Supply Base Report: BIOENA S.A.S.

Main (Initial) Audit

www.sbp-cert.org

Completed in accordance with the Supply Base Report Template Version 1.6

For further information on the SBP Framework and to view the full set of documentation see www.sbp-cert.org

Document history

Version 1.0: published 26 March 2015

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Version 1.2 published 23 June 2016

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Contents

1 Overview

Producer name: BIOENA S.A.S.

Producer address: Km 54,1 Ruta del Sol 3 Bosconia - Santa Marta Desviación vía a Monterrubio Km 1, . Algarrobo, Departamento del Magdalena, Colombia

SBP Certificate Code: SBP-13-14

Geographic position: 11.237860, -74.130883

Primary contact: Ricardo Benitez, +57 322 884 8049,rb@bioena.co

Company website: https://bioena.co/

Date report finalised: N/A

Close of last CB audit: 07 Nov 2024

Name of CB: Preferred by Nature OÜ

SBP Standard(s) used: SBP Standard 2: Verification of SBP-compliant Feedstock, SBP Standard 4: Chain of Custody, SBP Standard 5: Collection and Communication of Data Instruction, Instruction Document 5E: Collection and Communication of Energy and Carbon Data 1.5

Weblink to Standard(s) used: https://sbp-cert.org/documents/standards-documents/standards

SBP Endorsed Regional Risk Assessment: Not applicable

Weblink to SBR on Company website: N/A

Indicate how the current evaluation fits within the cycle of Supply Base Evaluations					
Main (Initial) Evaluation	**First Surveillance**	**Second Surveillance**	**Third Surveillance**	**Fourth Surveillance**	**Re-assessment**
☒	☐	☐	☐	☐	☐

2 Description of the Supply Base

2.1 General description

Feedstock types: Primary, Secondary

Includes Supply Base evaluation (SBE): No

Includes REDII: Yes

Includes REDII SBE: Yes

Includes RED II TOF: No

Feedstock origin (countries): Colombia

2.2 Description of countries included in the Supply Base

Country: Colombia

Area/Region: Northern Colombia

Sub-Scope: N/A

Exclusions: No

BIOENA S.A.S. plans to begin sourcing raw materials from forest plantations in three projects located in northern Colombia: Reforestadora de la Costa, Universidad de Antioquia, and Fiduciaria Allianz. These projects include *Eucalyptus tereticornis* plantations selected to fulfill supply needs for the initial years of operation.
Additionally, in the departments of Atlántico, Magdalena, and Cesar, a reforestation initiative was conducted between 2008 and 2009 in collaboration with small landowners. This initiative, led by Madeflex and funded by USAID, achieved approximately 6,000 hectares of forest plantations in cattle-farming areas of these departments. Since these plantations are established on private lands, BIOENA's wood supply will be sourced from private resources.
BIOENA S.A.S. is particularly focused on utilizing this species and these plantations due to their initial intended uses. The wood's physicomechanical properties were ideal for producing poles for rural electrification and telecommunication, as well as hardboard for Madeflex. However, a national law passed early this century banned the use of wood poles in rural areas, and the market shift toward MDF boards—more cost-effective and lightweight than hardboard—led to a decline in demand for hardboard. Consequently, plantations originally cultivated for these applications have lost their markets, creating an opportunity for BIOENA S.A.S. to repurpose this wood in industrial pellet production.
There is also substantial demand in northern Colombia for wood in pallet manufacturing, primarily for export packaging. These pallets are made from wood sourced from commercial plantations of species like *Gmelina arborea*, *Pinus spp.*, and *Acacia mangium*, all of which must be registered with the Colombian Agricultural Institute (ICA). The sawmills producing these pallets generate significant wood waste, which represents another potential supply source for BIOENA S.A.S.

