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BONSUCRO



BONSUCRO®

**GUIDANCE FOR THE BONSUCRO MASS BALANCE
CoC STANDARD**

**INCLUDING GUIDANCE FOR THE BONSUCRO EU RED MASS BALANCE
CoC STANDARD**

ACKNOWLEDGEMENT

The Bonsucro Secretariat would like to express their gratitude to the participants of the Standard Revision Taskforce (SRT)* who have dedicated time, knowledge and passion to this project. Without their guidance, advice and decisions, the Bonsucro/Bonsucro EU RED Mass Balance Chain of Custody Standard and Guidance would not have been achieved the expected improvement and relevance. The Secretariat also thanks their companies who have allowed their employees to share their resources with Bonsucro.

The Secretariat would like to thank all stakeholders, including members of Bonsucro and licensed Certification Bodies, who have shared their experience and knowledge with the SRT and ensure the resulting Standard and Guidance are in line with the reality of the industry.

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London, 17th October 2015

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1. INTRODUCTION

1.1 BONUCRO

Bonsucro is a global multi-stakeholder non-profit initiative dedicated to reducing the environmental and social impacts of sugarcane production while recognising the need for economic viability. The mission of Bonsucro is to achieve a sugarcane sector that is continuously improving and verified as sustainable by acting collaboratively within the sector and working to continuously improve the three pillars of sustainability: economic, social and environmental viability. Bonsucro aims to achieve this mission through providing the definition for sustainable sugarcane and all sugarcane derived products through a multi-stakeholder approach. Bonsucro also aims at ensuring the integrity of the implementation of the Bonsucro Production and Chain of Custody Standards, through the implementation of the Certification Protocol.

1.2 OBJECTIVE OF GUIDANCE OF IMPLEMENTATION OF BONUCRO MASS BALANCE CoC STANDARD

The objective of this Guidance of Implementation of Bonsucro Mass balance CoC Standard is to facilitate the understanding and implementation of Bonsucro CoC Standard by economic operators, Certification Bodies and the wider audience.

The document shall be read in conjunction with the Bonsucro Mass Balance CoC Standard as this document contains all the requirements to be met in order to achieve Chain of Custody certification.

1.3 HISTORY OF THE DOCUMENT

1.3.1 Version 4.0

In March 2014, upon the recommendation of the Bonsucro Secretariat, the Board of Directors agreed to start the revision process of the Bonsucro/Bonsucro EU RED Mass Balance CoC Standard and Guidance. The Board instructed the Secretariat to follow the Standard Revision Procedure set up in line with the ISEAL Code of Best Practice for Standard Setting. The Secretariat called for one representative of each class of membership to form the Standard Revision Taskforce (SRT). The SRT first met remotely

in September 2014. The SRT was given the task to draft the new version of the Bonsucro/Bonsucro EU RED Mass Balance CoC Standard and Guidance. All meeting minutes are publicly available on the Bonsucro website.

A total of 54 people participated in the two public consultations (38 presencially and 16 online) held through November 2014 to January 2015 and in June 2015.

REVISION ROUND	DATE	DESCRIPTION OF AMENDMENT
A	June 2010	Draft version send to Bonsucro EU Sub Committee
B	July 2010	Final version approved by Bonsucro Management Committee
C	December 2010	Revision made based on compliance with EU RED
D	February 2011	Revision made based on compliance with EU RED
Draft version 4.0	November 2014	First draft open for public consultation
2nd Draft version 4.0	June 2015	Second draft open for public consultation
3rd Draft version 4.0	September 2015	Final draft published for vote by members
4.0	October 2015	Revised Bonsucro Mass Balance Chain of Custody Standard and Guidance published, with inclusion of new indicators

This document is written in the English language. Bonsucro does not assume any liability for errors or misunderstandings introduced when this document is translated into other languages.

Bonsucro Standards are reviewed at least every five years. The next review is scheduled for October 2020.

The current standard was approved by the Bonsucro membership on 17th October 2015. It becomes effective from 26th November 2015 and will apply only to activities that have taken place after this date.

From 26th November 2015 onward, non-certified economic operators who wish to become Bonsucro/Bonsucro EU RED Mass Balance CoC certified must be found in compliance with the revised Bonsucro/Bonsucro EU RED Mass Balance CoC Standard version 4.0.

Certified economic operators whose audit is planned between 26th November 2015 and 31st January 2016, will have the possibility to choose to be audited against version 3 or version 4.0 of the Bonsucro/Bonsucro EU RED Mass Balance CoC Standard.

Bonsucro/Bonsucro EU RED Mass Balance CoC certified economic operators must be in compliance with the revised Bonsucro/Bonsucro EU RED Mass Balance CoC Standard (version 4.0) from 1st February 2017 onward.

Bonsucro encourages its stakeholders to share their views regarding the Standards. Any comments on this document will be used for future revisions and can be submitted to info@bonsucro.com, via the Bonsucro website: www.bonsucro.com, or in writing to:

Bonsucro
The Wenlock
50-52 Wharf Road
London, N1 7EU, UK

2. SCOPE

This standard applies to any economic operator purchasing, handling and/or trading Bonsucro-compliant or Bonsucro EU RED-compliant material. It describes the requirements to ensure the traceability of Bonsucro-compliant or Bonsucro EU RED-material by implementing a mass balance system.

Economic operators may choose any of the following two scopes for certification and associated compliance claims:

1. “Bonsucro”: compliant with Bonsucro requirements.
2. “Bonsucro EU RED”: compliant with Bonsucro requirements PLUS additional requirements from the EU Renewable Energy Directive (RED- 2009/28/EC), the EU Fuel Quality Directive (FQD- 2009/30/EC) and additional communication from the European Commission (Com 2010/C 160/02 and BK/gS/ener.c.1(2014)3648524).

