the BDMG Sustainability Bond Framework, dated May 2020, and provide a Second-Party Opinion on the Framework’s environmental and social credentials and its alignment with the Sustainability Bond Guidelines 2018 (SBG).¹ This Framework has been published in a separate document.²

Scope of work and limitations of Sustainalytics Second-Party Opinion

Sustainalytics’ Second-Party Opinion reflects Sustainalytics’ independent³ opinion on the alignment of the reviewed Framework with the current market standards and the extent to which the eligible categories are credible and impactful.

As part of the Second-Party Opinion, Sustainalytics assessed the following:

- The Framework’s alignment with the ICMA Sustainability Bond Guidelines 2018;
- The credibility and anticipated positive impacts of the use of proceeds;
- The alignment of the Issuer’s sustainability strategy and performance and sustainability risk management in relation to the use of proceeds.

For the use of proceeds assessment, Sustainalytics relied on its internal taxonomy, version 1.3, which is informed by market practice and Sustainalytics expertise as an ESG research provider.

As part of this engagement, Sustainalytics held conversations with various members of BDMG’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 the Framework. BDMG representatives have

¹ The Sustainability Bond Guidelines are administered by the International Capital Market Association and are available at <https://www.icmagroup.org/green-social-and-sustainability-bonds/sustainability-bond-guidelines-sbg/>

² The BDMG Sustainability Bond Framework will be made available on The Development Bank of Minas Gerais’ website.

³ When operating multiple lines of business that serve a variety of client types, objective research is a cornerstone of Sustainalytics and ensuring analyst independence is paramount to producing objective, actionable research. Sustainalytics has therefore put in place a robust conflict management framework that specifically addresses the need for analyst independence, consistency of process, structural separation of commercial and research (and engagement) teams, data protection and systems separation. Last but not the least, analyst compensation is not directly tied to specific commercial outcomes. One of Sustainalytics’ hallmarks is integrity, another is transparency.

confirmed (1) they understand it is the sole responsibility of BDMG to ensure that the information provided is complete, accurate or up to date; (2) that they have provided Sustainalytics with all relevant information and (3) that any provided material information has been duly disclosed in a timely manner. Sustainalytics also reviewed relevant public documents and non-public information.

This document contains Sustainalytics' opinion of the Framework and should be read in conjunction with that Framework.

Any update of the present Second-Party Opinion will be conducted according to the agreed engagement conditions between Sustainalytics and BDMG.

Sustainalytics' Second-Party Opinion, while reflecting on the alignment of the Framework with market standards, is no guarantee of alignment nor warrants any alignment with future versions of relevant market standards. Furthermore, Sustainalytics' Second-Party Opinion addresses the anticipated impacts of eligible projects expected to be financed with bond proceeds but does not measure the actual impact. The measurement and reporting of the impact achieved through projects financed under the Framework is the responsibility of the Framework owner.

In addition, the Second-Party Opinion opines on the intended allocation of proceeds but does not guarantee the realised allocation of the bond proceeds towards eligible activities.

No information provided by Sustainalytics under the present Second-Party Opinion shall be considered as being a statement, representation, warrant or argument either in favour or against, the truthfulness, reliability or completeness of any facts or statements and related surrounding circumstances that BDMG has made available to Sustainalytics for the purpose of this Second-Party Opinion.

Sustainalytics' Opinion

Section 1: Sustainalytics' Opinion on the BDMG Sustainability Bond Framework

Sustainalytics is of the opinion that the BDMG Sustainability Bond Framework is credible, impactful and aligns with the four core components of the Green Bond Principles 2018 (GBP 2018) and Social Bond Principles 2018 (SBP 2018). Sustainalytics highlights the following elements of BDMG's Sustainability Bond Framework:

- Use of Proceeds:
 - The eligible categories – Sustainable Agriculture and Sustainable Management of Living Natural Resources, Renewable Energy and Energy Efficiency, Sustainable Water and Wastewater Management, Clean Transportation, Pollution Prevention and Control, Access to Essential Services - Health, Access to Essential Services - Education, Socioeconomic Empowerment - Gender inclusion, Employment Generation - Micro and small enterprises, Affordable Basic Infrastructure - Inclusive and sustainable urbanization, Access to Essential Services - Economic recovery after disasters – are aligned with those recognized by the GBP 2018 and SBP 2018.
 - The Sustainable Agriculture and Sustainable Management of Living Natural Resources category includes low-carbon agriculture and forestry projects that will yield ecological benefits such as increased productivity of land, reduction of greenhouse gases (GHG) emissions and/or sequestration of carbon. Based on the definitions provided in the Framework, Sustainalytics views the intention of the eligible activities in this category positively, while noting the following:
 - Integrated cropland-livestock-forestry systems (ICLFS) and agroforestry projects aim to enhance agricultural productivity, and have been demonstrated to protect vulnerability of farmers (particularly smallholder farmers) to environmental shocks, including climate change.^{4,5} However, such integrated projects could face certain barriers,⁶ particularly related to their effective adoption on a farm-level, as well as their

⁴ World Development Perspectives, Overcoming barriers to low carbon agriculture and forest restoration in Brazil: The Rural Sustentável project: <https://www.sciencedirect.com/science/article/pii/S2452292916301321#b0010>

⁵ Current Opinion in Environmental Sustainability, Climate risk adaptation by smallholder farmers: the roles of trees and agroforestry: <https://www.sciencedirect.com/science/article/pii/S1877343513001619?via%3Dihub>

⁶ The adoption of integrated crop-livestock systems is influenced by several factors, including the "costs of adoption versus non-adoption, supply chain infrastructure, biophysical suitability, availability of skilled labor, access to information and know-how, as well as the willingness to diversify production." Land Use Policy, Determinants of crop-livestock integration in Brazil: Evidence from the household and regional levels: https://www.bu.edu/gdp/files/2018/02/Gil_Garrett_et_al_2016_Determinants-of-ICLS.pdf

BDMG Sustainability Bond Framework

- overall potential for achieving a net reduction in methane emissions resulting from livestock production.^{7,8}
- Specific agricultural projects that reduce greenhouse gas emission or water-use are eligible. Sustainalytics views positively that the Framework defines quantitative improvements and standards.
 - BDMG has specified a list of crops or activities that are eligible if they are subject to appropriate certifications, as defined in the Framework. Sustainalytics has assessed the certifications cited by BDMG's Framework, and while noting the wide variety of schemes that are considered eligible, considers them on the whole to be indicative of positive environmental impacts and well-suited for inclusion in sustainability bonds (see Appendices 1 and 2 for an overview of the referenced certification schemes.)
 - Sustainalytics notes that a number of the certification schemes, such as Fairtrade, primarily speak to social impacts within the context of agricultural and forestry activities, and as such are considered eligible in the context of a sustainability bond.
 - Sustainalytics notes that BDMG considers projects certified under the Regenerative Organic Certification to be eligible, and encourages BDMG to select producers that obtain the Silver level or higher.
 - The Renewable Energy and Energy Efficiency category includes wind energy, solar energy, biomass and hydroelectric, power transmission systems for non-conventional renewable energy. Sustainalytics views the renewable energy thresholds and criteria defined in the Framework as aligned with market practice, while noting the following:
 - The category allows for sustainable biofuel production, specifically ethanol production that meets the following requirements: (i) fully compliant with the Brazilian Forest Code and (ii) does not compete with food production nor deplete existing terrestrial carbon pools. This includes sugarcane ethanol with BONSUCRO certification⁹ and biodiesel originated from Roundtable on Responsible Soy (RTRS) certified crops. Sustainalytics views favorably these certifications and criteria; see Appendix 1 for an overview of BONSUCRO and RTRS.
 - While recognizing the importance of energy storage in increasing energy efficiency and integrating renewables, Sustainalytics notes the importance of thorough risk assessment and due diligence for pump-storage hydro facilities.
 - The Energy Efficiency portion of the category includes a variety of activities that must deliver at least a 20% improvement in energy performance. Sustainalytics notes that BDMG may be unable to ensure that technologies that are primary driven or powered by fossil fuels are fully excluded, and encourages ongoing monitoring to avoid financing these initiatives with sustainability bond proceeds.
 - The Sustainable Water and Wastewater Management category includes projects in the areas of wastewater collection and treatment, urban sewage and solid urban waste treatment in line with ongoing private and public sector initiatives aimed at increasing accessibility and quality of such services.
 - The Framework allows for conventional landfilling projects, limited to those with energy capture. While Sustainalytics views best practice in the green bond market to restrict eligibility to decommissioned landfills,¹⁰ the inclusion of operating landfill facilities with energy capture is viewed positively in the context of Brazilian waste management systems as such investments are considered to be a positive step forward to improving the country's overall waste management capability.
 - Within the Clean Transportation category, BDMG includes infrastructure for mass public transit systems, including trains, subways, electric buses, and bus rapid transit (BRT). Sustainalytics recognizes that some BRT systems may deploy fossil fuel-powered vehicles; although electrified transit provides the greatest environmental benefits, the expansion of mass transit more broadly has an overall positive impact regardless of fuel source. Additionally, the Framework states that eligible BRT systems will be certified under the Institute for Transportation & Development Policy's BRT Standard at the level of Bronze, Silver or Gold. Sustainalytics is of the opinion that this qualification, in addition to the threshold outlined in the Framework, will ensure effective transit infrastructure and maximize the environmental benefits of the projects developed.