BIOENA S.A.S. has acquired a 16-hectare site in Algarrobo, Magdalena, where its production plant is located, approximately 131 km from COREMAR's export port. The forest plantations initially contracted for supply, excluding land ownership, will be harvested following standards for fair labor practices, with wages compliant with Colombian regulations and FSC sustainability principles.
BIOENA S.A.S. is also committed to adhering strictly to protections for endangered species listed under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), as well as species on IUCN red lists and those covered by national resolutions that provide special protection. The company respects vulnerable ecosystems and habitats, along with resources vital to the needs of local communities. Notably, none of the species used in BIOENA's production processes are listed as endangered.
For the initial supply period, BIOENA S.A.S. expects to secure approximately 170,000 tons of type 1A product from an estimated 14 suppliers and 28,000 tons of type 4A product from around 7 suppliers.
Finally, Colombia has recently taken preliminary steps in energy production from forest biomass. According to the Colombian Energy Mining Planning Unit (UPME), forest biomass contributes to less than 1% of the country's total energy production from all biomass sources.

2.3 Actions taken to promote certification amongst feedstock supplier

BIOENA solo comprara materia prima o biomasa que provenga de plantaciones que esten o cuente con el respectivo registro ICA, de esta forma promovera que que toda aquella plantacion condicion sera de caracter obligatorio para BIOENA

2.4 Quantification of the Supply Base

Supply Base

a. **Total Supply Base area (million ha)**: 0.00
b. **Tenure by type (million ha):** 0.55 (Privately owned)
c. **Forest by type (million ha):** 0.55 (Tropical)
d. **Forest by management type (million ha):** 0.55 (Plantation)
e. **Certified forest by scheme (million ha):** 0.21 (FSC)

Describe the harvesting type which best describes how your material is sourced: Clearcutting
Explanation: Semi-mechanized models are utilized for the harvesting process. The initial stage involves felling, limbing, and topping the trees using chainsaws. Next, tractors with "rear claws" are employed for what is known as "small transport," moving the logs to the lot edge. Once at the lot edge, the chainsaw is used again to cut the logs into lengths of 2, 3, 4, or 6 meters. These sections are then stacked to facilitate the loading phase. For loading, tractors equipped with hydraulic articulated arms and log grapples, or excavators with specialized log grapples, are used to handle the logs efficiently. This setup streamlines the harvesting process while ensuring safe, manageable transport of materials.
Was the forest in the Supply Base managed for a purpose other than for energy markets? Yes - Majority
Explanation: As detailed in the previous chapter on the Supply Base Report (SBR), BIOENA S.A.S. plans to source raw material from Eucalyptus tereticornis plantations within three forestry projects in northern Colombia: Reforestadora de la Costa, Universidad de Antioquia, and Fiduciaria Allianz, covering the initial years of operation. Additionally, between 2008 and 2009, a reforestation initiative led by Madeflex and

USAID in Atlántico, Magdalena, and Cesar resulted in approximately 6,000 hectares of plantations. These Eucalyptus tereticornis plantations were originally intended for industrial uses, such as poles for rural electrification and hardboard. However, due to changes in regulations and the introduction of MDF boards in the market, demand for this wood declined. This shift has created a unique opportunity for BIOENA S.A.S. to repurpose this wood for industrial pellet production, aligning with current market demands.

For the forests in the Supply Base, is there an intention to retain, restock or encourage natural regeneration within 5 years of felling? N/A
Explanation: BIOENA does not own the land and therefore cannot provide information in response to this question.

Was the feedstock used in the biomass removed from a forest as part of a pest/disease control measure or a salvage operation? No
Explanation: In Colombia, there are no documented cases of pests or diseases in the plantation areas supplying the raw material that would require phytosanitary treatments.

What is the estimated amount of REDII-compliant sustainable feedstock that could be harvested annually in a Supply Base (estimated): 79395.00 tonnes
Explanation: BIOENA initially estimates that the value of FSC 100% certified material will align with the figure presented in this SBR.