Within the Bonsucro Certification System documents (i.e. Standards, Guidance, and Certification Protocol) the extra Bonsucro EU RED requirements are clearly marked. For certification against Bonsucro EU RED, the Bonsucro requirements PLUS all additional EU RED requirements must be met.

The Bonsucro EU RED certification is intended for ethanol, ETBE or other products wishing to demonstrate compliance with the EU Renewable Energy Directive (RED- 2009/28/EC), the EU Fuel Quality Directive (FQD- 2009/30/EC) and additional communication from the European Commission (Com 2010/C 160/02 and BK/gS/ener.c.1(2014)3648524).

Eligibility of wastes and residues for double counting against the EU RED is defined by each Member State and economic operators should seek additional guidance on this.

3. REFERENCED PUBLICATIONS

- Bonsucro/Bonsucro EU RED Mass Balance CoC Standard v4.0 October 2015
- Bonsucro Production Standard v4.1.1 September 2015
- Bonsucro Certification Protocol v4.1 September 2011
- Bonsucro Calculator v4.05 January 2015
- Communication from the Commission on the practical implementation of the EU biofuels and bioliquids sustainability scheme and on counting rules for biofuels (2010/C 160/02)
- Claims and Labelling; Logo Use requirements document v5.02 January 2014
- European Commission's Communication 2010/C 160/02 (2010) on the practical implementation of the EU biofuels and bioliquids sustainability scheme and on counting rules for biofuels
- European Commission's Communication 2011/13/EU (2011) on certain types of information about biofuels and bioliquids to be submitted by economic operators to Member States
- EU Directive 2009/28/EC (RED) on the promotion of the use of energy from renewable sources
- EU Directive 2009/30/EC (FQD) as regards the specification of petrol, diesel and gas-oil and introducing a mechanism to monitor and reduce greenhouse gas emissions
- ISEAL Code of Good Practice for Setting Social and Environmental Standards v6.0 December 2014
- Letter to the voluntary schemes that have been recognised by the Commission for demonstrating compliance with the sustainability criteria for biofuels (BK/gS/ener.c.1(2014)3648524)
- Requirements for the operation of the Bonsucro Credit Trading System v1.2 April 2014

4. DEFINITIONS AND ABBREVIATIONS

Normative references for definitions referring to:

ISO 9000:2005; ISO 14001:2004; ISO IEC Guide 17000:2004; EU RED (2009/28/EC); EU FQD (2009/30/EC); CEN/TC383

BONSUCRO CERTIFIED MEMBERS: Bonsucro members who are in compliance with the Bonsucro Certification System.

CANE SUPPLY AREA: area which a mill defines as the farms/estates supplying cane for the purposes of certification.

CERTIFICATION BODY: i.e. Conformity Assessment Body; Body that performs the audit

Note 1 - An accreditation body is not a conformity assessment body (ISO/IEC 17000:2004) (Source: Adapted from ISO/IEC 17011:2005)

CHAIN OF CUSTODY: the supply chain of a product including all stages from the feedstock production up until the release of the product for consumption.

CLIENT: next legal owner of the product in the Chain of Custody.

CONSIGNMENT: quantity (e.g. batch, lot, load) of product mass with attached data specifying the product content in terms of kilograms (or tons of sugar or litres/m³ of ethanol) and sustainability characteristics.

CONVERSION FACTORS: are the ratio between the output material and the input material. Conversion factors will be specific to facilities and should be accurately documented in the mass balance system.

DOCUMENT: Information and its supporting medium.

Note 1 - The medium can be paper, magnetic, electronic or optical computer disk, photograph or master sample, or a combination thereof;

Note 2 - Adapted from ISO 9001:2000; ISO 14001:2004

ECONOMIC OPERATOR: Individual, company or organization which has ownership and/or control of sugarcane and/or all sugarcane derived products, from their origin to their market availability, for one or several steps in the supply chain.

Note 1 - Organisation is being used here as defined in ISO 14001.

INVENTORY PERIOD: A consistent period over which physical Bonsucro certified product and sustainability data is reconciled. Unallocated sustainability data may be carried over to the next inventory period following mass balance rules. This period must not exceed three months.

FINISHED PRODUCT: A finished product is a product where no further modification occurs (including repacking).

MASS BALANCE: A system for administratively monitoring the inputs and outputs of certified material/product throughout the supply chain. It allows for mixing of these materials/products at any stage in the supply chain, provided that the outputs of certified material/product do not exceed the inputs of certified material/products. Material conversion rates need to be included.

MULTIPLE SITES: A group of sites that have a contractual link, a defined Central Office and a minimum of two participating sites. Such sites may be groups of refineries, food processors, etc, brought together under a Central Office and administered using an Internal Control System (ICS). Central Offices that also physically handle and/or process Bonsucro certified product or sustainable data are counted as both Central Office and a participating site.

REPORTING PERIOD: This will be one year, starting from certification date, unless otherwise agreed.

SITE: A single functional part of an economic operator's operations or a combination of parts situated at one locality, eg. sugarcane mill, terminal, food processing facility, storage, tanks.

SUPPLIER: Previous legal owner of the product in the Chain of Custody.

