

BRF S.A GREEN BOND

FRAMEWORK OVERVIEW AND SECOND-PARTY OPINION BY SUSTAINALYTICS

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www.sustainalytics.com

Vikram Puppala (Toronto)
Manager, Advisory Services
vikram.puppala@sustainalytics.com
(+1) 647 317 3694

Catalina Secreteanu (London)
Senior Responsible Investment Adviser,
Institutional Relations
catalina.secreteanu@sustainalytics.com
(+44) 20 3514 3124

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1. PREFACE

BRF S.A (BRF) has engaged Sustainalytics to provide an opinion and support efforts to formulate a framework that can be used to issue a green bond. As part of this engagement, Sustainalytics, held conversations with various members of BRF’ treasury, sustainability, operations and engineering teams to understand the sustainability impact of BRF’s business processes and planned use of proceeds of its green bond. Sustainalytics also reviewed relevant public and internal documents and provided its opinion on the green bond.

This document contains two sections: Framework Overview – summary of BRF green bond framework; and Sustainalytics’ Opinion – an opinion on the framework.

2. FRAMEWORK OVERVIEW

2.1 Introduction

BRF S.A., together with its subsidiaries, engages in raising, producing, and slaughtering poultry, pork, and beef in Brazil. The company is headquartered in Itajaí, Brazil and exports its products to the Middle East, Africa, Europe, Eurasia, Asia, and the Americas. BRF one of the biggest producers of refrigerated and frozen protein foods in the world. The company’s brands include Sadia, Perdigão, Batavo, Elegê, Qualy, Perdix and Paty.

2.2 BRF Green Bond

BRF is issuing a green bond aimed at funding green projects across its business divisions and operations. The green projects will focus on energy efficiency, renewable energy, sustainable forests, GHG reduction, water management, packaging, raw material use reduction and waste management. The following sections summarize BRF’s green bond framework with regard to the use of proceeds, management of proceeds and reporting.

2.2.1 Use of Proceeds

The proceeds of the green bond will be allocated towards refinancing and funding new BRF projects that meet the following criteria.

Eligibility Criteria

To be eligible for the green bond proceeds, the projects funded must meet one or more of the following business activity criteria:

1. Energy Efficiency
2. GHG Emission Reduction
3. Renewable Energy
4. Water Management
5. Waste Management
6. Sustainable and Efficient Packaging
7. Sustainable Forest Management
8. Raw Material Use Reduction

1. Energy Efficiency

The context: Energy efficiency is an important sustainability goal for BRF and is managed through the company's Energy Excellence Program, which promotes sustainable consumption. BRF has a goal of achieving an overall reduction in energy use through improvements in factories, distribution centers and agricultural operations.

Use of proceeds: BRF has identified numerous projects aimed at reducing the consumption of energy that the proceeds of the green bond will be used. These energy efficiency projects include, but not limited to, replacing refrigeration equipment with more energy efficient models, installing more efficient LED lighting, reusing thermal energy from the production process, and optimizing production processes to reduce energy waste.

2. GHG Emission Reduction

The context: BRF considers GHG reduction as highly important and reports it as a key sustainability initiative within one of the company's pillars of Sustainability - Adapting to Climate Change.

Use of Proceeds: BRF expects to use the proceeds of the green bond to fund projects related to reducing the amount of methane emissions from its production processes. This is expected to be completed in the form of replacing the company's anaerobic wastewater treatment system with an activated sludge system, thereby reducing the overall amount of methane the company emits.

3. Renewable Energy

The context: Renewable energy development is also a key component of the company's Energy Excellence Program. BRF tracks its energy intensity from renewable and nonrenewable source of electricity and undertakes projects to meet the company's goal of obtaining most of the direct energy from renewable sources in 2015. BRF currently has 1 small, run-of-the river hydro and 3 biomass plants with installed capacity of 5 MW of energy, and has plans in the near term to construct 1 biomass plant and 1 biogas plant.

Use of proceeds: BRF expects to use the proceeds of the green bond to fund projects related to renewable energy projects including, but not limited to, increasing the capacity of run-of-the-river hydroelectric energy generation, installing biomass boilers for cogeneration, and the installation of solar and wind generation technology.

Additional consideration: BRF has clarified to Sustainalytics that it does not undertake any large, dam-based, hydro projects.

