

Post Issuance Second Party Opinion

Green Bonds based on FS Bioenergia's Green Bond
Framework



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August 4th, 2021

About SITAWI

SITAWI Finance for Good is a Brazil-based organization whose mission is to mobilize capital for positive environmental and social impact. We develop financial solutions for social impact and advise the financial sector on how to incorporate environmental and social issues into strategy, risk management and investment analysis. We are one of the 5 best environmental and social research houses for investors according to Extel Independent Research in Responsible Investment - IRRRI 2019 – and a pioneer in the green bond market in Brazil.

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I. Scope

The purpose of this Post-Issuance Second Party Opinion is to provide an opinion on the alignment of five green bonds issued by FS Bioenergia to the company's Green Bond Framework and to the Green Bond Principles. The Green Bond Framework developed by FS Bioenergia obtained a positive second party opinion from SITAWI in 2020.

The first issuance was a Certificate of Agribusiness Receivables (CRA, in Portuguese acronym) backed by a Certificate of Agribusiness Credit Rights (CDCA, in Portuguese acronym) in the amount of R\$ 210 million. It was issued on February 12th, 2020, with maturity on February 22, 2023.

The second issuance was a Bank Credit Bill (CCB, in Portuguese acronym) N° 270246320 with Santander in the amount of R\$ 180 million. It was issued on June 19th, 2020, with final maturity on June 24, 2021.

The third operation was a Certificate of Real Estate Receivables (CRI, in Portuguese acronym) and was issued through a Bank Credit Note N° CSBRA20200600402 with the bank Credit Suisse, on June 25th, 2020, and maturing on February 22nd, 2023, in the amount of R\$ 120 million.

The fourth operation was the issuance of a green bond on December 15, 2020, maturing on December 15, 2025, in the amount of US\$ 550 million. This operation had an additional funding (fifth operation), on January 11, 2021, in the amount of US\$ 50 million.

The raised proceeds were allocated 100% towards CAPEX and OPEX associated to FS Bioenergia's operations for the production of corn ethanol, fostering the production of biofuels and contributing to mitigate climate change.

SITAWI used its proprietary analysis method, which is aligned with the Green Bond/Loan Principles (GBP/GLP)¹, United Nations (UN) Sustainable Development Goals (SDGs)² and other internationally recognized sustainability standards.

SITAWI's opinion is based on:

- i. Alignment of green bonds to FS Bioenergia's Green Bond Framework;
- ii. Operation contracts with banks;
- iii. Environmental, Social and Governance (ESG) performance of financed projects.

The analysis used information and documents provided by FS Bioenergia, some of which were confidential; desk research; and other elements acquired through interviews (videoconferences). This process was carried out between June and August 2021.

The evaluation process consisted of:

- Planning the evaluation;
- Conducting the evaluation, including client preparation, gathering evidence, and evaluation;
- Preparation of the evaluation conclusion;
- Preparation of the evaluation report;

¹ <https://www.icmagroup.org/green-social-and-sustainability-bonds/green-bond-principles-gbp/> e https://www.lma.eu.com/application/files/9115/4452/5458/741_LM_Green_Loan_Principles_Booklet_V8.pdf

² <https://nacoesunidas.org/pos2015/agenda2030/>

The assessment was performed in accordance with relevant general principles and professional standards for independent auditing, and in line with the International Standard on Valuation Engagements other than Audits or Reviews of Historical Financial Information (ISAE 3000), International Standard on Quality Control (ISQC 1, 2009) and Code of Ethics for Professional Accountants of the International Ethic Standards Board for Accountants (IESBA, 2019).

SITAWI had access to all requested documents and persons, thus being able to provide an opinion with reasonable level of assurance regarding completeness, accuracy and reliability.

II. Opinion

In our opinion the five green bonds are aligned, in all material aspects, with FS Bioenergia's Green Bond Framework and the GBP and GLP generating clear and measurable environmental benefits. FS Bioenergia's Framework and the Framework's second party opinion, the latter prepared by SITAWI, have been made publicly available on FS's Investor Relations website.³

This opinion is based on the following two analyses:

i. Proceeds Allocation

- a. The projects that received proceeds generate tangible environmental benefits and fall under the 'Bioenergy' category of FS Bioenergia's Green Bond Framework. The use of proceeds is aligned with the renewable energy category of the Green Bond Principles. In addition, we have identified that the projects can contribute to the achievement of SDG 7 (Affordable and clean energy).
- b. 100% of the raised proceeds have already been allocated. They summed up to R\$ 510 million in the domestic market and USD 550 million in the foreign market. Of the domestic market issuances, R\$ 390 million were allocated to OPEX and R\$ 120 million to CAPEX. Of the international market issuances, USD 47.3 million were allocated to OPEX and USD 502.7 million to CAPEX.
- c. The proceeds allocated to OPEX were used to purchase feedstock to produce corn ethanol for the 2019/2020 crop year. The proceeds allocated to CAPEX were used to increase the company's ethanol production capacity. The proceeds were temporarily held in low-risk instruments and in the company's cash without significant risk of contamination. The company proved the allocation of 100% of the green proceeds through audited documents.
- d. The eligible projects have not received proceeds from other green issuances/loans other than those analyzed in this document. The amount of eligible green projects and assets is higher than the proceeds labelled as green.
- e. The Lucas do Rio Verde and Sorriso plants, which received the proceeds from the green issuances, have valid environmental licenses to operate.
- f. The company will inform investors annually about the status of proceeds allocation towards green projects, as well as their environmental and climate benefits through the company's audited Sustainability Report. This year's report will be published in the second half of 2021.
- g. FS Bioenergia has made the Green Bond Framework and the Framework's second party opinion publicly available. The latter was developed by SITAWI in 2020, with information about the categories of eligible projects for green financing. The company will also disclose the present report.