SUSTAINABILITY CHARACTERISTICS: States or properties as a means of judging whether or not a sustainability principle has been fulfilled. (Source: CEN/TC383)

TRACEABILITY: The ability of each economic operator in the chain of custody to trace sustainability criteria one step back to the supplier and one step forward to the client

Symbols and Abbreviations	
CoC	CHAIN OF CUSTODY
G	GRAMS
GHG	GREENHOUSE GAS
HA	HECTARES
HCV	HIGH CONSERVATION VALUE
KG	KILOGRAMS
KJ	KILOJOULES
L	LITRES
MJ	MEGAJOULES
T	METRIC TONNES
Y	YEAR

5. FRAMEWORK FOR AUDITING

5.1 THE BONUCRO CERTIFICATION SYSTEM

The Bonsucro Certification System consists of 3 main elements:

1. **Standards:** Bonsucro has developed 2 standards:
 - The “[Bonsucro Production Standard](#)” contains principles and criteria for achieving sustainable production of sugarcane and all sugarcane derived products in respect of economic, social and environmental dimensions.
 - The “[Bonsucro/Bonsucro EU RED Mass Balance Chain of Custody Standard](#)” contains a set of technical and administrative requirements for enabling the tracking of Bonsucro-compliant or Bonsucro EU RED-compliant sugarcane and derived products along the entire supply chain from fields to mill including transportation; through to production (e.g. conversion, processing, manufacturing, transformation), to warehousing, transportation and trade, to the use of sugarcane and all sugarcane derived products.
2. **Guidance for implementation:** Bonsucro has developed guidance documents for members that provide further information on how to become compliant with the Bonsucro Production Standard and/or Chain of Custody Standard.
3. **Certification Protocol:** Bonsucro has developed a Certification Protocol for auditors that lists the process and procedures for certification against the Bonsucro Standards. This includes: 1.) rules and requirements for independent Certification Bodies to audit against the Bonsucro standards, and 2.) audit procedures for independent Certification Bodies to verify compliance with the Bonsucro Standards.

Together, these 3 elements form the Bonsucro Certification System. As such, these individual documents must always be used in relation to each other.

5.2 UNIT OF CERTIFICATION

- Any economic operator who has ownership of Bonsucro/Bonsucro EU RED certified sugarcane products and/or derivatives thereof must be Chain of Custody certified if they want to trade such products or make claim about their activities.
- Retailers and distributors of finished products do not need Chain of Custody certification.

5.3 CERTIFICATION PROCESS

Only after certification (date when the certificate is issued and the economic operator starts to be listed on the “certified members” list of Bonsucro’s webpage) are economic operators allowed to make public claims about their purchase of Bonsucro certified products and/or sell Bonsucro certified products and claim it as such. Any claims must adhere to the Bonsucro Claims and Labelling requirements.

- In order to achieve certification with the Bonsucro Mass Balance CoC Standard, members must have full compliance with all indicators, except for indicator 4.1.2 which is only a requirement for the scope of Bonsucro EU RED Mass Balance CoC Certification.
- The result of the audit will be the possibility of claiming and/or selling a volume of Bonsucro or Bonsucro EU RED certified products, according to the certified volume produced or procured.
- The certification decision will be based on the audit report. Documents showing evidence of compliance with the indicators must be presented by the economic operator to the independent auditors who will verify them during the audit process.
- The audit will be performed according to the frequency defined by Bonsucro in the Certification Protocol.
- The audit must be performed by Bonsucro licensed Certification Bodies.

For more certification requirements see the Bonsucro Certification Protocol

6. GUIDANCE TO THE BONSUERO CHAIN OF CUSTODY STANDARD

PRINCIPLE 1. IMPLEMENTING MASS BALANCE CHAIN OF CUSTODY

CRITERION 1.1. THE ECONOMIC OPERATOR MUST IMPLEMENT THE MASS BALANCE REQUIREMENTS WITHIN THE SCOPE IDENTIFIED

- **Indicator 1.1.1. - The economic operator must identify the scope of the Mass Balance system**

Guidance for implementation: In the case the economic operator opts for Bonsucro EU RED certification, it has to comply with all indicators in the standard, including indicator 4.1.2. The auditor should check for compliance.

Bonsucro EU RED certification is intended to demonstrate compliance of ethanol, ETBE or other products to the EU Directive 2009/28/EC (RED) and/or EU Directive 2009/30/EC (FQD).

The scope of certification can be both Bonsucro Chain of Custody Standard and Bonsucro EU RED Chain of Custody Standard should the products included in the unit of certification be a combination of both. In such case, the procedures for each scope shall be clearly indicated at the mass balance system.

- **Indicator 1.1.2 - The economic operator must define the unit of certification, including, in the case of multi-site operators, number of sites and the type of operations covered by the scope of their mass balance Bonsucro/Bonsucro EU RED Mass Balance CoC. An economic operator must implement the mass balance requirements at the level of a single site.**

Guidance for implementation: The Mass Balance system should be applied for each site individually, controlling for mixing and splitting.

Site, as described in the Definition section of this document, is: “a single functional part of an economic operator’s operations or a combination of parts situated at one locality, e.g. sugarcane mill, terminal, food processing, storage, tanks”.. Examples of sites: farms supplying cane to the mill, warehouses, terminals, factories, etc.

In the internal procedures that cover Bonsucro and Bonsucro EU RED certified products, it should be listed what site(s) is(are) covered under the Internal Control System managing the Mass Balance.

A Bonsucro/Bonsucro EU RED CoC multisite certificate cannot be issued if the list of sites is not available.

- **Indicator 1.1.3 - Requirements of the standard apply to all applicable activities outsourced to independent third parties (e.g. subcontracts for storage, transport or other outsourced activities).**

- **Guidance for implementation:** Any outsourced activity should be listed and its role in the mass balance system should be defined. If any outsourced activity embeds risks for the accuracy of the sustainability claim, such as mixing and splitting in an individual site, the economic operator should make sure that the activity is covered by the mass balance procedure and that it is correctly implemented. Records of internal reviews should be available (indicator 1.2.4).

In the case that the economic operator is not able to influence or check the procedures in place concerning the outsourced activities, the third party should seek chain of custody certification independently.

It is allowed for a third party to be included in the mass balance procedures of more than one economic operator.

- **Indicator 1.1.4 The economic operator must have an agreement with its sites requiring appropriate reporting and communication.**

- **Guidance for implementation:** Evidence of agreement e.g. contracts, emails, memorandum, etc. and description of the requirements regarding Bonsucro certified products should be available.