⁷ Agriculture, Ecosystems & Environment, Adoption and development of integrated crop–livestock–forestry systems in Mato Grosso, Brazil: <https://www.sciencedirect.com/science/article/abs/pii/S016788091400471X>

⁸ IPCC, Land-Climate Interactions: https://www.ipcc.ch/site/assets/uploads/2019/08/2c.-Chapter-2_FINAL.pdf

⁹ Eligible if originated from plantations with mechanized harvests that do not employ pre-harvest burning practices, with BONSUCRO certification required for producers with over R\$ 250 million in revenues and investments of over BRL 10 million

¹⁰ The Climate Bonds Initiative include this consideration in their standard for waste management, see: <https://www.climatebonds.net/files/files/Waste%20Management%20Background%20Paper%282%29.pdf>

BDMG Sustainability Bond Framework

- The projects within the Pollution Prevention and Control category intend to prevent and mitigate the negative effects of productive activities on the environment, including effluent treatment, industrial waste treatment and final disposal and systems for pollution control and reduction. Sustainalytics notes that industrial waste management processes powered by fossil fuel generation are not considered eligible.
 - Within the social categories eligible under the use of proceeds, the Framework defines targeted groups, such as areas with HDI below Brazilian municipalities' average, vulnerable communities and minority groups, micro and small-medium enterprises (SMEs) and general public living in certain Minas Gerais municipalities for eligible projects under the social use of proceeds.
 - The Health category considers expenditures related to public health facilities and/or private health projects located in municipalities with HDI below the average for all Brazilian municipalities, with a focus on reaching vulnerable communities.¹¹ Sustainalytics notes that approximately 47.5% of municipalities fall under the eligibility criteria and that such municipalities are mostly located far from urban centers and have relatively little access to healthcare facilities. Sustainalytics anticipates significant positive social benefits from this category, and recognizes the potential benefits of financing targeted subsidized private facilities in underserved areas with vulnerable populations, as well as public healthcare more broadly.
 - Within the Education category, BDMG intends to support accessible education infrastructure that targets one of the following: (i) public facilities, (ii) municipalities with an HDI below the Brazilian municipality average and/or (iii) vulnerable communities, with a focus on increasing overall access to education infrastructure through targeted development. Sustainalytics views this as aligned with market practice.
 - The Socioeconomic Empowerment category intends to provide SMEs that are controlled by women with financing initiatives to encourage increased participation and equal opportunities for leadership. In order to qualify, SMEs have to have been in operation under majority female ownership (50% or more) for at least six months. Sustainalytics views this criterion to be aligned with market practice by specifying a target population.
 - Within the Employment Generation category BDMG may provide lending to specific classes of SMEs.¹² Sustainalytics notes that BDMG has committed to only financing micro and small businesses in low HDI areas. Sustainalytics views the targeted nature of these loans to be in line with market practice, and further notes positively the small average loan size (between BRL 20,000 and BRL 30,000) in BDMG's portfolio and the extensive exclusionary criteria. Refer to Section 3 for further information on SMEs in the context of Brazil.
 - The Affordable Basic Infrastructure category intends to improve accessibility within Minas Gerais municipalities through urban infrastructure. This includes paving urban roads in remote and rural areas that lack connectivity, sewage and other social infrastructure.
 - Sustainalytics notes the positive intention of such investments and the potential to encourage inclusive urbanization in underserved cities. Nevertheless, Sustainalytics views urban road paving as an activity with significant potential to drive negative environmental outcomes, and as such note that this may detract from the overall positive social impact of the projects.
 - The Access to Essential Services category includes projects and activities intended to support municipalities affected by natural and human hazards as well as health emergencies. Sustainalytics notes that the financial products offered in this category are solely aimed at individuals residing within affected communities.
 - Sustainalytics highlights the important innovative nature of these initiatives in the geographical and temporal context, as Minas Gerais has faced disasters related to tailing pond collapses as well as the effects of COVID-19.
 - Sustainalytics notes that the Framework includes a broad list of projects or credit operations that are ineligible, including working capital lending or debt replacement, projects which have previously received financing by BDMG with resources from Development Banks and Multilateral Agencies, uncertified palm oil production, fossil fuel projects and fossil fuel energy generation, construction of new large hydro projects (>30 MW) and energy generation from biomass sources that deplete existing terrestrial carbon pools. The Bank has also included a look-back period of 48 months and has noted that projects that have maturing financing contracts in the same year of issuance are ineligible under the Framework. Sustainalytics highlights that such exclusions will help prevent the net proceeds directed towards projects that could have significant environmental and/or social risks.
- Project Evaluation and Selection:

¹¹ The index varies from 0 to 1. Brazilian HDI calculated in 2020 and used as comparison measure in this Framework is 0.761.

¹² BDMG's criteria for micro-enterprises is a gross annual income of up to BRL 360,000 million, and for small businesses a gross annual income ranging between BRL 360,000 and BRL 4,800,000 in accordance with the Complementary Law 123 of 2006.

- BDMG's project selection process is overseen by the Credit and Renegotiation Committee, which consists of representatives from the Bank's Credit Analysis, Operations, Credit Management, Products, Risks and Internal Control, Financial and Legal.
 - The Committee will evaluate projects based on four factors: the credit risk of the borrower, alignment with the Framework, the expected environmental impacts, the definition of monitoring indicators and alignment with the Bank's Social-Environmental Responsibility Policy.
 - Based on the involvement of senior executives, and the public disclosure of the main criteria used to evaluate projects, Sustainalytics considers this process to be in line with market expectations.
- Management of Proceeds:
 - The management of proceeds will be overseen by the Bank's Financial Management department. Pending allocation, the net proceeds of the sustainability bond(s) will be deposited in the Bank's cash account or invested in high-liquidity low-risk instruments. The proceeds of the sustainability bond will be registered as a unique "source" within the Bank's internal accounting system to support clear tracking.
 - BDMG has committed to not using the net proceeds of the bond issued under this Framework to finance, even temporarily, any investment not aligned with the goals of the sustainability bond.
 - Based on the use of formal internal systems, as well as the disclosure of temporary investments, Sustainalytics considers this process to be in line with market practice, and highlight positively the commitments to screen temporary uses to ensure that investments do not detract from the goals of the Framework.
- Reporting:
 - BDMG has committed to reporting annually on both the allocation and impact of proceeds on its corporate website. Sustainalytics considers this to be in line with market practice.
 - Allocation reporting will include information on the number of beneficiaries, the average value of the loans, the amount disbursed within each eligibility category, and the regional distribution of the disbursements.
 - Impact reporting will be aggregated at the category level, and will include relevant key performance indicators as well as representative case studies. The Bank has committed to providing at least one impact indicator and one result indicator for each eligible category.

Alignment with Sustainability Bond Guidelines 2018

Sustainalytics has determined that the BDMG 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.

Section 2: Sustainability Performance of BDMG

Contribution of Framework to The Development Bank of Minas Gerais 's sustainability strategy

BDMG's sustainability strategy is captured in its 2019 Sustainability Report,¹³ in which the Company highlights its three strategic pillars: align and link BDMG's operations with the 2030 Agenda, expand sustainable investments for Minas Gerais, and harness the potential of partnerships, technical cooperation and financial innovations. The report further outlines that through its 2020-2024 Strategic Roadmap, the Company aims to ensure financial sustainability while maximizing impact and development to generate value for the society at large. In order to fulfill its vision, BDMG has focused on financing projects within five specific areas: technology and innovation, infrastructure, micro small and medium enterprises, agribusiness and sustainability. Although BDMG has not set quantifiable targets for green and social financing, the Bank has provided evidence of its commitment to combating climate change and supporting the prosperity of its communities, as outlined by the initiatives below:¹⁴

- In 2019, the Bank disbursed approximately BRL 1.3 billion, representing a 2.2% increase from 2018. It is estimated that this amount generated an additional impact of BRL 974 million on Minas Gerais' economy, stimulating approximately 22,677 jobs.
- In the same year, the Bank earmarked BRL 625 million in its portfolio for public sector expenditures to fund the development of municipal infrastructure. These projects include construction, renovation

¹³ BDMG, Sustainability Report 2019: https://www.bdmg.mg.gov.br/wp-content/uploads/2020/03/ABG000620H_Relatorio_Gestao_2019_BDMG_Ingles_185x300mm-bx_Final-1.pdf

¹⁴ *Ibid*

and expansion works of public buildings, water and sewage supply, solid waste, mobility, and urban drainage. Of this amount, BRL 9.2 was disbursed to water treatment and distribution, sewage treatment or solid waste projects, reaching 22 municipalities in the region.

- In October of 2019, the Bank signed a financing contract with the European Investment Bank (EIB), resulting in a credit limit of EUR 100 million intended to finance clean energy generation projects, including photovoltaic solar energy, bioenergy plants and energy efficiency projects. The total estimated generation capacity of 45.8 GWh/year as a result of these expenditures is equivalent to the annual consumption of more than 23,800 households. BDMG also supports operations in the biofuels sector, specifically targeting four municipalities located in the Triângulo Mineiro region, as well as operations for industrial waste and air treatment. In order to measure the impact of its efforts, in 2019 the Bank collaborated with IDB to develop a CO₂ calculator designed to assess emissions, removals, forest carbon stocks and emission reductions from projects financed by the BDMG.
- Through its digital platform, BDMG Digital, the Bank evaluates and grants credit to Small and Micro Enterprises (SMEs). In 2019, the Bank disbursed a total of BRL 172 million through its platform, contributing to 96% of the total amount distributed to MSMEs that year, representing a growth of 10.5% compared to the amount disbursed through the platform in 2018 and reaching 4,566 clients.
- In order to support women-owned MSMEs, the Bank created a financing line catered to women in 2018, Empreendedoras de Minas, and in 2019 disbursed BRL 32.5 million, serving 977 business women in 220 municipalities in Minas Gerais, 40 of which have HDI below the State average. This represents a 25% increase from the number of women reached in 2018.
- Since 2017, the Bank has worked with the Renova Foundation on Social and Economic Programs to create several funds to foster economic activities in municipalities affected by natural disasters. In 2019, the Bank disbursed BRL 2.4 million to seven municipalities to aid disaster relief efforts.