4. Water Management

The context: BRF identifies water management as a key sustainability challenge for the company. The company focuses on water consumption reduction projects from its industrial activities with a focus on reducing water consumption per unit of production volume.

Use of proceeds: BRF has identified numerous projects for the green bond that a) reduce water consumption and b) improve wastewater management. Projects that reduce water consumption include, but not limited to, rainwater collection in plants, the automation of production process equipment to supply water only on demand, and optimization of water processing, storing, and distribution. Projects that improve wastewater management include, but not limited to, the construction of specific treatment systems for the reuse of wastewater.

5. Waste Management

The context: BRF reports that waste management is an environmental priority, and as per the sustainability report, has plans to reduce the volume of waste generated by the company.

Use of proceeds: Waste management projects outlined by BRF that will be eligible for the green bond proceeds involve the overall reduction of waste through the installation of equipment that reduces waste generation. These projects include, but not limited to, the reuse of processing wastes as an alternative fuel for power generation and the construction of organic waste composting plants.

6. Sustainable and Efficient Packaging

The context: The increase of sustainable and efficient packaging is an important consideration for BRF. The company is a member of the Brazilian Packaging Association (Abre), and has worked to improve recycling processes such as the inclusion of recycling symbols on their packages.

Use of proceeds: Packaging projects that would be eligible for the green bond proceeds include the acquisition of equipment that would allow the company to decrease the amount of raw material used in packaging and the increased use of recyclable materials in product packaging.

7. Sustainable Forest Management

The context: BRF recognizes that the use of sustainable biomass for use in its energy generation processes is vital in reaching one of its main commitments- to increase the amount of renewable energy used by the company.

Use of proceeds: BRF outlines sustainable forestry projects to be funded by the proceeds of the green bond. These projects include the development of eucalyptus plantations, which will be sustainably managed. All trees from this plantation that are harvested will be replanted, maintaining the soil quality and biodiversity. The proceeds would be used for the first year of forest management, for operations including, soil preparation, purchase of young plants, soil fertilization and pest control. This avoids the degradation of the environment and the use of external suppliers who may not have sustainable forestry practices.

Additional consideration: BRF reports that all the areas of the company that are applicable to the New Forest Code, follow the schedule set by the Brazilian Institute of Environment and Renewable Natural Resources (IBAMA).

8. Raw Material Use Reduction

The context: The reduction of raw material use, in the form of animal feed, is a key sustainability consideration for BRF. The feed conversion – amount of feed for a kilo of live chicken, is a closely tracked metric within BR.

Use of proceeds: Through the use of the green bond proceeds, the company plans on optimizing processes to reduce the use of animal feed. This involves improving the consistency of the feed, resulting in reduced consumption of grains and other raw material.

Additional consideration: BRF assured Sustainalytics that such a reduction in animal feed has no negative impact on the animals and all such projects will be implement in accordance with BRF's animal welfare standards which have reference to five freedoms: animals free from hunger and thirst; free from

environmental discomfort; free from pain, injury and disease; free to express their natural behavior; and free from fear and stress.

Eligible Projects

Please refer to Appendix A for the detailed list of sample eligible projects

2.2.2 Management of Proceeds

The proceeds from the green bond will be placed in BRF's treasury and managed by the treasury department. BRF has disclosed to Sustainalytics the following process for the management of the green bond proceeds.

Project Approval

For each eligible project, BRF's investment team will analyze all the material and financial information and check if the project is aligned with the company's strategy, following this, the largest approved projects, with an investment higher than R\$ 1 MM, will be presented at the company's board meeting for approval. All projects will be required to have a financial evaluation and a master plan presentation, with all financial gains and impacts clearly outlined. This financial evaluation and master plan must be presented at the beginning of the approval process.

Project Tracking

All approved projects will undergo a monthly evaluation by the corporate investment team. The corporate investment team will assess the disbursement of funds and confirm that the money is being expended according to the criteria that were established at the beginning of the project. BRF uses a SAP system to manage all investments. BRF engineers and business units input all expenses in to the SAP system, where they are analyzed by the corporate investment team. If an abnormality in investment use is detected; for example, if the investment exceeded what it was initially planned or not used for a certain period of time, the investment would be automatically blocked. It will be enabled again only if an explanation is provided.

Project Checking

After all investments are made, the large projects will go through a post mortem analysis, carried out by the corporate investment team. The team will check that the results align with the current company strategy and capture the lessons learned.