CRITERION 1.2 THE ECONOMIC OPERATOR HAS A SYSTEM IN PLACE TO IMPLEMENT THE MASS BALANCE REQUIREMENTS

- Indicator 1.2.1 The economic operator must have an appointed management representative with overall responsibility and authority for implementation and compliance with all applicable requirements of the Bonsucro/Bonsucro EU RED Mass Balance CoC standard.

Guidance for implementation: Procedures should name the responsible person(s) (i.e. job position) for implementation and compliance with the Bonsucro Chain of Custody Standard, and replacement person(s) in case of absence (i.e. vacations). The management representative and the replacement(s) should be aware of all procedures and auditors can evidence this by conducting interviews.

- Indicator 1.2.2 The economic operator must establish, implement and maintain procedures covering all applicable requirements of the Bonsucro/Bonsucro EU RED Mass Balance CoC. The procedures must be according to the scale and complexity of the economic operator, covering all sites included in the scope.

Guidance for implementation: Procedures should be available in written form and should include actions covering all the principles, criteria and indicators of the Bonsucro/Bonsucro EU RED Chain of Custody Standard. It is not necessarily, however, to mention explicitly each indicator individually, i.e. each step of the procedure can cover more than one indicator. The auditor should evaluate the completeness of the procedures and the number of employees involved, the system for recording data used (e.g. software) should be adequate to the complexity of the economic operator and will be evaluated according to the auditor's experience. Employees involved should be aware of procedures and auditors can evidence this by conducting interviews.

- Indicator 1.2.3 The economic operator must retain records and reports related to implementation of the Bonsucro/Bonsucro EU RED Mass Balance CoC standard, including purchase and sales documents, production records and volume summaries for at least five (5) years

Guidance for implementation: All records and reports related to implementation of the Bonsucro/Bonsucro EU RED Chain of Custody standard should be recorded and kept for at least five (5) years. It is not expected that records will pre-date the implementation of the Bonsucro/Bonsucro EU RED Chain of Custody system. In the case of multi site certification, the documents (originals or copies) should be available at the site centrally managing the mass balance system. Records and reports older than 12 months could be subject to evaluation by the auditor, even if the audit focuses on the 12-month period prior to the audit.

- Indicator 1.2.4 The economic operator must undertake an annual internal review of performance, including the effectiveness of quality management systems and the compliance of the sites with the requirements of this Bonsucro/Bonsucro EU RED Mass Balance CoC Standard. In case of problems, the economic operator must take appropriate corrective actions.

Guidance for implementation: Annual internal review of performance should be carried out for each site individually, in the case of multi site certification. Desk reviews are allowed (can be done together with other events e.g. producer internal audit) and can take the form of checklists and document sampling, for example. Non-conformities should be recorded and action plans should be developed and implemented before the surveillance audit takes place. Records should be made available for auditors.

PRINCIPLE 2. VALIDATING BONSUCRO DATA

CRITERION 2.1 THE ECONOMIC OPERATOR SHALL VALIDATE THE BONSUCRO DATA

- Indicator 2.1.1 The economic operator must check the supplier contract, invoice and supporting documentation to ensure the supplied Bonsucro/Bonsucro EU RED certified product comes from Bonsucro/Bonsucro EU RED certified suppliers, matches the accompanying documentation and includes all information required in Annex 1.

Guidance for implementation: The economic operator should include in its procedures the need for consulting Bonsucro (e.g. website, contact with Bonsucro Secretariat) on a regular basis in order to confirm the validity of the supplier's certificate. Product description, quantities and additional information as required in the annex should be validated. In case of discrepancies, the economic operator should contact its supplier and request for data correction, which must be received before sustainability data is passed on to the next client.

PRINCIPLE 3. RECONCILING BONSUCCRO DATA

CRITERION 3.1 THE ECONOMIC OPERATOR MUST RECORD AND MANAGE THE BONSUCCRO DOCUMENTATION

- Indicator 3.1.1 Invoice and/or supporting documentation of incoming Bonsucro/Bonsucro EU RED certified product must be received and entered into the system within 30 days of physical delivery.

Guidance for implementation: The economic operator must receive documentation containing the information listed in Annex 1 within 30 days of physical receipt of the product. In cases of delay, the economic operator must reinforce the request for documentation from supplier.

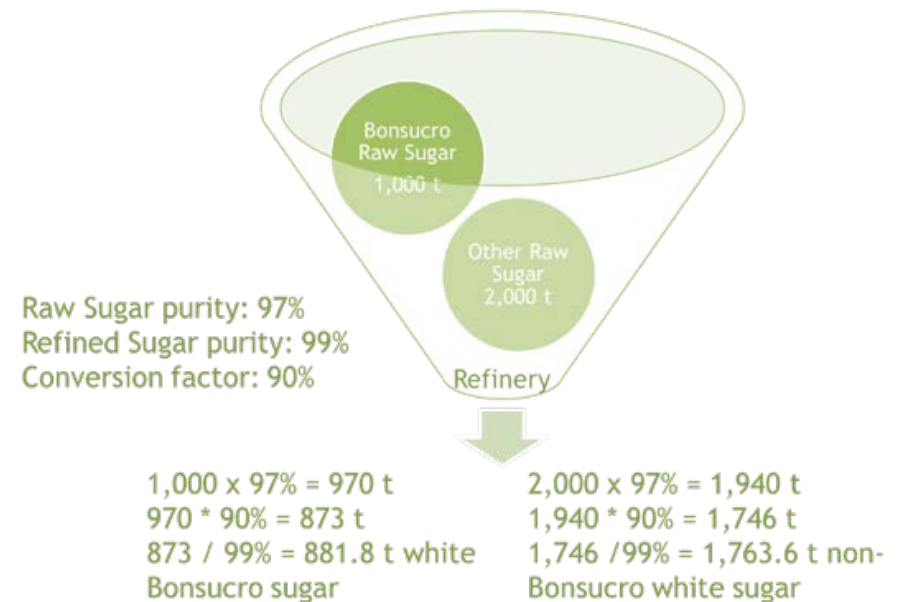
- Indicator 3.1.2 Where applicable, the economic operator must use documented conversion rates in order to calculate the equivalent output weight or volume (at 100% sucrose or ethanol equivalents) associated with the received Bonsucro/BonsucroEU consignment.