Sustainalytics is of the opinion that the BDMG Sustainability Bond Framework is aligned with the company's overall sustainability strategy and initiatives and will further the Company's action on its key environmental and social priorities.

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

Sustainalytics recognizes that the projects financed by BDMG with the proceeds of sustainability bond(s) will generate largely positive environmental benefits, and contribute to economic development in the state of Minas Gerais. However, by offering credit for investment in a variety of infrastructure, agricultural, and resource projects, financial institutions are exposed to the possibility of financing activities that have negative environmental or social impacts. Key environmental risks may relate to ensuring sustainable use of water, limiting degradation of natural environments (including deforestation and soil erosion), limiting the release of pollutants (including wastewater and agricultural runoff) and greenhouse gas emissions. Key social risks may include worker health and safety, community engagement, and broader societal impacts such as food prices and access to services.

BDMG has processes in place to mitigate these potential risks arising from projects funded, including a Social and Environmental Responsibility Policy (SERP) which is aligned with the Brazilian Central Bank's Resolution 4327/2014. This regulation establishes a requirement that financial institutions create SERP and provides guidelines for its implementation.¹⁵ As part of the SERP, BDMG requires that borrowers supply various information regarding its operations; the extent of detail required of these questionnaires is dependent upon the assessed risk level of the sector in which they operate, as well as the size of the company, measured by revenue. These analyses are refreshed annually, and any credit granted is subject to a contractual obligation to meet specified environmental and social risk mitigation targets. BDMG has committed to using this existing risk mitigation procedure to inform its project selection process.

Based on the alignment of their process with statutory requirements, the integration of environmental and social risk mitigation into the formal credit process, and the use of contractual requirements obligating borrowers adhere to commitments, Sustainalytics considers that BDMG is well-positioned to address the environmental and social risks associated with the projects financed by its sustainability bond(s).

¹⁵ Mayer Brown, Brazilian Central Bank Publishes Guidelines for the Social and Environmental Responsibility Policies of Financial Institutions: <https://www.mayerbrown.com/brazilian-central-bank-publishes-guidelines-for-the-social-and-environmental-responsibility-policies-of-financial-institutions-05-06-2014/>

Section 3: Impact of Use of Proceeds

All eleven use of proceeds categories are aligned with those recognized by GBP or SBP. Sustainalytics has focused on five below where the impact is specifically relevant in the local context.

The impact of sugarcane ethanol and soy biodiesel in Brazil

Biofuels, liquids derived from biological matter which can be used as a substitute or supplement to fossil fuels, are more controversial than other renewable energy resources; biofuels are sometimes considered to have environmental or social impacts which outweigh their benefits.¹⁶ While biofuels are generally cleaner-burning than traditional diesel or gasoline,¹⁷ some studies have questioned the lifecycle carbon benefits based on the necessary energy inputs and induced land use changes¹⁸ while other observers have criticized the displacement of food production for energy crops.¹⁹ Considering these challenges, the Climate Bonds Initiative has proposed a standard for bioenergy that requires an 80% emissions reduction compared to a fossil fuel baseline.

These challenges all speak to the biofuel sector in a broad sense, but are particularly relevant for some of the most common biofuel feedstocks, notably palm oil (used for biodiesel) and corn (used for ethanol). Sugarcane, also a source of ethanol, and Brazilian sugarcane in particular, is distinct in several ways from other “first generation”²⁰ biofuels. Studies have shown that lifecycle carbon emissions for Brazilian sugarcane ethanol are much lower than for corn or sugar beet ethanol, as much as 86% lower than gasoline refined from crude oil.²¹ Furthermore, recent reviews of the sugarcane sector have indicated that most expansion of sugarcane crops is occurring on degraded pastureland, and is not resulting in increased deforestation or decreased food crop yields.²²

Nevertheless, biofuels remain a renewable energy source with potential adverse impacts. Sustainalytics views positively BDMG’s reference to regulatory provisions such as the Brazilian Forest Code, third-party certifications such as Bonsucro (for sugarcane-sourced ethanol) the Round Table on Responsible Soy (for soy-sourced biodiesel), and the commitment to best management practices such as using mechanized harvesters to avoid pre-harvest burning. Sustainalytics considers BDMG’s use of proceeds for biofuels projects to likely result in net-positive environmental benefits, and encourages the issuer to continue to strive towards best practices that minimize social and environmental impacts, such as ensuring cropland expansion is not inducing deforestation or other negative land use changes or impacting food supplies, and conducting lifecycle carbon assessments in line with industry standards.

Waste Management

Brazil is the fifth-largest generator of waste in the world, producing approximately 198,000 tons of municipal solid waste daily.²³ Even though the country has made major improvements in the area of waste management over the last few years, 42% of all waste collected is still disposed of improperly or unsafely.²⁴ Although incinerators are more effective, the final destination of waste is usually dumps or landfills, due to the lower costs associated with these disposal methods.²⁵ Around 58% of waste is placed in sanitary landfills, 24% in controlled landfills, and 17% in various dumpsites, which translates into 75,000 tonnes of waste not being deposited in a manner that prevents environmental degradation.²⁶ Moreover, there is a significant population that lives in large urban areas that does not have access to sanitary sewers.²⁷ In 2018, Brazil’s Supreme

¹⁶ National Geographic, Biofuels explained: <https://www.nationalgeographic.com/environment/global-warming/biofuel/>

¹⁷ US Energy Information Administration, Biofuels explained, Ethanol and biodiesel: https://www.eia.gov/energyexplained/index.php?page=biofuel_home

¹⁸ Land Clearing and the Biofuel Carbon Debt: <http://science.sciencemag.org/content/319/5867/1235>

¹⁹ Oxfam, Growing a better future: <https://www.oxfam.ca/grow/learn/issues/agriculture/biofuels>

²⁰ “First generation” biofuels generally refer to biofuels made from traditional food crops such as corn or sugar; it can be contrasted with “second generation” or “advanced” biofuels from lignocellulosic biomass, woody residues, and other non-food sources.

²¹ Nature Climate Change, Brazilian sugarcane ethanol as an expandable green alternative to crude oil use: <https://www.nature.com/articles/nclimate3410>

²² Sustainability of sugarcane production in Brazil: <https://www.researchgate.net/publication/323443015/download>

²³ Waste Management in Brazil:

https://www.iswa.org/fileadmin/user_upload/World_Congress_2014_Sao_Paolo/Carlos_Carlos_Waste_management_in_Brazil_-_it_is_time_to_focus_on_waste_as_a_resource.pdf

²⁴ *Ibid*

²⁵ Issues in Brazil, Waste Management: <https://sites.google.com/a/nygh.edu.sg/brazil—people-and-society-poverty-environmental-sustainability/main-issues/environment/waste-management-in-brazil>

²⁶ Waste Management in Brazil:

https://www.iswa.org/fileadmin/user_upload/World_Congress_2014_Sao_Paolo/Carlos_Carlos_Waste_management_in_Brazil_-_it_is_time_to_focus_on_waste_as_a_resource.pdf

²⁷ Issues in Brazil, Waste Management: <https://sites.google.com/a/nygh.edu.sg/brazil—people-and-society-poverty-environmental-sustainability/main-issues/environment/waste-management-in-brazil>

Federal Court ruled that the construction of landfills in areas of permanent conservation is prohibited.²⁸ As a direct consequence of this ruling,²⁹ Brazilian state capitals, will have to seek out safer places to dispose of their waste. As much of the waste management services are left to the private sector,³⁰ there is a wide range of opportunities for investments into the sustainable development of the waste sector. Given this context, Sustainalytics is of the opinion that BDMG's green lending will have a positive impact for waste management in Brazil, from both an environmental and a social perspective.

Wastewater projects

Large volumes of wastewater in urban areas pose an environmental challenge for Brazil, caused in part by the obstacles the sanitation sector is currently facing in managing the residues produced by water and wastewater treatment plants. In 2015, more than 33 million Brazilians had no access to safe drinking water, and more than 100 million lacked access to sewage collection.³¹ Meanwhile, only 42% of the produced sewage undergoes treatment.³² As such, most Brazilian cities struggle with the issue of water pollution caused by untreated sewage discharge to waterbodies and poorly maintained water and drainage infrastructure.³³ It is estimated that of the 5,570 municipalities in Brazil, only 34% have wastewater treatment plants.³⁴ Studies suggest that a primary driver of the decrease in water quality in Brazil was the rapid urbanization from 45% in 1960 to 80% in 2000, which was not accompanied by adequate investments in sanitation;³⁵ of the total of 2,800 wastewater treatment plants in Brazil, the majority of them are situated in small towns.³⁶

Brazil aims to reach 93% coverage in terms of wastewater treatment by 2033, and universal access to sanitation in urban areas by the same year.³⁷ Partnerships with the private sector will play an important role in achieving this national objective, as state utilities have increasingly sought out private financing for wastewater collection and treatment through concessions, since federal funds have been disbursed slowly.³⁸ Considering these factors, Sustainalytics has a positive view of BDMG's green financing in the wastewater management sector, as it will not only help alleviate the pressure put on the environment and society, but also support Brazil's 2020 goals.