2.2.3 Reporting

BRF commits to provide the following reporting with regard to the green bond:

1. BRF will create a criteria-level report for the green bond investors, providing figures and KPIs for the following KPIs:
 - a. Carbon emissions avoided,
 - b. GHG emissions avoided,

- c. Energy saved,
 - d. Energy produced from renewable energy sources,
 - e. Water consumption reduced,
 - f. Waste reduced or recycled,
 - g. Raw material use avoided,
 - h. Number of acres of sustainably managed projects, and
 - i. Sustainable and efficient material used.
2. BRF Corporate Responsibility Report: BRF commits to publishing company-level KPI figures in the company's annual sustainability report.

2.2.4 Compliance Review

On the anniversary of the green bond issuance, BRF will engage Sustainalytics to review projects funded by the green Bond in order to assess the compliance of projects with the use of proceeds criteria of the bond. Sustainalytics will review a broad sample of projects from the total allocated projects in order to determine whether or not they meet the use of proceeds criteria defined in the framework. Sustainalytics will provide a report of the evaluation, which BRF may plan to disclose publicly. In an unlikely event that a project did not meet the use of proceed criteria, BRF would reallocate the bond funds to a different project that is aligned with the criteria.

3 SUSTAINALYTICS' OPINION

An environmentally focused company: In BRF's 2015 Corporate Sustainability Report the company outlines seven pillars of sustainability, including several important environment-related pillars such as adaptation to climate change, sustainability in the supply chain, and the promotion of sustainable consumption. The company states that these pillars are integrated into the strategy, everyday management and attitudes of all employees at BRF. Sustainalytics feels that this vision for environmental performance is in-line with the desired objectives of this green bond. Furthermore, BRF is rated in Sustainalytics' ESG research as an Environmental outperformer in the food products industry and is ranked in the top 20% of peers in terms of its overall environmental performance. In addition, BRF has not been involved in any significant controversies or incidents relating to environmental issues. Sustainalytics is of the opinion that BRF is strongly environmentally focused and is well positioned to issue a green bond.

Strong GHG-reduction programme: BRF has a strong GHG reduction programme. In 2012, the company carried out an Energy Excellence Programme across its entire meat processing units and across dairy products operation units in 2013. BRF has adopted efficiency initiatives in the company's logistics system, the use of biomass as a fuel (renewable energy), and has undertaken energy and heat conservation mechanisms in equipment and processes. BRF is a member of the Brazilian GHG Protocol Program and follows this methodology for calculating the BRF Greenhouse Gas Inventory, which the company reports as Gold Seal, the greatest recognition given by the Program. Furthermore, the company is part of "Companies for the Climate", a Brazilian initiative that seeks to support companies in building a low-carbon economy in Brazil. Sustainalytics is of the opinion that by using the proceeds of the green bond for GHG reduction programme and initiatives, BRF is likely to achieve significant GHG emission reductions from its operations.

Impact: BRF lists energy efficiency, renewable energy, GHG emissions reductions, water management, waste management, sustainable packaging and forest management, and raw material use reduction as project areas that would be funded by the proceeds of the green bond. Sustainalytics considers these projects to be highly environmentally significant, in the mitigation of environmental impacts from industrial meat production activities. The environmental impacts of the global meat production industry are significant, especially concerning GHG emissions. A recent report published by the Food and Agriculture Organization of the United Nations, found that emissions from global livestock represent 14.5 percent of all anthropogenic GHG emissions.¹ Sustainalytics is of the opinion that, by funding projects that provide energy and water efficiency solutions to sectors that have high environmental impacts, such as meat production, the company is effectively targeting areas of its business that have a significant negative environmental impacts and helping to effectively mitigate those impacts.

¹ Tackling Climate Change Through Livestock, FAO 2013, <http://www.fao.org/docrep/018/i3437e/i3437e.pdf>

Conclusion

Through this green bond, BRF aims to support projects that focus on energy efficiency, renewable energy, GHG emissions reductions, water management, waste management, and sustainable packaging and forest management. By focusing on such high environmental impact areas of the meat processing and production, BRF is targeting carbon reduction efforts in an industry that would benefit significantly from mitigating further negative environmental impacts. BRF's green bond framework is in alignment with market best practices and norms such as the Green Bond Principles. BRF's approach to track, audit and report the use of proceeds will further ensure investors of funds are properly managed by the BRF. In addition, BRF will have an annual compliance review to ensure that the project selected for the bond are in compliance with the bond's eligibility criteria. All these elements make this green bond robust and credible.