Guidance for implementation: Units and methods of calculation used need to be checked by the certification body. In general, calculations and units can be accepted when “traceable” to starting material on the condition that the way of calculation and the ratio used are made transparent and are documented and the applied method is used in a consistent manner for the inventory period. The economic operator should account for losses and they should be proportionate to compliant and non-compliant product.

Example 1:

“Sweet sugar” is a refinery and Bonsucro Mass Balance CoC certified economic operator that buys Bonsucro certified raw sugar for refining purposes. Typically, the average of the conversion factor from raw to white sugar at “Sweet Sugar” is 90%. “Sweet Sugar” buys 1,000 tonnes of Bonsucro certified raw sugar and 2,000 of non-Bonsucro certified raw sugar (other).

The raw sugar they buy was measured at 97% purity and their final white sugar has 99% purity. This means that the real certified volume of raw sugar is 1,000 tonnes x 97% = 970 tonnes, which will result in 881.8 tonnes of Bonsucro certified white sugar, applying the 90% conversion factor, meaning 873 tonnes of sucrose content.



The same conversion factor is applied to the non-Bonsucro certified volumes, i.e., $2,000 \times 97\% \times 90\% / 99\% = 1,763.6$ tonnes of non-Bonsucro certified white sugar.

Since “Sweet Sugar” documents the conversion rates and applies the losses equally to the product regardless of certification, the economic operator is compliant with indicator 3.1.2.

Example 2:

“Clean Energy” is a fuel distributor and Bonsucro EU RED Mass Balance CoC certified economic operator that buys, transports, storages and sells Bonsucro EU RED certified ethanol. “Clean Energy” bought 5,000 m³ Bonsucro EU RED certified anhydrous ethanol and 4,000 m³ non Bonsucro EU RED certified anhydrous ethanol. Since they are fungible, consignments were mixed and transported in the same barge between locations. When “Clean Energy” discharged the ethanol, only 8,820 m³ were stored in their tank at the port. The loss in this case is 2% and, from the final cargo of 8,820 m³ ethanol, 4,900 m³ are of Bonsucro EU RED certified product and 3,920 m³ of non Bonsucro EU RED certified product.

Since “Clean Energy” documents and applies the losses equally to the products regardless of certification, the economic operator is compliant with indicator 3.1.2

- **Indicator 3.1.3 The economic operator must maintain the accuracy of any measuring equipment used.**

Guidance for implementation: Metering and weighing equipment used by the economic operator or by subcontractors for volume or weight input and output of the mass balance is required calibration with a minimum frequency of once a year (or as per manufacturer’s guidelines) preferably by a calibration and testing organization that is accredited for ISO IEC 17025 or equivalent. The equipment used for calibration may not be used for regular production and needs to be stored in a safe place. Methods and proof of verification and validation of results need to be recorded and need to be demonstrated to the auditor. Where it is common practice or required by regulation, seals should be intact and matching calibration documents.

- **Indicator 3.1.4 The volume of the Bonsucro/Bonsucro EU RED certified product received and the associated sustainability characteristics must be recorded in the system, within one week of entering the system, after validity has been confirmed (indicator 2.1.1).**

Guidance for implementation: The economic operator may collect data and records and input these at regular intervals (at least once a week) rather than as received. There should be mechanisms to control changing the data.

- Indicator 3.1.5 Allocation of Bonsucro/Bonsucro EU RED data must only be to products which are fungible with sugarcane-derived products.

Guidance for implementation: Data can be allocated to any type of sugarcane derivative (e.g. ethanol produced from corn, wheat, sugarcane; sugar produced from sugarcane, beet), provided they could be mixed (are ‘fungible’). Bonsucro data cannot be allocated to products which can’t be made from sugarcane, for example no Bonsucro data could be allocated to vegetable oil biodiesel or wheat flour. The economic operator seeking Chain of Custody certification should present information about the production process (e.g. inputs and outputs) for “non-traditional” sugarcane derivatives, such as bioplastics, pellets and others.

Example 1:

“Clean Energy” buys different biofuels. On May 4th, the economic operator bought 1,000 m³ of Bonsucro EU RED certified ethanol produced in Brazil. On the same day, it bought 500 m³ biodiesel certified by ABC and with origin in Asia. On the next day, “Clean Energy” bought 2,000 m³ ethanol produced from corn and with XYZ certification. On May 6th, the economic operator sold to one of its clients, 500 m³ of biodiesel with ABC certification and 1,000 m³ Bonsucro EU RED certified ethanol. Since, biodiesel and ethanol are not fungible, i.e. cannot be mixed without losing its characteristics, the volumes must maintain the original certification. “Clean Energy” is compliant with indicator 3.1.5.

Procurement department

Date	Supplier	Product	Feedstock	Origin	Certification	Quantity
04/05/2014	X	Ethanol	Sugarcane	Brazil	Bonsucro	1000
04/05/2014	Y	Biodiesel	Palm	Asia	ABC	500
05/05/2014	Y	Ethanol	Corn	USA	XYZ	2000

Commercial department

Date	Client	Product	Origin	Certification	Quantity
06/05/2014	A	Biodiesel	Asia	ABC	500
06/05/2014	A	Ethanol	Brazil	Bonsucro	1000

Example 2:

“Sweet Sugar” bought 1,000 tonnes of Bonsucro certified white sugar and 500 tonnes of non-certified beet white sugar on May 4th. On the next day, it bought another 2,000 tonnes of non-certified beet white sugar. Since the products are fungible, they were mixed and stored in the same warehouse. On May 6th, it sold 1,500 tonnes of Bonsucro certified sugar. This is possible since the products are fungible and therefore, “Sweet Sugar” is compliant with indicator 3.1.5.