The importance of supporting SMEs in Brazil

According to the OECD's SME and Entrepreneurship Brazil 2020 Policy, SMEs account for 62% of the nation's total employment rate and 50% of national value added.³⁹ In Minas Gerais, SMEs were responsible for approximately 81% of the jobs in 2019.⁴⁰ As defined in the Complementary Law 123 of 2006, micro enterprises are companies with gross annual income of up to BRL 360,000, while small businesses are those with gross annual income ranging from BRL 360,000 to BRL 4.8 million.

Despite the important role SMEs play in supporting Brazil's citizenry and economy, these businesses face a number of challenges given the conditions of the environment in which they operate. Due to Brazil's lack of sufficient integration into the global supply chain, many SMEs are unable to participate in international trade and successfully scale their business.⁴¹ The OECD Report further cites that there is a stark productivity gap between SMEs and large companies in Brazil, much of which has been attributed to limited innovation and

²⁸ Brazil Reports, Brazil's Supreme court orders sustainable waste management by law: <https://brazilreports.com/brazils-supreme-court-orders-sustainable-waste-management-by-law/>

²⁹ *Ibid*

³⁰ Issues in Brazil, Waste Management: <https://sites.google.com/a/nygh.edu.sg/brazil--people-and-society-poverty-environmental-sustainability/main-issues/environment/waste-management-in-brazil>

³¹ Governance of Drinking Water and Sanitation Infrastructure in Brazil: https://www.ana.gov.br/todos-os-documentos-do-portal/documentos-sas/arquivos-cobranca/documentos-relacionados-saneamento/governance-of-ws-infrastructure-in-brazil_final.pdf

³² *Ibid*

³³ German Development Institute, Urban Sewage in Brazil: Drivers of and Obstacles to Wastewater Treatment and Reuse: https://www.die-gdi.de/uploads/media/DP_26.2016.pdf

³⁴ *Ibid*

³⁵ *Ibid*

³⁶ Inter-American Development Bank, Urban wastewater treatment in Brazil: <https://publications.iadb.org/bitstream/handle/11319/7783/Urban-wastewater-treatment-in-Brazil.pdf>

³⁷ Governance of Drinking Water and Sanitation Infrastructure in Brazil: https://www.ana.gov.br/todos-os-documentos-do-portal/documentos-sas/arquivos-cobranca/documentos-relacionados-saneamento/governance-of-ws-infrastructure-in-brazil_final.pdf

³⁸ https://www.die-gdi.de/uploads/media/DP_26.2016.pdf

³⁹ OECD Library, SME and Entrepreneurship Policy in Brazil 2020: <https://www.oecd-ilibrary.org/sites/cc5feb81-en/index.html?itemId=/content/publication/cc5feb81-en>

⁴⁰ BDMG, Sustainability Report 2019: https://www.bdmg.mg.gov.br/wp-content/uploads/2020/03/ABG00620H_Relatorio_Gestao_2019_BDMG_Ingles_185x300mm-bx_Final-1.pdf

⁴¹ OECD Library, SME and Entrepreneurship Policy in Brazil 2020: <https://www.oecd-ilibrary.org/sites/cc5feb81-en/index.html?itemId=/content/publication/cc5feb81-en>

export propensity amongst Brazilian SMEs.⁴² In addition, credit market conditions for such businesses are unfavorable, namely because of high interest rates, short loan maturities, a lack of credit history or property collateral, preventing many SMEs from receiving the public and private sector-credit needed to ensure long-term viability.⁴³ While the government has worked towards introducing various policy reforms to combat this, loan subsidies have proven to be the main direct policy instruments utilized by the federal government to encourage SME development.⁴⁴ For example, between 2016 and 2018, the Brazilian Development Bank's share of business loans provided to SMEs increased from 30.6% to 46.8%.⁴⁵

In this context, BDMG's credit lines and products targeting SMEs, particularly those that address low-HDI regions in Minas Gerais such as the BDMG GERMINAS Social line of credit, play an important role in fostering economic opportunity and social development and reducing inequalities across, specifically between municipalities in Minas Gerais.

The impact of economic relief for communities affected by disasters

In 2015, Brazil experienced its worst ecological disaster to date when the Fundão tailings dam near Mariana, Minas Gerais collapsed and flooded the villages of Bento Rodrigues and Paracatu de Baixo, killing 19 people.⁴⁶ The dam released an estimated 43.7 million m³ of mine tailings, which entered the Atlantic Ocean and resulted in a humanitarian crisis that saw the displacement of more than 220 families,⁴⁷ with cities along the Doce River suffering severe water shortages due to pollution that spanned more than 670 km of the river.⁴⁸ The collapse of Fundão, one of the biggest environmental disasters in the history of the global mining industry, both in terms of the volume of tailings dumped and the magnitude of the damage,⁴⁹ has had a lasting effect on Minas Gerais' economy and its inhabitants.

In order to serve its communities, BDMG has worked with the Renova Foundation on Social and Economic Programs to create a number of funds in the 35 municipalities of the Minas Gerais area where Renova has operations. The Desenvolve Rio Doce fund was created in order to serve those affected by the collapse of the Fundão dam.⁵⁰ Since 2017, it has reached a volume of BRL 29.4 million, benefitting 779 companies and supported more than 5,000 jobs. In December 2018, together with Sebrae (The Brazilian Service of Support for Micro and Small Enterprises), BDMG and launched the Compete Rio Doce fund to increase access to credit for companies that, due to financial restrictions, were not eligible for financing through the Desenvolve Rio Doce fund.⁵¹ Since its creation, the fund has helped reach 91 SMEs with BRL 4.3 million as of 2019.⁵² BDMG has also launched the Social and Environmental Program for Sewage Collection and Treatment of Solid Waste Disposal Program which supports impacted areas through the financial provision of basic sanitation plans, the design of sewage system projects, the implementation of sewage collection and treatment works and the eradication of dumps and implementation of regional landfills.⁵³

Given the above and the Bank's intention to boost the economic activity of municipalities most affected by natural disasters, human hazards and health emergencies, Sustainalytics is of the opinion that BDMG's economic recovery financing will support the rehabilitation of these communities and have a positive social impact.

⁴² OECD Library, SME and Entrepreneurship Policy in Brazil 2020: <https://www.oecd-ilibrary.org/sites/cc5feb81-en/index.html?itemId=/content/publication/cc5feb81-en>

⁴³ IDB, Brazil promotes productivity of micro, small and medium-sized enterprises with IDB support: <https://www.iadb.org/en/news/brazil-promotes-productivity-micro-small-and-medium-size-enterprises-idb-support>

⁴⁴ OECD Library, SME and Entrepreneurship Policy in Brazil 2020: <https://www.oecd-ilibrary.org/sites/cc5feb81-en/index.html?itemId=/content/publication/cc5feb81-en>

⁴⁵ *Ibid*

⁴⁶ Science Direct, Deep into the mud: ecological and socio-economic impacts of the dam breach in Mariana, Brazil: <https://www.sciencedirect.com/science/article/pii/S1679007316301104>

⁴⁷ IUCN, Impact of the Fundao Dam failure: <https://portals.iucn.org/library/sites/library/files/documents/2018-038-En.pdf>

⁴⁸ Science direct, Funado tailings dam failures: the environmental tragedy of the largest technological disaster of Brazilian mining in global context: <https://www.sciencedirect.com/science/article/pii/S1679007316301566>

⁴⁹ *Ibid*

⁵⁰ BDMG, Sustainability Report 2019: https://www.bdmg.mg.gov.br/wp-content/uploads/2020/03/ABG000620H_Relatorio_Gestao_2019_BDMG_Ingles_185x300mm-bx_Final-1.pdf

⁵¹ *Ibid*

⁵² *Ibid*

⁵³ *Ibid*

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
Sustainable Agriculture and Sustainable Management of Living Natural Resources	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.
Renewable Energy and Energy Efficiency	7. Affordable and Clean Energy	7.2 By 2030, increase substantially the share of renewable energy in the global energy mix. 7.3 By 2030, double the global rate of improvement in energy efficiency.
Sustainable Water and Wastewater Management	6. Clean Water and Sanitation	6.1. By 2030, achieve universal and equitable access to safe and affordable drinking water for all. 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.
Clean Transportation	11. Sustainable Cities and Communities	11.2. By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons.
Pollution Prevention and Control	9. Industry, Innovation and Infrastructure 12. Responsible Consumption and Production	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, with all countries taking action in accordance with their respective capabilities 12.5. By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.
Access to Essential Services – Health	3. Good Health and Well-Being	3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all.
Access to Essential Services - Education	4. Quality Education	4.1 By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes. 4.3 By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university.
Socioeconomic Empowerment - Gender inclusion	5. Gender Equality	5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life.
Employment Generation - Micro and small enterprises	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
Affordable Basic Infrastructure - Inclusive and sustainable urbanization	11. Sustainable Cities and Communities	11.3. By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries
Access to Essential Services - Economic recovery after disasters	11. Sustainable Cities and Communities	11.5. By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations.