Feedstock

Reporting period from: 16 Oct 2024

Reporting period to: 15 Oct 2025

a. **Total volume of Feedstock**: 1-200,000 tonnes
b. **Volume of primary feedstoc**k: 1-200,000 tonnes
c. **List percentage of primary feedstock, by the following categories.**
    - Certified to an SBP-approved Forest Management Scheme: 20% - 39%
    - Not certified to an SBP-approved Forest Management Scheme: 0%
d. **List of all the species in primary feedstock, including scientific name:** Eucalyptus tereticornis (Eucalipto); Gmelina arborea (Melina); Tectona grandis (Teca); Pinus patula (Pino); Acacia mangium (Acacia mangium);
e. **Is any of the feedstock used likely to have come from protected or threatened species?** No
    - Name of species: N/A
    - Biomass proportion, by weight, that is likely to be composed of that species (%):
f. **Hardwood (i.e. broadleaf trees): specify proportion of biomass from (%):** 82.15
g. **Softwood (i.e. coniferous trees): specify proportion of biomass from (%):** 17.84
h. **Proportion of biomass composed of or derived from saw logs (%):**
i. **Specify the local regulations or industry standards that define saw logs:** N/A
j. **Roundwood from final fellings from forests with > 40 yr rotation times - Average % volume of fellings delivered to BP (%):** 0.00
k. **Volume of primary feedstock from primary forest:** 0 N/A
l. **List percentage of primary feedstock from primary forest, by the following categories. Subdivide by SBP-approved Forest Management Schemes**:
    - Primary feedstock from primary forest certified to an SBP-approved Forest Management Scheme: N/A

- Primary feedstock from primary forest not certified to an SBP-approved Forest Management Scheme: N/A

m. Volume of secondary feedstock: 1-200,000 tonnes

- Physical form of the feedstock: Chips, Offcuts

n. Volume of tertiary feedstock: 1-200,000 tonnes

- Physical form of the feedstock: Shavings

o. **Estimated amount of REDII-compliant sustainable feedstock that could be collected annually by the BP:** 63000.00tonnes

Proportion of feedstock sourced per type of claim during the reporting period				
Feedstock type	**Sourced by using Supply Base Evaluation (SBE) %**	**FSC %**	**PEFC %**	**SFI %**
Primary	0.00	100.00	0.00	0.00
Secondary	0.00	100.00	0.00	0.00
Tertiary	0.00	0.00	0.00	0.00
Other	0.00	0.00	0.00	0.00

3 Requirement for a Supply Base Evaluation

Note: Annex 1 is generated by the system if the SBE is used without Region Risk Assessment(s). Annex 2 is generated if RED II SBE is in the scope.

Is Supply Base Evaluation (SBE) is completed? No

N/A

Is REDII SBE completed? Yes

A SBE RED II is carried out for the general supply of primary material 1A, for each supply the organization has contemplated the case-by-case evaluation first of the traceability and then of the forestry operation to ensure legal compliance with Colombia, the regeneration of the exploited areas, the protection of the areas that were determined as protection zones, the maintenance of the soil and biodiversity and maintain or improve the productive capacity of the plantations from which Bioena S.A.S will be supplied, which will be carried out with the continuous monitoring of the forestry operation.

4 Supply Base Evaluation

Note: Annex 2 is generated if RED II is in the scope.

4.1 Scope

Feedstock types included in SBE:

SBP-endorsed Regional Risk Assessments used: Not applicable

List of countries and regions included in the SBE:

4.2 Justification

N/A

4.3 Results of risk assessment and Supplier Verification Programme

N/A

4.4 Conclusion

N/A

5 Supply Base Evaluation process

N/A

6 Stakeholder consultation

N/A

6.1 Response to stakeholder comments

7 Mitigation measures

7.1 Mitigation measures

7.2 Monitoring and outcomes

N/A

8 Detailed findings for indicators

Detailed findings for each Indicator are given in Annex 1 in case the Regional Risk Assessment (RRA) is not used.