Procurement department

Date	Supplier	Product	Feedstock	Origin	Certification	Quantity
04/05/2014	X	White Sugar	Sugarcane	Brazil	Bonsucro	1000
04/05/2014	Y	White Sugar	Beet	Europe	N/A	500
05/05/2014	Y	White Sugar	Beet	Europe	N/A	2000

Commercial department

Date	Client	Product	Origin	Certification	Quantity
06/05/2014	A	White Sugar	Brazil	Bonsucro	1500
			Europe		

- Indicator 3.1.6 The volume of the Bonsucro/Bonsucro EU RED certified product and the associated sustainability characteristics leaving the system must be recorded in the system within one week.

Guidance for implementation: The economic operator may collect data and records and debit these at regular intervals (at least once a week) rather than as sent. There should be mechanisms to control changing the data.

- Indicator 3.1.7 The economic operator must undertake inventories of the input/output balance of the Bonsucro/Bonsucro EU RED certified product at fixed regular intervals, for each operation site, not exceeding three months.

Guidance for implementation: The accounting system requires appropriate data entries e.g. inputs, conversions, outputs. There need to be planned and documented intervals (inventory periods) where inventories are taken of all entered data. The inventory period should not exceed three months.

Example 1:

Economic operator A has controls in place in order to compile all information regarding incoming and outgoing products on a monthly base. By 2nd of the month, the analyst forwards all information to the management regarding the previous calendar month. In the information that is compiled, there is specific mention to the balance of Bonsucro certified product. In this case, the inventory period is 1-month. Therefore, the economic operator is compliant with indicator 3.1.7.

Example 2:

The accounting year of Economic operator B is from April to March. Information is closed on a quarterly basis. This means that the analyst compiles information regarding the period 1st of April to 30th of June and follows it to the management by 15th of July. In this case, the inventory period is of 3-months. Therefore, the economic operator is compliant with indicator 3.1.7.

Example 3:

The financial year of Economic operator C goes from January to December. There are no procedures in place for analyzing the balance of Bonsucro certified products in a shorter time frame. The inventory period of Economic operator C is 12-months. Therefore, the economic operator is not compliant with indicator 3.1.7.

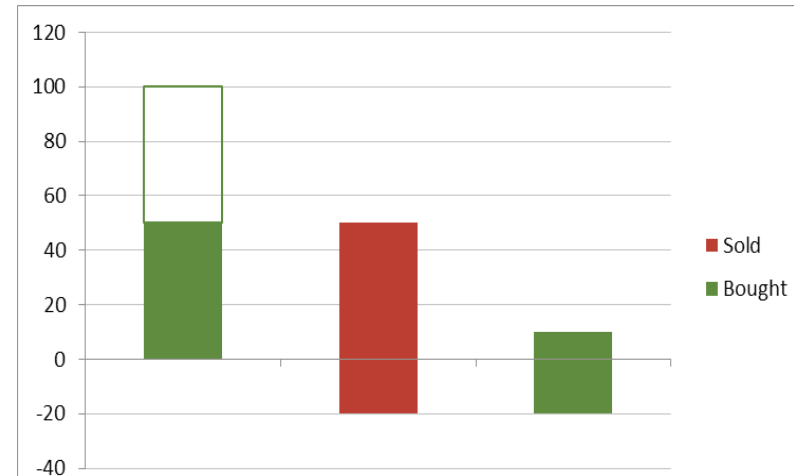
- **Indicator 3.1.8** The volume of Bonsucro/Bonsucro EU RED certified product received should be greater than or equal to the volume or quantity of Bonsucro/Bonsucro EU RED certified product supplied to clients over a fixed inventory period of maximum three months

Guidance for implementation: Within the defined inventory period, negative balances are allowed. At the end of the inventory period:

$$\text{Certified input} - \text{Certified output} - \text{Losses} \geq 0$$

Example:

During the month of January, the economic operator buys 50 tonnes of Bonsucro certified sugar and 50 tonnes of non Bonsucro certified sugar. In February, the economic operator sells 70 tonnes of Bonsucro certified sugar. At the end of the month of February, the balance is negative by 20 tonnes. However, in March, the



economic operator buys 30 tonnes of Bonsucro certified sugar, bringing the balance at the end of the 3-month period to +10 tonnes and, therefore, the economic operator is compliant with indicator 3.1.8.

- **Indicator 3.1.9** Where the balance of inputs and outputs is positive at the end of the economic operator’s inventory period, sustainability data may be carried into the next inventory period.

Example:

Given the example described at indicator 3.1.8., the economic operator finishes its 3-month period (Jan-Fev-Mar) with 10 tonnes Bonsucro certified sugar in its balance. The economic operator is entitled to transfer the positive balance (+10 tonnes) to the following inventory period (Apr-May-Jun).

- **Indicator 3.1.10** Sustainability data expires three years from the date of entry into the system or until the end of certification of the economic operator, whichever occurs sooner.

Guidance for implementation: The economic operator shall record the date of entry of the sustainability data into the system. Based on this date, respective sustainability data is valid for 3 years.

Example:

Mill “Sugarcracker” is 100% Bonsucro certified and produced on May 10th 2014, 200 m³ of ethanol and 500 tonnes of sugar. Those volumes are valid until May 9th 2017. On the next day, it produced additional 300 m³ of ethanol and 600 tonnes of sugar, which validity expires on May 10th 2017.