Conclusion

The Banco de Desenvolvimento de Minas Gerais has developed the BDMG Sustainability Bond Framework under which it will issue sustainability bonds and the use of proceeds to finance projects in the areas of Sustainable Agriculture and Sustainable Management of Living Natural Resources, Renewable Energy and Energy Efficiency, Sustainable Water and Wastewater Management, Clean Transportation, Pollution Prevention and Control, Access to Essential Services - Health, Access to Essential Services - Education, Socioeconomic Empowerment - Gender inclusion, Employment Generation - Micro and small enterprises, Affordable Basic Infrastructure - Inclusive and sustainable urbanization, and Access to Essential Services - Economic recovery after disasters. Sustainalytics considers that the projects funded by the sustainability bond proceeds will provide positive environmental and/or social impacts.

The BDMG Sustainability Bond Framework outlines a process by which proceeds will be tracked, allocated, and managed, and commitments have been made for reporting on the allocation and impact of the use of proceeds. Furthermore, Sustainalytics believes that the BDMG Sustainability Bond Framework is aligned with the overall sustainability strategy of the company and that the sustainability use of proceeds categories will contribute to the advancement of the UN Sustainable Development Goals, in particular Goals 4, 5, 6, 7, 8, 9, 11, 12 and 15. Additionally, Sustainalytics is of the opinion that BDMG has sufficient measures to identify, manage and mitigate environmental and social risks commonly associated with the eligible projects funded by the use of proceeds.

Based on the above, Sustainalytics is confident that BDMG is well-positioned to issue sustainability bonds and that the BDMG Sustainability Bond Framework is robust, transparent, and in alignment with the Sustainability Bond Guidelines 2018 and the four core components of the Green Bond Principles 2018 and Social Bond Principles 2018.

Appendices

Appendix 1: Environmental and Social Certifications for Agriculture Products

	Starbucks C.A.F.E Practices ⁵⁴	The Common Code for the Coffee Community (4C) ^{55,56}	Fairtrade (Hired Labour, ⁵⁷ Small Producer ⁵⁸)	Rainforest Alliance ⁵⁹	UTZ ⁶⁰	Proterra ⁶¹
Background	SCS partnered with Starbucks and Conservation International to develop the Coffee and Farmer Equity (C.A.F.E.) Practices standard to ensure that Starbucks is sourcing sustainably grown and processed coffee.	4C started in 2003 as a public private partnership project by the coffee industry and the German development cooperation to initiate a multi stakeholder dialogue for defining a mainstream code of conduct for sustainability. The organization has evolved over the years and was acquired by MEO Carbon Solutions in 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 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.	Created in 2006, the Proterra Standard is owned and independently run under the Proterra Foundation umbrella group. The Standard focuses on human rights and good labour practices, good agricultural practices and issues like deforestation and biodiversity, with a focus on rigorous non-GMO requirements.
Clear positive impact	Promoting sustainable practices in coffee production for farmers and consumers.	Promoting sustainable practices in coffee production at all stages along the supply chain.	Promoting sustainable practices for agricultural products, consumer goods and gold.	Promoting sustainable practices in agriculture, forestry and tourism.	Promoting sustainable practices in Coffee, Cocoa Tea and Hazelnut farming and trading.	Promoting sustainability at all levels of the feed and food production system.
Minimum standards	After undergoing the verification process, coffee farmers may receive one of the following statuses: Strategic suppliers achieve a minimum total score of 80% and comply with the zero	10 Unacceptable Practices and 30 Baseline criteria with 90 field-tested indicators that must be met in order to qualify; Participation is possible with "average yellow" performance, continuous improvement towards "green" is required.	Each Fairtrade standard has a set of core requirements that must be met and development requirements that are intended to foster continuous improvement and which certified producers must make progress on.	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 increasingly large proportion of both mandatory and additional points.	The Proterra Standard applies to 3 levels of operation across the food supply chain and has 7 principles, each principle has core indicators and non-core indicators. To qualify, organisations must meet 80% of all indicators (which includes all core indicators)

⁵⁴ SCS globalservices, Starbucks C.A.F.E Practices: <https://www.scsglobalservices.com/services/starbucks-cafe-practices>

⁵⁵ SCAA Sustainability Committee, The Common Code for the Coffee Community:

<https://www.scaa.org/PDF/SustainableCoffeeCertificationsComparisonMatrix.pdf>

⁵⁶ 4C Association, 4C Certification: <https://www.4c-services.org/about/recognitions-memberships/>

⁵⁷ Fairtrade Standard for Hired Labor: https://files.fairtrade.net/standards/HL_EN.pdf

⁵⁸ Fairtrade Standard for Small-scale Producer Organizations: https://files.fairtrade.net/standards/SPO_EN.pdf

⁵⁹ Rainforest Alliance, Sustainable Agriculture Certification: <https://www.rainforest-alliance.org/business/certification/>

⁶⁰ UTZ Certification, The UTZ Standard: <https://utz.org/>

⁶¹ Proterra Foundation, Proterra Standard: <https://www.proterrafoundation.org/wp-content/uploads/2019/02/ProTerra-Standard-V04-final-26-02.pdf>

	tolerance indicators. Preferred suppliers achieve a minimum total score of 60% and comply with the zero tolerance indicators. This status is awarded for three years if audited during harvest period and no organizational changes occur. Verified suppliers achieve a score of below 60% and comply with the zero tolerance indicators. This status is awarded for two years if audited during harvest period.	Applies to farms and to production structures of all sizes.				Rigorous Non-GMO requirements (<0.1% to adventitious 0.9% GMO maximum)
Scope of certification or programme	Starbucks addresses key risks through its minimum expectations that include zero tolerance indicators.	4C aims exclude worst practices and continuously increase the sustainability of coffee production and processing in the economic, social and environmental dimension.	Fairtrade addresses key risks through its requirements, including child labour, forced labour and pesticide use.	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.	Proterra directly addresses key risks such as environment protection, child labour, forced labour, indigenous peoples' rights, soil fertility, inclusion of GMOs.
Verification of standards and risk mitigation	Certified entities undergo audits 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.	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 third-party verification to ensure compliance with criteria and continuous improvement.
Third party expertise and multi-stakeholder process	Starbucks relies on SCS Global Services (SCS) to ensure the quality and integrity of the third-party verification process for its C.A.F.E. practices.	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.	Standard setting is aligned with the ISEAL Standard Setting Code.	Standard setting is aligned with the ISEAL Standard Setting Code.
Performance Display						

Qualitative considerations	Starbucks has emphasized that C.A.F.E. Practices is not a certification scheme, but rather a continuous improvement programme. Once farmers are verified against C.A.F.E. Practices by a third-party auditor, Starbucks works with them to improve their standing to reach preferred, and eventually strategic, status. Suppliers are expected to communicate the implementation of work plans to local Farmer Support Centers and provide progress reports.	As of December 2019, 224 4C Units were certified under the 4C System, encompassing more than 400,000 coffee producers in 24 countries around the world. 4C is well established in the primary coffee producing and consuming countries, often regarded as the leading coffee certification system.	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.	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.	The Proterra Standard is widely used in South America and Europe, and the Foundation is backed by industry stakeholders in both regions. Proterra poses restrictions on deforestation similar to those of the RTRS. It is acknowledged that while the standard has minimum requirements and requires a commitment to continuous improvement from the second year of certification, the core indicators are largely process oriented rather than outcome driven.
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	Naturland ⁶²	Roundtable on Responsible Soy (RTRS) ⁶³	Bonsucro ⁶⁴	Roundtable on Sustainable Biomaterials (RSB) ⁶⁵	Florverde Sustainable Flowers ⁶⁶	ISCC ⁶⁷
Background	Naturland was established in 1982 with the initial goal of creating a fertile layer of humus. Since then, the organization has partnered with several leading groups and has become a pioneer for organic agriculture. Through its five Standards Producers, Naturland requires that products must	The Round Table for Sustainable Soy (RTRS) works with all involved stakeholders on producing more sustainable soy through the RTRS Standard for Responsible Soy Production.	Bonsucro was developed out of the Better Sugarcane Initiative, an international multi-stakeholder NGO whose purpose is to lower the environmental and social impacts of sugarcane production. The Bonsucro Production Standard aims to ensure that the sugarcane production and sugarcane derived products are	The Roundtable on Sustainable Biomaterials (RSB) is an international initiative that promotes and supports the sustainability of biomaterials production and processing, bringing together companies, farmers, NGOs, and inter-governmental agencies. While the RSB was set up in 2007 as a means of ensuring the sustainability	Florverde is an independent social and environmental standard for the flower sector. The organization works closely with flower growers, agronomists, NGOs and government officials to ensure that the standard remains relevant. Although Florverde sets the standard, the certification itself is awarded by third party certification bodies such as Icontec and NaturaCert.	International Sustainability and Carbon Certification ("ISCC") is a German certification system that provides sustainability solutions for traceable and deforestation-free supply chains of agricultural, forestry, waste and/or residue raw materials, non-bio renewables and recycled carbon materials and fuels.