APPENDICES

Appendix A: Sample List of Eligible Projects

Categories	Project Name	Description	Impact KPI
Energy Efficiency	Reduction in pressure condensation (Refrigeration)	•Reduction of condensation pressure by replacing the current capacitors with more efficient equipment , resulting in a gain of electric energy in the system/(kg/cm ² pressure)	Kwh saved/reduced or/and CO2 avoided
	Chiller Energy Recovery	•Use of the water energy output of the carcass cooling system to reduce temperature of the spare water, saving energy. The temperature is then 6° C less than the starting temperature, reducing the demand for energy to cool the water.	Kwh saved/reduced or/and CO2 avoided
	Lighting	•Replacement of current lamps to LED light bulbs with lower energy consumption and greater durability	Kwh saved/reduced or/and CO2 avoided
	Energy Reuse	• Reduction of steam or energy consumption through the use of thermal energy from other steps of the production process	Steam saved/reduced or/and CO2 avoided
	Variable cooling	•Empowerment of the compressors' energy saving capacity by installing frequency inverters that modulate the engine according to demand	Kwh saved/reduced or/and CO2 avoided
	Application of new technologies	•Application of new technologies with greater efficiency to replace the existing system	Kwh saved/reduced or/and CO2 avoided
	Reduction of fuel consumption	•Automation of combustion systems which decreases fuel consumption	tons of fuel saved/reduced or/and CO2 avoided
	Process optimization	•Optimization of processes in order to increase equipment yield, reducing energy waste	Kwh or Steam saved/reduced or/and CO2 avoided
	Replacement of Equipment	•Replacement of obsolete equipment with more efficient equipment with lower power consumption	Kwh saved/reduced or/and CO2 avoided
Renewable Energy Generation	Energy Cogeneration	•Cogeneration energy with biomass boilers	Kwh produced or/and CO2 avoided
	Power Plant Repowering	•Increased capacity of hydroelectric energy generation, a 100% renewable energy source	Kwh produced or/and CO2 avoided
	Biogas	•Power generation by burning biogas from waste generated in the anaerobic digestion process	Kwh produced or/and CO2 avoided
	Alternative Energy Generation	•Alternative energy production from clean technologies such as wind and solar	Kwh produced or/and CO2 avoided
Sustainable Forests	Forest management for use in biomass energy production	•Production of biomass in order to produce energy generation provided from renewable sources: own reforestation with sustainable management (assuring that all trees that are used are replanted, maintaining the soil quality and biodiversity)	Acres
GHG Emission Reduction	Replacement of anaerobic treatment system by an activated sludge system.	•Reduction of methane emissions through the replacement of the anaerobic wastewater treatment system to an activated sludge system.	tons CO2e avoided /reduced
Water Management	Application of technologies to reduce water waste	•Standardization of equipment and processes with significant water consumption	m ³ saved/reduced
	Rainwater collection	•Use of rainwater collected in the plants.	m ³ saved/reduced
	Demand control of water consumption	•Automation of equipment supplying water only on demand, thereby reducing consumption	m ³ saved/reduced
	Water reuse	•Reuse of wastewater after undergoing a specific treatment system	m ³ saved/reduced
	Replacement of water supply source	•Replacement of the source used to supply water by a more renewable one.	m ³ saved/reduced
Waste Management	Process optimization	•Optimization on the processes of capturing, processing, storage and distribution of water supply	m ³ saved/reduced
	Waste reuse	•Reuse of processes wastes as an alternative fuel for power generation.	tons saved/ reduced
	Reduction of waste generation	•Installation of equipment and process standardization in order to reduce waste generation	tons saved/ reduced
	Composting of organic waste	•Construction and operation of organic waste composting plants	tons saved/ reduced
Sustainable and Efficient Packaging	Process optimization	•Optimization of storage processes, treatment and disposal of solid waste, wastewater, air emissions	tons saved/ reduced
	Reduction of aluminum in packaging	•Acquisition of equipment that allows for a decrease of raw material used in packages.	tons saved/ reduced
Raw Material Use Reduction	Process optimization in order to reduce the consumption of raw material	•Improvement of the consistency of the feed resulting in a reduction in the consumption of grains and other raw materials.	tons saved/ reduced or/and Sustainable Material - tons used

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