ii. Company


- a. One critical controversy involving the company was identified. The company adopted measures to avoid the reoccurrence of the critical occurrence (death of an employee). Therefore, we consider the company to be capable of managing and mitigating possible social and environmental risks of the projects that received green proceeds.

³ <https://www.fs.agr.br/ri/spo-e-framework/>

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Rio de Janeiro, August 4th, 2021

Declaration of Responsibility

SITAWI⁴ is not a shareholder, subsidiary, supplier or client of FS Bioenergia. SITAWI declares that it has no conflict of interest and is able to issue an independent opinion.

The analysis contained in this Second Party Opinion is based on public and confidential documents, provided by FS Bioenergia. We cannot attest the completeness, preciseness, or reliability of these sources. Therefore, SITAWI will not be held responsible for any decisions based upon information contained in this report.

THIS IS NOT A RECOMMENDATION

We reinforce that the analysis and opinion in this report shall not be taken as an investment recommendation or a proxy for liquidity or returns.

III. Proceeds Allocation

Five green bonds were issued by FS Bioenergia based on the company's Green Bond Framework which was published in March 2020 and was assessed regarding alignment to the GBP through SITAWI's Second Party Opinion.

The proceeds raised through the green bonds were used for reimbursement of expenses - occurred within 24 months of the date of each operation - and future expenses. FS Bioenergia's financial team was responsible for the management of the raised proceeds.

Each operation is detailed in the table below.

Operation	Green Bond Framework Category	Issuance date	Maturity	Total amount	Allocation	% of proceeds already allocated
1) CRA - CDCA	Bioenergy	Feb/2020	Feb/2023	R\$ 210 million	OPEX to acquire feedstock to produce corn ethanol for 2019/20 crop	100
2) CCB N°270246320 (Santander)	Bioenergy	Jun/2020	Jun/2021	R\$ 180 million	OPEX to acquire feedstock to produce corn ethanol for 2019/20 crop	100
3) CRI – CCB N° CSBRA20200600402 (Credit Suisse)	Bioenergy	Jun/2020	Feb/2023	R\$120 million	CAPEX to increase ethanol production capacity	100
4 e 5) Green Bond and additional fundraising	Bioenergy	Dec 2020/ Jan 2021	Dec 2025	US\$ 550 million + US\$ 50 million	8.6% for OPEX to acquire feedstock to produce corn ethanol in the 2020/21 crop and 91.4% in CAPEX to increase ethanol production capacity	100

Source: FS Bioenergia

The expenses were demonstrated through audited documents such as the company's financial statements.

The company's Green Bond Framework sets guidelines for the use of proceeds, project evaluation and selection and information disclosure, aligned with the Green Bond Principles. Details regarding the environmental benefits of the company's bioenergy operations are presented in section IV of this report.

As the green proceeds were already fully allocated, there is no risk of contamination of the proceeds temporarily not allocated to the projects. Also, according to the company's Framework, the temporarily unallocated proceeds are invested in Bank Deposit Certificates (CDBs) or other low-risk investments, as long as they do not invest in carbon-intensive activities. The full allocation of the raised proceeds through the green

operations demonstrated that the company has been complying with the guidelines of their Green Bond Framework that established that the use of the raised proceeds must be completed within 12 months after each issuance.

FS Bioenergia has committed to monitor and report financial and environmental information related to their green projects. The company has made the Green Bond Framework and the associated Second Party Opinion publicly available on their website. The intended use of proceeds for all green operations was made available to investors in advance to the issuances.

Additionally, the company's Annual Sustainability Report 2020/2021 will also include information on the use of proceeds, with the respective allocated amount, social and environmental impacts of the operations, as well as the methodologies used to measure the social and environmental impacts of the projects. The projects' financial and impact indicators are detailed in section IV of this report. It is worth mentioning that the Annual Sustainability Report undergoes an external audit process, which contributes to its integrity.

Therefore, we conclude that the proceeds have been allocated as established in FS Bioenergia's Green Bond Framework and in line with the Green Bond/Loan Principles. As the proceeds have already been fully allocated to the projects, there is no risk of contamination from temporary allocation in carbon intensive activities. The information about the use of raised proceeds in green operations and the financial and environmental indicators will be disclosed to the public through the company's Annual Sustainability Report which undergoes an external verification process.

IV. Projects' Impact

Environmental and Climate Benefits

The main environmental benefits generated by FS Bioenergia's activities are associated with climate change mitigation. These benefits are measured by the impact indicators shown below, as defined in their Framework.