⁶² Naturland: <https://www.naturland.de/en/>

⁶³ RTRS: <http://www.responsiblesoy.org/?lang=en>

⁶⁴ Bonsucro: <https://www.bonsucro.com/>

⁶⁵ RSB: <https://rsb.org/>

⁶⁶ Florverde Sustainable Flowers: FSF Standard: <https://florverde.org/fsf-standard/>

⁶⁷ International Sustainability Carbon Certification (ISCC): <https://www.iscc-system.org/>

BDMG Sustainability Bond Framework

	be made without the use of GMOs and GMO derivatives.		sustainably produced.	of liquid biofuels for transport, in 2013, it expanded its scope to include biomaterials.		
Clear positive impact	Promoting sustainable management, nature conservation and climate protection.	Promoting sustainable soy production for human consumption, animal feed and biofuels.	Promoting sustainable sugarcane production.	Promoting sustainable biomaterials.	Promote sustainable practices in the flowers and ornamentals industry.	Promoting sustainable supply chain practices.
Minimum standards	Each Naturland Standard has a set of minimum requirements that must be met in order to ensure compliance. The Production Standard prohibits plant genetic engineering, even in the case of gradual conversion to organic.	The RTRS soy certification sets requirements in the areas of legal compliance and good business practices, responsible labour conditions, responsible community relations, environmental responsibility, and good agricultural practices.	The Bonsucro Production Standard sets minimum requirements in the areas of legal compliance, biodiversity and ecosystem impacts, human rights, production and processing and continuous improvement.	The RSB sets minimum requirements in the areas of legality, planning, monitoring and continuous improvement, GHG emissions, human and labour rights, rural and social development, local food security, conservation, soil, water and air management, use of technology, inputs and management of waste, land rights and chain of custody. The RSB standard requires that biofuels achieve 50% lower lifecycle GHG emissions compared with a fossil fuel baseline. Each Principle also includes type of feedstock as a specific indicator of compliance.	The Florverde sets minimum requirements in 14 different categories, certifying that floriculture processes meet quality, environmental and social requirements. One of the categories that has requirements that must be met, Management System, mandates continuous improvement and ongoing compliance with the standard.	The ISCC system has core sustainability criteria requirements that must be met. In addition to the core requirements of ISCC PLUS, voluntary additions can be added to adapt ISCC PLUS certificates to meet specific market requirements. Verification of GHG emissions is considered voluntary and can be added by applying as an add-on.
Scope of certification or programme	Naturland has five Standards: Production, Aquaculture, Beekeeping, Insects and Forest Management. Each of the standards existed before the first EU regulations on organic agriculture became law, addressing organic forest management, the manufacture of textiles and cosmetics, and	The RTRS soy certification addresses human rights, child labour, forced labour, human health and safety, biodiversity use, soil quality, substance use (agrochemicals), GHG emissions, and resource management (energy, water, waste) through its criteria.	Bonsucro addresses key risks such as human and labour rights, ecosystem management, biodiversity and land use through its criteria.	The RBS certification addresses key risks such as human and labour rights, supply chain, resource management, and land and biodiversity use through its criteria.	Florverde aims to strengthen the socio-environmental performance of the organizations it works with by addressing key issues including working conditions, occupational health, environmental best practices, protection of biodiversity and product traceability through its criteria.	Different certifications are available (ISCC PLUS, ISCC EU, ISCC Solid Biomass NL and ISCC Non-GMO) depending on the type of market suppliers are targeting; food, bio-based products, feed and energy. Within each specific certification, different types of agricultural materials are covered. ISCC PLUS includes all types of agricultural and forestry raw

	within its social standards, various social issues.					materials, waste and residues, non-bio renewables, recycled carbon materials and fuels.
Verification of standards and risk mitigation	Certified entities undergo third-party audits to ensure compliance with criteria. In most cases, annual EU-Organic audits can be combined with the Naturland audit to save cost and time.	Certified entities undergo third-party audits to ensure compliance with criteria. As the certificate is valid 5 years, the certified entity is subject to annual surveillance surveys.	Certified entities undergo third-party audits to ensure compliance with criteria.	Certified entities undergo a self-assessment process and, afterward, receives a visit from a third-party auditor. Annual audits will also take place after the validation.	Certified entities undergo third-party audits to ensure that products continue to meet the quality and environmental and social requirements of Florverde. This includes farm documentation, inspecting farms, interviewing workers and reviewing lab test results.	Certified entities undergo third party verifications audits to ensure compliance with the sustainability requirements existing based on legal requirements or voluntary agreements.
Third party expertise and multi-stakeholder process	The Naturland Standards were developed through a multi-stakeholder approach, leveraging thought-leaders and public sector expertise when producing each one of the individual standards.	The RTRS Standard for Responsible Soy Production was developed through the efforts of producers, industry and civil society, which agreed upon the Principles and Criteria for certifying soy as a responsible crop.	Bonsucro is a full member of the ISEAL Alliance and respects the ISEAL Code of Good Practice for Setting Social and Environmental Standards and the Impacts Code.	RSB is a full member of the ISEAL Alliance and respects its Codes of Good Practice for multi-stakeholder sustainability standards. RSB's benchmarks are available with Rainforest Alliance, the Sustainable Agriculture Network, the Forest Stewardship Council, Bonsucro and the IFC Performance standards.	Florverde partners with other leaders in the sector such as WWF, Association of Colombian Flower Exporters, Flowers of Colombia and Eco Business Fund. The certification scheme is based on the ISO / IEC 17065 standard.	Standard setting is aligned with the UN Global Compact, the ISEAL Standard Setting Code and ISAE 3000.
Performance Display						
Qualitative considerations	Over 65,000 farmers in 68 countries manage an area of approximately 440,000 hectares in accordance to Naturland standards. Naturland mandates full farm conversion whereas the EU regulation on organic farming only requires partial farm conversion.	RTRS has more than 180 members from countries all around the world, selling over 1.3 million tonnes of RTRS certified soy. The RTRS certifications have been criticized for managing allegedly 'flawed' criteria which allow the certification of GMO and herbicide resistant crops. Additionally, the RTRS criteria	Bonsucro has certified around 3.37% of global sugarcane production and covers 3.70% of global area of sugarcane, having 207 member organizations in over 20 countries.	The RSB certification is considered strong by organizations such as WWF, IUCN and NRDC. In 2017, RSB certified 50 industrial facilities and 56 784 hectares of farmland.	114 farms are Florverde certified in Colombia and Ecuador, while 53% of Colombian stems are certified. More than 3,690 hectares were Florverde certified in 2019, and 38,334 flower workers benefit annually due to the labour and worker requirements of the certification.	Global recognition across more than 100 countries. There are over 23,000 ISCC certified supply chains with approximately 3,500 system users. For ISCC PLUS, no certification schemes other than ISCC are currently accepted which means that all economic operators along the supply chain must demonstrate that the ISCC sustainability criteria have been fulfilled. ISCC focuses on Stage 1 of the biofuel

BDMG Sustainability Bond Framework

		allow for deforestation of secondary forest areas (not identified as primary or high conservation value). Moreover, in 2009 and 2010 two major Brazilian organisations in the soya supply chain quit the RTRS because the addition of a criteria related to deforestation. RTRS members such as Nidera, Monsanto and DuPont/Pioneer were sanctioned by Argentine authorities in the past due to forced labour, despite the fact that respecting labour laws are a condition for using the RTRS label.				product life cycle; feedstock production and collection.
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	Regenerative Organic Certified ⁶⁸	IDB Fairtrade ⁶⁹	Demeter Biodynamic Standards ⁷⁰	Union for Ethical BioTrade (UBET) ⁷¹
Background	Regenerative Organic Certified was established in 2017 with the mission of promoting regenerative organic farming as the highest standard of agriculture worldwide. The group is comprised of farmers, business leaders and experts in soil health, animal welfare, and social fairness.	IDB launched the IDB Fairtrade certification program in 2004. The certification espouses the values of the Fairtrade Mark and intends to promote human, social and environmental development through positive trade relations.	The International Demeter Standards for production were created in 1992. In 1999, the Processing Standards were first approved by the Members' Assembly, regulating the process of food, cosmetics, textiles as well as storage, packaging and labelling. In 2020, production, processing and labelling were combined to form one International Demeter Biodynamic Standard.	UBET is a non-profit association that aims to support companies' sourcing behavior through a series of practices that outline ethical ways to source specialty ingredients for the food, cosmetics and natural pharmaceuticals sectors. The Ethical BioTrade (UBET) Standard stems from the BioTrade Principles and Criteria developed by the United Nations Conference on Trade and Development (UNCTAD).
Clear positive impact	Promoting holistic agricultural practices in soil health, animal welfare and farmworker fairness.	Promoting sustainable agricultural practices and preservation of natural products.	Promoting holistic agricultural practices through biodynamic farming.	Promoting ethical sourcing and innovation of raw materials.
Minimum standards	In order to achieve ROC, an entity must also hold USDA Organic certification or an	Projects are assessed based on meeting minimum requirements related to the	The standard has a variety of fundamental requirements that must be met in different	The UBET Standard consists of seven principles: biodiversity conservation, sustainable use

⁶⁸ Regenerative Organic Certified: <https://regenorganic.org/>

⁶⁹ IDB Certifications, IDB Fairtrade: <https://www.idb.com.br/selo-ibd-fair-trade/?lang=en%3E>

⁷⁰ Demeter, International Demeter Biodynamic Standards: <https://www.demeter.net/certification/standards>