Its first sale of Bonsucro certified product occurred on July 20th of the same year. It sold 1000 tonnes of Bonsucro certified sugar to Trading “ChainX”, who registered in its system the volumes on the same day. These 1,000 tonnes are valid until July 19th, 2017. “Sugarcracker” decided that it would not renew its certification on June 5th 2016. This means that “Sugarcracker” cannot sell the remaining 100 tonnes of sugar and 500 m³ of ethanol as Bonsucro certified. ChainX, however, can still sell the 1,000 tonnes it has on its book, until July 19th, 2017 or until it is certified, whichever occurs sooner.

Mill "Sugarcracker"

Quality department

Date	Product	Quantity	Valid to
10/05/2014	Ethanol	200	09/05/2017
10/05/2014	Sugar	500	09/05/2017
11/05/2014	Ethanol	300	10/05/2017
11/05/2014	Sugar	600	10/05/2017

Commercial department

Date	Product	Quantity	Client
20/07/2014	Sugar	1000	A

Trading "ChainX"

Procurement department

Date	Product	Quantity	Supplier	Valid to
20/07/2014	Sugar	1000	A	19/07/2017

PRINCIPLE 4. TRACING BONSUCRO DATA

CRITERION 4.1 SUSTAINABILITY CHARACTERISTICS OF CONSIGNMENTS ARE TRACEABLE WITHIN THE ECONOMIC OPERATOR'S MASS BALANCE SYSTEM

- Indicator 4.1.1 Each consignment transacted must be recorded uniquely in the system.

Guidance for implementation: The method and system (either administrative, physical or both) used for unique identification of the consignment should be stated.

It is possible for clients to use the same identification code set by the supplier, if it can make sure that it is not repeated.

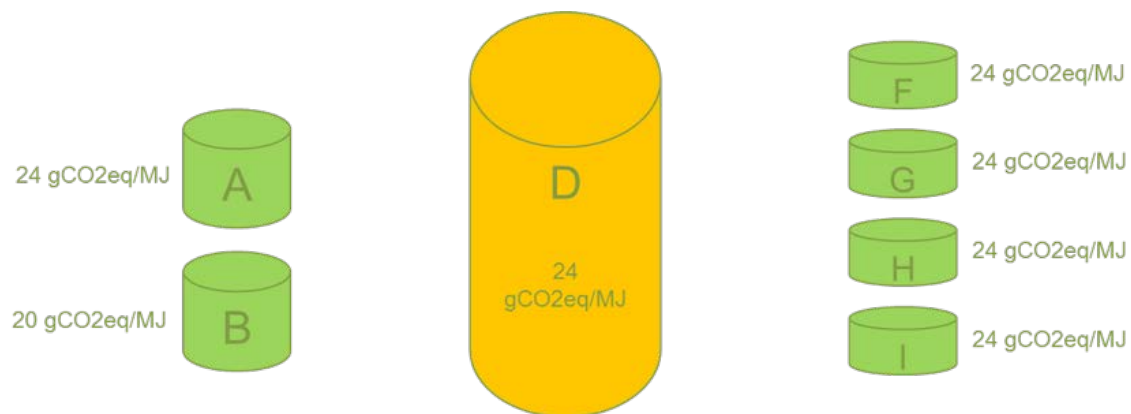
- Indicator 4.1.2 Where a combined consignment is supplied to a client, averaging GHG data is not allowed. The original GHG value of each component of the consignment can be allocated to a similar amount of outgoing material. Alternatively, a group consignment can use the worst GHG performance.

Guidance for implementation: No averaging of GHG values from consignments grouped together is permissible. Each separate GHG value must be reported on the documents going to the client (buyer) or the highest (worst) GHG value can be used for the entire consignment. Other sustainability data such as country of origin and feedstock type can be grouped if identical.

Example 1

“Clean Energy” buys Bonsucro EU RED certified ethanol from two different suppliers. Each consignment, A and B, have different GHG values, 24 and 20 g CO₂eq/MJ, respectively.

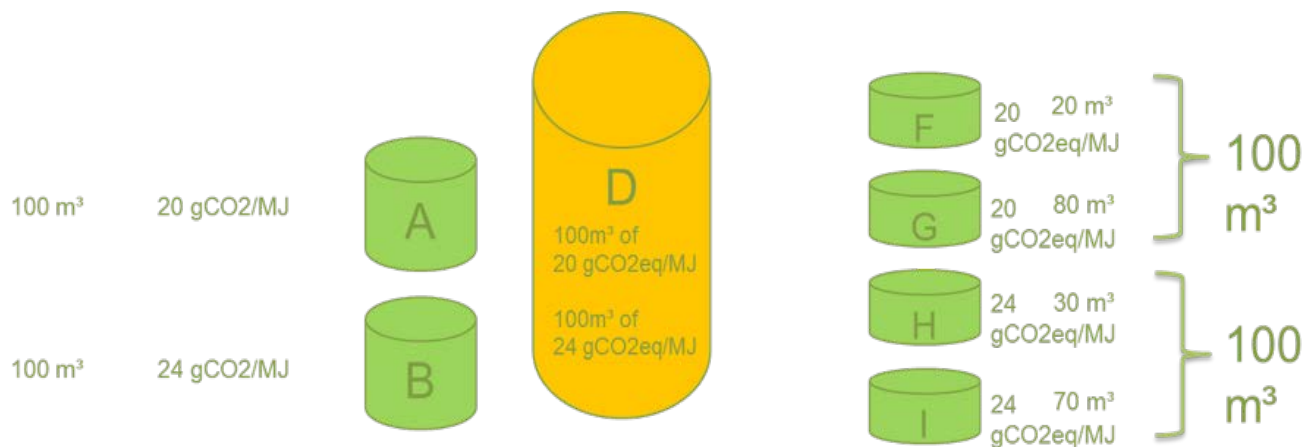
Consignments are mixed and stored in the same tank, D. Since there is no procedure in place to account for the different GHG values, the worst GHG value of 24 gCO₂eq/MJ is assigned to the mixture.