IV.I Impact Indicators

Impact Indicators – of the activities linked to FS Bioenergia's Green Bond Framework	
<p>a. Carbon intensity of ethanol production, considering all phases of the production process (based on the RenovaCalc tool)</p>	<ul style="list-style-type: none"> Lucas do Rio Verde Unit: 17.81 gCO₂eq/MJ (anhydrous ethanol) and 17.68 gCO₂eq/MJ (hydrous ethanol) Sorriso Unit: 17.83 gCO₂eq/MJ (anhydrous ethanol) and 17.06 gCO₂eq/MJ (hydrous ethanol) <p>Both units' carbon intensities are below the carbon intensity threshold set by the CBI Bioenergy criteria</p>
<p>b. Volume of produced biofuel</p>	<p>Anhydrous Ethanol (2020/21 crop): 404,584.97 m³</p> <p>Hydrated Ethanol (2020/21 crop): 709,246.62m³</p>
<p>c. Area of standing forest</p>	<p>Not applicable, since there were no green</p>
<p>d. Carbon inventory per hectare of standing forest</p>	<p>issuances in the 'Forests' category established in the Framework</p>

It is worth mentioning that the company has committed to assess climate impacts on its production and prepare an associated action plan in line with the CBI resilience requirements by the end of 2021. The company maintains this commitment.

Management of Social and Environmental Impacts

The main environmental and social impacts related to the company's operations have been described in their Green Bond Framework. To mitigate the risks of their operations, FS has consolidated policies and procedures that are publicly available on their website.⁵

Through their Sustainability Policy, FS Bioenergia commits to:

- i. comply with environmental legislation and be in compliance with relevant legal and regulatory frameworks, as well as with agreements to which Brazil and FS are signatories;
- ii. incorporate environment preservation in all sectors, operations and processes, complying with the principles of corporate sustainability;
- iii. act through systematic assessments of the environmental aspects and impacts of its operations, acting in a preventive and continuous improvement way in the environmental performance and management practices;

⁵ <https://www.fs.agr.br/ri/nossas-politicas-e-procedimentos/>

- iv. Promote and incorporate actions to preserve biodiversity and its ecosystem services;
- v. Act ethically and transparently with all stakeholders;
- vi. Consider environmental aspects in decision-making processes, as well as in new businesses, and partnerships;

FS's Environmental Policy is a tool for identifying the most significant environmental impacts in the company's processes and operations and establishes practices and procedures to monitor and mitigate them. This Policy complements the Sustainability Policy.

The company had committed itself, through the Framework, to evaluate the following aspects concerning its corn suppliers:

- Exclusion of suppliers that are included in the slave labor list;
- Not buying corn and biomass produced in protected areas nor originated in deforested areas in the Cerrado biome since 2018 and in the Amazon biome since 2008;
- Evaluation if the production area is free of embargoes and if there has been recent deforestation;
- General socio-environmental assessment through satellite monitoring using the Agrotools SAFE tool.

The company carried out the above-mentioned assessments, and during the 2020/2021 crop year 2504 corn contracts were analyzed. Of this total, 17 did not pass the evaluation criteria and 5 were cancelled. The mentioned reasons were embargoes by Ibama and unauthorized deforestation. It is worth mentioning that the supplier hiring process for the 2020/2021 crop year was audited by KPMG as part of the information to be presented in the Sustainability Report (to be published in the second half of 2021).

Furthermore, one specific controversy involving the company was identified through desk research. The company has shown it adopted measures to avoid the recurrence of these facts. Therefore, we consider the company to be capable of managing and mitigating possible social and environmental risks of the projects that received green bond proceeds.

Social	Severity Level	Responsiveness
2021: Accident at Lucas do Rio Verde unit leads to employee's death.	Critic: An employee of FS Bioenergia was accidentally run over by a wheel loader on June 2 nd . The operational service garrison composed of three military firefighters was called. When they arrived at the scene, the victim had already died.	<p>Responsive: In a note, the company regretted the death of the employee and said it was taking all necessary steps to assist his family, as well as collaborate with the authorities' investigations. According to the company, all appropriate measures were taken after the accident, including calling, in addition to the Fire Department, the Military Police, Civil Police and technical forensics team. The necroscopic report indicated that death was not produced by insidious or cruel actions, but rather that it resulted from an accident.</p> <p>Furthermore, in an interview with the company, FS informed that the Health and Safety Training Program was reinforced with a new training. The company also took</p>

		<p>the following actions: i) paralyzation of the plant operation from the time of the accident for approximately 24 hours; ii) the use of reflective vests was implemented, both mandatory use for all members of the utilities team and for access to the utility area, corn unloading and loading area; iii) Implementation of the mandatory use of reflective vests by all biomass truck drivers at the moment of unloading; iv) Implementation of new access restrictions to the biomass area and mechanical barriers to inhibit misconduct in areas with restricted/prohibited access or transit; v) Intensification of the training of the specific procedure for access to the biomass area; vi) Evaluation for the implementation of new technologies of man/machine interface detection. vii) Installation of a camera for greater coverage and monitoring of internal activities.</p>
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