⁷¹ Union for Ethical BioTrade, Ethical BioTrade Standard: https://static1.squarespace.com/static/58bfcdf22994ca36885f063e/t/5c6e8cbb9b747a469b09d32e/1550748860577/std01+-+ethical+biotrade+standard+-+2012-04-11_ENG_new+logo.pdf

	equivalently stringent standard formally recognized by the National Organic Program. The standard builds on the minimum criteria in USDA Organic and other equivalencies. The standard has three levels at the producer level: Bronze, Silver, Gold. Silver and above requires a commitment to continuous improvement. In addition to adhering with USDA Organic and other NOP organic program requirements, ROC looks to international standards with additional requirements for soil management, animal welfare and farm/worker fairness.	country's legislation and progress related to promoting local development. The standard states that operations receiving certification must present an Action Plan outlining how improvements will be implemented with the purpose of fulfilling all of the minimum criteria in the guidelines and at least two progress criteria related to environmental development and two related to human/social factors.	production processes, including, requirements for breeding new varieties and conversation breeding. If a farm has been certified as 'biodynamic', it means it has met the requirements of organic, with some additional requirements that go beyond the scope of organic farming, for example, 50% of livestock feed must be grown on the farm and the farm must set aside 10% of the total farm acreage for biodiversity.	of biodiversity, fair and equitable benefit sharing, local economic development, compliance with national and international laws, respect for human, labour and indigenous rights and clarity about land tenure. Each principle has an associated criteria with indicators that must be fulfilled in order to obtain certification.
Scope of certification or programme	ROC consists of three key areas: Soil Health and Land Management, Animal Welfare, and Farmer and Worker Fairness. Through these areas, it aims to improve animal welfare and provide economic stability and fairness for farmers, ranchers and workers.	IDB Fairtrade serves four key segments: Agriculture, Livestock, Processing and Cosmetics. A Steering Committee is responsible for identifying the main environmental and social demands of prospective organizations.	The standard applies to the production and processing of products from plant and animal original, distributed and marketed under Demeter, Biodynamic and related trademarks or other indications of the Biodynamic method.	The UBET Standard is used to independently check that good practices are applied in the areas of biodiversity conversation, human and labour rights and socio-economic development. The UBET Standard applies to all of the natural ingredients in the organization's portfolio.
Verification of standards and risk mitigation	Certified entities undergo routine third-party audits to ensure compliance with criteria.	Certified entities undergo audits 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.
Third party expertise and multi-stakeholder process	ROC was established by a collective group of stakeholders, including farmers, business leaders and experts in soil health, animal welfare and social fairness, collectively called the Regenerative Organic Alliance.	IDB Fairtrade builds on the Fairtrade Directive which is based on ILO Conventions and various International Protocols such as Agenda 21 and Global Compact Program.	This standard was created in collaboration with, and is supported by, the International Biodynamic Association (IBDA), the Section for Agriculture at the Goetheanum, Demeter-International and the national Biodynamic and Demeter organisations worldwide.	Standard setting is aligned with the ISEAL Standard Setting Code.
Performance Display				
Qualitative considerations	Since its inception in 2017, ROC has continuously evolved to incorporate recognized animal welfare and farmer and worker fairness practices, in line with recognized certification schemes, including Certified Humane and Fairtrade. It is noted that at the producer level, Sustainalytics views Silver and above to be in line with market expectations, as Silver mandates a commitment to continuous improvement.	Operates in several countries worldwide. The standard applies to companies, properties and producer groups that are looking to advance human, social and environmental development through trade relations based on Fairtrade principles.	Demeter represents more than 5,300 farmers with almost 190,000 hectares in 63 countries. The organization has 19 members and guest-members from Europe, America, Africa, New Zealand and India. While biodynamic farming has faced some criticism for not being formed solely on science-based practices, but rather through the unconventional treatment of farms as living organisms, it has proven to have a net	UEBT has members across Latin America, Asia, and Africa, with over 500 supply chains involving 60 countries and over 150,000 local producers. It is noted that UBET intends to update and publish its new standard in 2020.

			positive environmental and social impact.	
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Appendix 2: Environmental and Social Certifications for Forestry Products

	FSC ⁷²	PEFC ^{73,74}
Background	Founded in 1993 after the 1992 Earth Summit in Rio failed to produce any international agreements to fight against deforestation, FSC aims to promote sustainable forest management practice.	PEFC was founded in 1999 in response to the specific requirements of small- and family forest owners as an international umbrella organization providing independent assessment, endorsement and recognition of national forest certification systems.
Basic Principles	• Compliance with laws and FSC principles • Tenure and use rights and responsibilities • Indigenous peoples' rights • Community relations and workers' rights • Benefits from the forests • Environmental impact • Management plans • Monitoring and assessment • Special sites – high conservation value forests (HCVF) • Plantations	• Maintenance and appropriate enhancement of forest resources and their contribution to the global carbon cycle • Maintenance and enhancement of forest ecosystem health and vitality • Maintenance and encouragement of productive functions of forests (wood and no-wood) • Maintenance, conservation and appropriate enhancement of biological diversity in forest ecosystems • Maintenance and appropriate enhancement of protective functions in forest management (notably soil and water) • Maintenance of socioeconomic functions and conditions • Compliance with legal requirements
Governance	The General Assembly, consisting of all FSC members, constitutes the highest decision-making body. At the General Assembly, motions are proposed by one member, seconded by two more, and deliberated and voted on by all members. Members are entitled to vote to amend the bylaws, initiate new policies, and clarify, amend or overturn a policy decision by the board. Members apply to join one of three chambers – environmental, social, or economic – that are further divided into northern and southern sub-chambers. Each chamber holds 33.3% of the weight in votes, and within each chamber the votes are weighted so that the North and South hold an equal portion of authority, to ensure influence is shared equitably between interest groups and countries with different levels of economic development. The votes of all individual members in each sub-chamber represent 10% of the total vote of the sub-chamber, while the votes of organizational members make up the other 90%. The members vote for the board of directors, which is accountable to the members. There is an international board elected by all members and a US board, elected by the US-based members.	PEFC's governance structure is formed by the General Assembly (GA) which is the highest authority and decision-making body. It is made up of all PEFC members, including national and international stakeholders. Members vote on key decisions including endorsements, international standards, new members, statutes and budgets. All national members have between one and seven votes, depending on membership fees, while international stakeholder members have one vote each. The Board of Directors supports the work of the GA and together the GA and the Board make the formal approval of final draft standards. Standards are developed by working groups. In general, PEFC's governance structure is more representative of industry and government stakeholders than of social or environmental groups, which gives industry and governments more influence in the decision-making process. However, the organization does include stakeholders from all sectors.

⁷² Forest Stewardship Council, FSC: <https://ca.fsc.org/en-ca>

⁷³ The Brazilian Forest Certification Program (CERFLOR) was formally endorsed by PEFC in 2005 and has since formed alignment. As such, Sustainalytics' analysis of PEFC's framework, guidelines and credibility can be applied to CERFLOR. See more, at: <https://www.pefc.org/discover-pefc/our-pefc-members/national-members/brazilian-forest-certification-programme-cerflor>

⁷⁴ Programme for the Endorsement of Forest Certification, PEFC: <https://www.pefc.org/>

Scope	FSC is a global, multi-stakeholder owned system. All FSC standards and policies are set by a consultative process. There is an FSC Global standard and for certain countries FSC National standards. Economic, social, and environmental interests have equal weight in the standard setting process. FSC follows the ISEAL Code of Good Practice for Setting Social and Environmental Standards.	Multi-stakeholder participation is required in the governance of national schemes as well as in the standard-setting process. Standards and normative documents are reviewed periodically at intervals that do not exceed five years. The PEFC Standard Setting standard is based on ISO/IEC Code for good practice for standardization (Guide 59) ⁷⁵ and the ISEAL Code of Good Practice for Setting Social and Environmental Standards.
Chain-of-Custody	- The Chain-of-Custody (CoC) standard is evaluated by a third-party body that is accredited by FSC and compliant with international standards. - CoC standard includes procedures for tracking wood origin. - CoC standard includes specifications for the physical separation of certified and non-certified wood, and for the percentage of mixed content (certified and non-certified) of products. - CoC certificates state the geographical location of the producer and the standards against which the process was evaluated. Certificates also state the starting and finishing point of the CoC.	- Quality or environmental management systems (ISO 9001:2008 or ISO 14001:2004 respectively) may be used to implement the minimum requirements for chain-of-custody management systems required by PEFC. - Only accredited certification bodies can undertake certification. - CoC requirements include specifications for physical separation of wood and percentage-based methods for products with mixed content. - The CoC standard includes specifications for tracking and collecting and maintaining documentation about the origin of the materials. - The CoC standard includes specifications for the physical separation of certified and non-certified wood. - The CoC standard includes specifications about procedures for dealing with complaints related to participant's chain of custody.
Non-certified wood sources	FSC's Controlled Wood Standard establishes requirements to participants to establish supply-chain control systems, and documentation to avoid sourcing materials from controversial sources, including: - Illegally harvested wood, including wood that is harvested without legal authorization, from protected areas, without payment of appropriate taxes and fees, using fraudulent papers and mechanisms, in violation of CITES requirements, and others, - Wood harvested in violation of traditional and civil rights, - Wood harvested in forests where high conservation values are threatened by management activities, - Wood harvested in forests being converted from forests and other wooded ecosystems to plantations or non-forest uses, - Wood from management units in which genetically modified trees are planted.	The PEFC's Due Diligence System requires participants to establish systems to minimize the risk of sourcing raw materials from: - forest management activities that do not comply with local, national or international laws related to: - operations and harvesting, including land use conversion, - management of areas with designated high environmental and cultural values, - protected and endangered species, including CITES species, - health and labor issues, - indigenous peoples' property, tenure and use rights, - payment of royalties and taxes. - genetically modified organisms, - forest conversion, including conversion of primary forests to forest plantations.
Accreditation/verification	FSC-accredited Certification Bodies (CB) conduct an initial assessment, upon successful completion companies are granted a 5-year certificate. Companies must undergo an annual audit every year and a reassessment audit every 5 years. Certification Bodies undergo annual audits from Accreditation Services International (ASI) to ensure conformance with ISO standard requirements.	Accreditation is carried out by an accreditation body (AB). Like a certification body checks a company meets the PEFC standard, the accreditation body checks that a certification body meets specific PEFC and ISO requirements. Through the accreditation process PEFC has assurance that certification bodies are independent and impartial, that they follow PEFC certification procedures. PEFC does not have their own accreditation body. Like with the majority of ISO based certifications, PEFC relies on national ABs under the umbrella of the International Accreditation Forum (IAF). National ABs need to be a

⁷⁵ ISO, ISO/IEC Guide 59:2019: <https://www.iso.org/standard/23390.html>

BDMG Sustainability Bond Framework

		member of the IAF, which means they must follow IAF's rules and regulations.
Conclusion	Sustainalytics views both FSC and PEFC as being robust, credible standards that are based on comprehensive principles and criteria that are aligned with ISO. Both schemes have received praise for their contribution to sustainable forest management practices ⁷⁶ and both have also faced criticism from civil society actors. ^{77,78} In certain instances, these standards go above and beyond national regulation and are capable of providing a high level of assurance that sustainable forest management practices are in place. However, in other cases, the standards are similar or equal to national legislation and provide little additional assurance. Ultimately, the level of assurance that can be provided by either scheme is contingent upon several factors including the certification bodies conducting audits, national regulations and local context.	