“Clean Energy” then sells consignments F, G, H and I, which together sum the original volume of A+B-losses. All consignments F, G, H and I are assigned the GHG value of D, 24 CO₂eq/MJ. Since, the worst GHG value is used for the group consignment, “Clean Energy” is compliant with indicator 4.1.2.

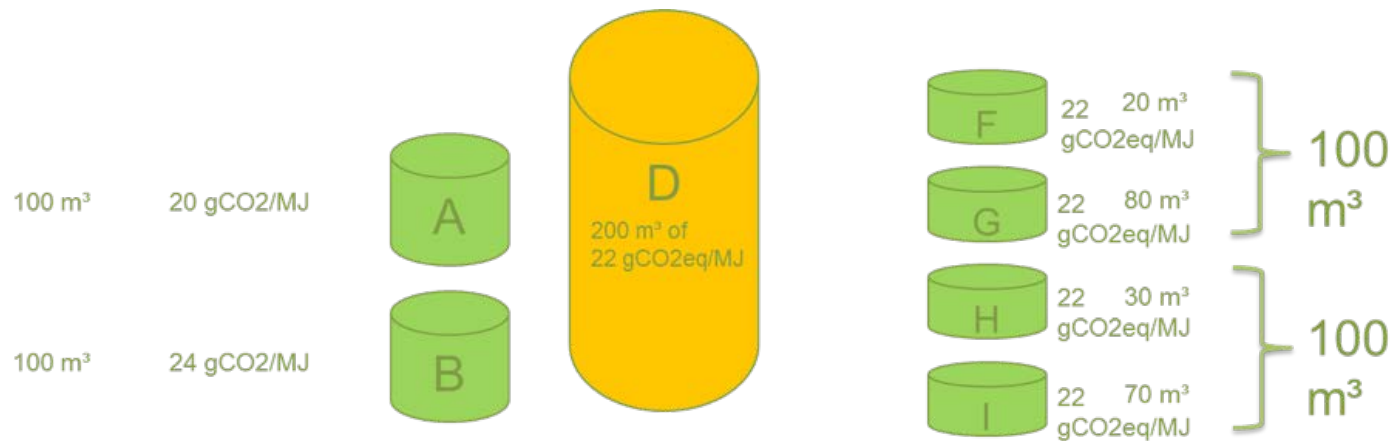
Example 2

“BioFuel” buys Bonsucro EU RED certified ethanol from two different suppliers. Each consignment, A and B, have different GHG values, 24 and 20 g CO₂eq/MJ, respectively. Consignments are mixed and stored in the same tank, D. “BioFuel’s” system is prepared to keep the individual consignment GHG values after they are mixed into a group consignment. “BioFuel” knows that it has in tank D, 100 m³ of ethanol with 20 g CO₂eq/MJ and 100 m³ of ethanol with 24 g CO₂eq/MJ. “BioFuel” then sells consignments F, G, H and I, which together sum the original volume of A+B-losses (which in the example is considered to be 0). To different consignments F, G, H and I the original GHG values of consignments A and B are assigned, as long as the respective sum of the volumes matches the original consignments. Since, the original GHG value is used for the group consignment and the balance is kept, “BioFuel” is compliant with indicator 4.1.2.



Example 3

“Wrong#” buys Bonsucro EU RED certified ethanol from two different suppliers. Each consignment, A and B, have different GHG values, 24 and 20 g CO₂eq/MJ, respectively. Consignments are mixed and stored in the same tank, D. “Wrong#” system averages GHG values after volumes are mixed into a group consignment. “Wrong#” knows that it has in tank D, 200 m³ of ethanol with 22 g CO₂eq/MJ. “Wrong#” then sells consignments F, G, H and I, which together sum the original volume of A+B-losses (which in the example is considered to be 0) and have a GHG value of 22 gCO₂eq/MJ. Since, the GHG values are averaged for the group consignment, “Wrong#” is not compliant with indicator 4.1.2.



PRINCIPLE 5. IDENTIFYING BONSUCRO DATA TO CLIENTS

CRITERION 5.1 SUSTAINABILITY CHARACTERISTICS OF CONSIGNMENTS ARE IDENTIFIED TO CLIENTS

- Indicator 5.1.1 Each consignment supplied to clients must contain a specification with, at a minimum, the data in Annex 1, clearly specifying the scope of compliance: Bonsucro compliant, Bonsucro EU RED compliant.

Guidance for implementation: The economic operator must issue documents including the information set in Annex 1. This information does not have to be in a separate document but can be included directly in the invoice. In the case that it is a separate document, it has to mention the invoice and/or consignment numbers.

- Indicator 5.1.2 Invoice and/or supporting documentation of outgoing Bonsucro/Bonsucro EU RED certified product must be sent to the client within 30 days of physical shipment.

Guidance for implementation: The economic operator must send documentation containing the information listed in Annex 1 within 30 days of physical receipt of the product.

7. ANNEXES

ANNEX 1 MINIMUM DATA ASSIGNED TO CONSIGNMENTS FOR BONSUCRO COMPLIANCE

BONSUCRO COMPLIANT PRODUCT:

- Description of the raw material of Bonsucro compliant product (sugarcane or sugarcane residues or wastes)
- The mass (kg or tonnes) or volume (litres or m³)
- Specification of sugar (sugar content in % sucrose) or specification of ethanol (alcohol content in % v/v)
- Evidence showing compliance with the Bonsucro Production Standard
- Buyer and seller contact information
- Transport distance, if relevant for the GHG calculation
- Country of origin (optional)

BONSUCRO EU RED COMPLIANT PRODUCT:

- All of the above
- Country of origin
- Statement about compliance with the Bonsucro EU RED Production Standard
- Actual GHG values [kg CO₂eq] per quantity of sustainable product [in tons or m³ at 15°C] calculated according to the Annex V of the EU Renewable Energy Directive (2009/28/EC), using any EC-approved GHG calculation tool or GHG default values provided in point D of the same annex V of the EU Directive.