Is RRA used? N/A

9 Review of report

9.1 Peer review

N/A

9.2 Public or additional reviews

N/A

10 Approval of report

Approval of Supply Base Report by senior management			
The undersigned persons confirm that I/we are members of the organisation's senior management and do hereby affirm that the contents of this evaluation report were duly acknowledged by senior management as being accurate prior to approval and finalisation of the report.			

Annex 1: Detailed findings for Supply Base Evaluation indicators

N/A

Annex 2: Detailed findings for REDII

Section 1. RED II Supply Base Evaluation

Country: Colombia	
(i) The legality of harvesting operations	
Type of Risk Assessment used	☐ Level A – proof at national or sub-national level ☒ Level B – management system at forest sourcing area level
Level A risk assessment description	N/A
Level B management system at the level of the forest sourcing area	FSC Certified Sourcing Compliance with applicable laws and regulations is verified through independent audits conducted by FSC-accredited certifying bodies. - Verifiers: Application for the FSC Forest Management Plan that includes local and national regulations and those of the FSC management standard. Non-FSC Certified Sourcing Harvesting operations will be verified to comply with applicable laws and regulations according to document FSC-CRNA-CO V1-0. - Indicators: Compliance with indicators 1.1, 1.2 of Bioena's FSC Due Diligence System Detail indicator 1.1 Land tenure and management rights: • In forest plantations: request the record of the forest plantation before the ICA if it is a commercial forest plantation, or the Administrative Deed (Acto Administrativo) from the Regional Autonomous Corporation of the Administrative Area if it is a protective-productive area. • The owner of the property should hold a Certificate of Freedom and Tradition for the property, and if s/he is the holder, he should have a document that certifies him/her as such (rental contract, joint venture accounts, loan agreement, etc.). • If necessary (e.g. in private lands), a copy of the property's public deed. • If necessary, consult the Colombian Agricultural Institute (ICA) regarding the validity of the Record of registration of the forest plantation. • In the case of collective lands: ruling number or Home Office Administrative Order that declares the Town Council (indigenous community) of Community Council (Afro-descendant community). Detail indicator 1.2 Management and harvesting planning: • In forest plantations: request to register the forest plantation with the ICA if they are commercial, or with the Regional Autonomous Corporation of

	the administrative area if they are productive-protective, review the approved species and special measures are in order with the Administrative Act . • In forest plantations that have a CIF, approved forest establishment and management plan shall exist for the FMU where the harvesting is taking place. • Forestry land-use in natural forest: forest management plan if this activity is ongoing and according to the Administrative Act that grants permission for the land-use for the FMU where the harvesting is taking place. • Forest management plans shall contain all legally required information and procedures (for natural forest as well as plantation- be aware requirement may vary). Note: For agroforestry systems and commercial forestry plantations not under CIF, productive-protective plantations not under harvesting and protective plantations: N/A
(ii) Forest regeneration of harvested areas	
Type of Risk Assessment used	☐ Level A – proof at national or sub-national level ☒ Level B – management system at forest sourcing area level
Level A risk assessment description	N/A
Level B management system at the level of the forest sourcing area	FSC Certified Sourcing Ensuring proper regeneration of harvested areas to maintain forest health, in accordance with FSC principles and criteria, including specific requirements for forest regeneration. - Verifiers: Request for detailed FSC Forest Management Plan on regeneration and monitoring while the operation is running Non-FSC Certified Sourcing Proper regeneration of harvested areas will be ensured to maintain forest health, following FSC-CRNA-CO V1-0 guidelines. - Verifiers: a) Contractual agreements with the owner for regeneration through coppicing or plantations or, b) Annual physical monitoring of management or establishment status (requires new ICA records) c) Satellite monitoring with remote means Landviewer https://eos.com/landviewer/12
(iii) That areas designated by international or national law or by the relevant competent authority for nature protection purposes, including in wetlands and peatlands, are protected unless evidence is provided that the harvesting of that raw material does not interfere with those nature protection purposes	
Type of Risk Assessment used	☐ Level A – proof at national or sub-national level