⁷⁶ FESPA, FSC, PEFC and ISO 38200: <https://www.fespa.com/en/news-media/blog/fsc-pefc-and-iso-38200>

⁷⁷ Yale Environment 360, Greenwashed Timber: How Sustainable Forest Certification Has Failed: <https://e360.yale.edu/features/greenwashed-timber-how-sustainable-forest-certification-has-failed>

⁷⁸ EIA, PEFC: A Fig Leaf for Stolen Timber: <https://eia-global.org/blog-posts/PEFC-fig-leaf-for-stolen-timber>

Appendix 3: Sustainability Bond / Sustainability Bond Programme - External Review Form

Section 1. Basic Information

Issuer name:	The Development Bank of Minas Gerais
Sustainability Bond ISIN or Issuer Sustainability Bond Framework Name, if applicable:	BDMG Sustainability Bond Framework
Review provider's name:	Sustainalytics
Completion date of this form:	May 28, 2020
Publication date of review publication:	Update to 2018 Sustainalytics SPO, published September 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 and SBPs:

- | | |
|--|--|
| ☒ Use of Proceeds | ☒ Process for Project Evaluation and Selection |
| ☒ Management of Proceeds | ☒ Reporting |

ROLE(S) OF REVIEW PROVIDER

- | | |
|---|--|
| ☒ Consultancy (incl. 2 nd opinion) | ☐ Certification |
| ☐ Verification | ☐ Rating |
| ☐ 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 Evaluation 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 categories for the use of proceeds – Sustainable Agriculture and Sustainable Management of Living Natural Resources, Renewable Energy and Energy Efficiency, Sustainable Water and Wastewater Management, Clean Transportation, Pollution Prevention and Control, Access to Essential Services - Health, Access to Essential Services - Education, Socioeconomic Empowerment - Gender inclusion, Employment Generation - Micro and small enterprises, Affordable Basic Infrastructure - Inclusive and sustainable urbanization, and Access to Essential Services - Economic recovery after disasters – are aligned with those recognized by both the Green Bond Principles and Social Bond Principles. Sustainalytics considers that the eligible categories will lead to positive environmental or social impacts and advance the UN Sustainable Development Goals, specifically SDG Goals 3, 4, 5, 6, 7, 8, 9, 11, 12 and 15.

Use of proceeds categories as per GBP:

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

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

Use of proceeds categories as per SBP:

- | | |
|--|--|
| ☒ Affordable basic infrastructure | ☒ Access to essential services |
| ☐ Affordable housing | ☒ Employment generation (through SME financing and microfinance) |
| ☐ Food security | ☒ Socioeconomic advancement and empowerment |
| ☐ Unknown at issuance but currently expected to conform with SBP categories, or other eligible areas not yet stated in SBPs | ☒ Other (please specify): Disaster Relief |

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

2. PROCESS FOR PROJECT EVALUATION AND SELECTION

Overall comment on section (if applicable):

BDMG's Credit and Renegotiation Committee will be responsible for evaluating and approving projects against the eligibility and exclusionary criteria and in alignment with the Bank's internal socio-environmental policies. The Committee is comprised of representatives from various departments including, Credit Analysis, Operations, Credit Management, Products, Risks and Internal Control, Finance and Legal. Sustainalytics considers the project selection process in line with market practice.

Evaluation and selection

- | | |
|---|---|
| ☒ Credentials on the issuer's social and green objectives | ☒ Documented process to determine that projects fit within defined categories |
| ☒ Defined and transparent criteria for projects eligible for Sustainability Bond proceeds | ☒ Documented process to identify and manage potential ESG risks associated with the project |
| ☒ Summary criteria for project evaluation and selection publicly available | ☐ Other (please specify): |

Information on Responsibilities and Accountability

- | | |
|--|--|
| ☒ Evaluation / Selection criteria subject to external advice or verification | ☐ In-house assessment |
| ☐ Other (please specify): | |

3. MANAGEMENT OF PROCEEDS

Overall comment on section (if applicable):

BDMG's Financial Management department will oversee the management of proceeds, which will be registered as a unique source by the Bank's established internal accounting functions. Pending allocation, proceeds will be held in the Bank's cash account or invested in high-liquidity and low-risk instruments, and will in no case be invested in projects which are misaligned with the goals of the Framework. This is in line with market practice.

Tracking of proceeds:

- | |
|---|
| ☒ Sustainability 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:

- | | |
|--|---|
| ☐ Allocations to future investments only | ☒ Allocations to both existing and future investments |
| ☐ Allocation to individual disbursements | ☒ Allocation to a portfolio of disbursements |
| ☐ Disclosure of portfolio balance of unallocated proceeds | ☐ Other (<i>please specify</i>): |

4. REPORTING

Overall comment on section (if applicable):

BDMG intends to report on both the allocation and impact of proceeds on an annual basis. Allocation reporting will include a breakdown by eligibility category and region, while impact reporting will include relevant KPIs, presented on an aggregate level per use of proceeds category, as well as representative case studies. BDMG has committed to providing at least one impact indicator for each eligible category. This is in line with market practice.

Use of proceeds reporting:

- | | |
|--|--|
| ☐ Project-by-project | ☒ On a project portfolio basis |
| ☐ Linkage to individual bond(s) | ☐ Other (<i>please specify</i>): |

Information reported:

- | | |
|---|---|
| ☒ Allocated amounts | ☐ Sustainability Bond financed share of total investment |
| ☐ Other (<i>please specify</i>): | |

Frequency:

- | | |
|---|--------------------------------------|
| ☒ Annual | ☐ Semi-annual |
| ☐ Other (<i>please specify</i>): | |

Impact reporting:

- | | |
|--|--|
| ☐ Project-by-project | ☒ On a project portfolio basis |
| ☐ Linkage to individual bond(s) | ☐ Other (<i>please specify</i>): |

Frequency:

- | | |
|---|--------------------------------------|
| ☒ Annual | ☐ Semi-annual |
| ☐ Other (<i>please specify</i>): | |

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): Various, refer to Framework |

Means of Disclosure

- | | |
|---|---|
| ☐ Information published in financial report | ☐ Information published in sustainability report |
| ☐ Information published in ad hoc documents | ☒ Other (please specify): On website. |
| ☐ 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:**

- | | |
|--|--|
| ☐ Consultancy (incl. 2 nd opinion) | ☐ Certification |
| ☐ Verification / Audit | ☐ Rating |
| ☐ Other (please specify): | |

Review provider(s):**Date of publication:****ABOUT ROLE(S) OF REVIEW PROVIDERS AS DEFINED BY THE GBP AND THE SBP**

- i. Second Party Opinion: An institution with sustainability expertise that is independent from the issuer may provide a Second Party Opinion. The institution should be independent from the issuer's adviser for its Sustainability Bond framework, or appropriate procedures such as information barriers will have been implemented within the institution to ensure the independence of the Second Party Opinion. It normally entails an assessment of the alignment with the Principles. In particular, it can include an assessment of the issuer's overarching objectives, strategy, policy, and/or processes relating to sustainability and an evaluation of the environmental and social features of the type of Projects intended for the Use of Proceeds.
- ii. Verification: An issuer can obtain independent verification against a designated set of criteria, typically pertaining to business processes and/or sustainability criteria. Verification may focus on alignment with internal or external standards or claims made by the issuer. Also, evaluation of the environmentally or socially sustainable features of underlying assets may be termed verification and may reference external criteria. Assurance or attestation regarding an issuer's internal tracking method for use of proceeds, allocation of funds from Sustainability Bond proceeds, statement of environmental or social impact or alignment of reporting with the Principles may also be termed verification.
- iii. Certification: An issuer can have its Sustainability Bond or associated Sustainability Bond framework or Use of Proceeds certified against a recognised external sustainability standard or label. A standard or label defines

BDMG Sustainability Bond Framework

specific criteria, and alignment with such criteria is normally tested by qualified, accredited third parties, which may verify consistency with the certification criteria.

- iv.** Green, Social and Sustainability Bond Scoring/Rating: An issuer can have its Sustainability Bond, associated Sustainability Bond framework or a key feature such as Use of Proceeds evaluated or assessed by qualified third parties, such as specialised research providers or rating agencies, according to an established scoring/rating methodology. The output may include a focus on environmental and/or social performance data, process relative to the Principles, or another benchmark, such as a 2-degree climate change scenario. Such scoring/rating is distinct from credit ratings, which may nonetheless reflect material sustainability risks.

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