	☒ Level B – management system at forest sourcing area level
Level A risk assessment description	N/A
Level B management system at the level of the forest sourcing area	FSC Certified Sourcing Ensure that areas designated by international or national laws, or by the competent authority, for the protection of nature, including wetlands and peatlands, are protected. This is verified by compliance with the FSC principles and criteria. - Verifiers: Application for HCV Identification and Monitoring documents (HCV1,2,3,4,5,6) and field monitoring Non-FSC Certified Sourcing Areas designated for nature protection will be verified as protected, unless evidence to the contrary is provided according to FSC-CRNA-CO V1-0. - Indicators: Compliance with indicators 3.1, 3.2, 3.3, 3.4, 3.5, 3.6 with field monitoring Detail Indicator 3.1 HCV 1 Specified risk for Natural National Parks and sites declared by international initiatives (as in the assessment), networks of private protected areas, Biodiversity Hotspots, IBAs, KBAs and their neighboring forest areas, Low risk for the rest of the country The organization generates prior cartographic reviews to make cross-references and detect if forest properties are in these areas, then the field prospecting occurs Detail Indicator 3.2 HCV 2 Intentionally left blank: Organizations must assess and design appropriate control measures to mitigate the risks identified in this risk assessment as appropriate. The organization uses the public mapping of IFLs published at https://intactforests.org/ to detect whether forest lands are being exploited in areas that correspond to IFLs, then applies field verification Detail Indicator 3.3 HCV 3 Specified risk for the Baudó River Delta RAMSAR site, ecosystems on the IUCN red list, Biosphere Reserves and neighboring forest areas, Low risk for the rest of the country The organization will check the information in a cartographic manner and then apply ground verification to rule out violation of the HCV

	Detail Indicator 3.4 HCV 4 Specified risk for the Baudó River Delta RAMSAR site, ecosystems on the IUCN red list, Biosphere Reserves and neighboring forest areas, Low risk for the rest of the country The organization will check the information in a cartographic manner and then apply ground verification to rule out violation of the HCV Detail Indicator 3.5 HCV 5 The company will define forestry practices that allow the conservation of the state of natural vegetation areas and protection areas. Harvest planning will define the exclusion zones for harvesting equipment and buffer zones. BIOENA S.A.S will comply with the legal requirements regarding protection areas for streams and soils. Detail Indicator 3.6 HCV 6 The company will verify the information in a public cartographic manner in Colombia and will then apply field verification to rule out the violation of the HCV, keeping a record in a field verification form while the forestry operation is in progress.
(iv) That harvesting is carried out considering the maintenance of soil quality and biodiversity with the aim of minimising negative impacts	
Type of Risk Assessment used	☐ Level A – proof at national or sub-national level ☒ Level B – management system at forest sourcing area level
Level A risk assessment description	N/A
Level B management system at the level of the forest sourcing area	FSC Certified Sourcing FSC certified forest management practices consider the maintenance of soil quality and biodiversity, including soil degradation by transport and harvest. Field visits ensure that negative impacts are minimized and sustainable practices are promoted. - Verifiers: Request a detailed forest management plan on maintaining soil quality and biodiversity, including measures to mitigate soil degradation by transport and harvest. Non-FSC Certified Sourcing It will be ensured that harvesting considers the maintenance of soil quality and biodiversity, minimizing negative impacts according to FSC-CRNA-CO V1-0. - Verifiers:

	Periodic monitoring of forestry activities will be carried out with the checking of operations, training of harvesting personnel regarding biomass management to minimize the impact on the soil and respect the existing pathways in the forestry operation.
(v) That harvesting maintains or improves the long-term production capacity of the forest.	
Type of Risk Assessment used	☐ Level A – proof at national or sub-national level ☒ Level B – management system at forest sourcing area level
Level A risk assessment description	N/A
Level B management system at the level of the forest sourcing area	FSC Certified Sourcing FSC requires that forest management practices maintain or improve the long-term productive capacity of the forest. This includes the sustainable management of forest resources and the implementation of practices that ensure future productivity. - Verifiers: Request a Forest Management Plan and periodic monitoring of forest resources. Non-FSC Certified Sourcing It will be verified that the harvest maintains or improves the long-term productive capacity of the forest, following the guidelines of FSC-CRNA-CO V1-0. Adequate regeneration of harvested areas will be ensured to maintain the health of the forest, following the guidelines of FSC-CRNA-CO V1-0. - Verifiers: a) Contractual agreements with the owner for regeneration through coppicing or plantations or, b) Annual physical monitoring of the management or establishment status (requires new ICA records)
LULUCF criteria 29(7)	
Type of Risk Assessment used	☒ Level A – proof at national or sub-national level ☐ Level B – management system at forest sourcing area level
Level A risk assessment description	SBP-endorsed REDII Level A risk assessment for Article 29(7) LULUCF
Level B management system at the level of the forest sourcing area	N/A

Section 2. RED II detailed findings for secondary and tertiary feedstock

10.1 Verification and monitoring of suppliers

Bioena S.A.S will validate its suppliers of secondary industry processing residue to determine if the supplied materials are eligible to be incorporated into the FSC and SBP product groups, consisting of the following elements:

a) For each supplier, Bioena S.A.S will prepare an audit report + documentary evidence to demonstrate that the materials supplied by them comply with the definitions Processing Residue 4A, the report will contain:
- The name and address of the supplier
- The supplier's activity (e.g. buyer/reclaimer/distributor)
- The categories of recovered material to be supplied,
- The level of control required will be described in the initial report (e.g. visual inspection after receipt, supplier audits)
- The organization's decision on whether the material is eligible - REDII a determination at the supplier's verification where it is stipulated that the material is not deliberately manufactured for the generation or production of pellets and a Self-declaration of the supplier indicating the same premise.

b) The company will monitor the compliance of suppliers in relation to the FSC and SBP definitions described above in this document and to the purchase specifications and will have a contingency plan to apply in case the material or documentation is not compliant.
The necessary documentation will be

- Requests for correction of purchase documents,
- Permanent or temporary invalidation of the supplier,
- Classification of the material as an input not eligible for FSC or SBP products

c) The validation frequency is basically once a year
d) Non-compliant product.

Bioena S.A.S staff will be at the site where the material is supplied, carrying out a visual survey to confirm that the type of raw material is in accordance with the definitions of Processing Residue. If there is a risk of mixing, the staff will inform the person responsible for the chain of custody to avoid the issuance of erroneous declarations or to alert any client to whom the declared material has been sent. In this regard, the points indicated in the product will be taken. non-compliant with FSC in this document.

10.2 Feedstock inspection and classification upon receipt

Reception staff collect the material according to established tertiary industry definitions, each Feedstock supplier has been physically evaluated prior to receipt.
Bioena S.A.S has generated a physical audit record for each tertiary material supplier; these materials must match what is received at the facilities. Invoices and shipping documents indicate "Slabs o orillo " (4A) invoices, delivery notes and/or shipping documents, depending on the raw material in question.
Materials that do not comply with what is indicated are not received by Bioena S.A.S

10.3 Supplier audit for secondary and tertiary feedstock

Bioena S.A.S established that its supplier audit will be generated once a year as long as the feedstock supplied is identical to the one evaluated, otherwise the feedstock is not received and the supplier is

immediately evaluated to determine the cause of the difference in feedstock.

Section 3. RED II detailed findings for TOF feedstock

NOTE: For “Trees outside forests (TOF) – Urban and landscape feedstock1“ no REDII sustainability requirements apply, only the GHG savings criteria apply (SBP REDII Bridging ID Section 4.2). The land use category in this case is neither forest land nor agricultural land. For “Trees outside forests (TOF) – Agricultural land feedstock“ the applicable criteria are Article 29 paragraphs (2)-(5).

N/A