



AIC Sustainability Programme Mass Balance Principles - Draft

Pillar 1 – Deforestation and Land Conversion

11th July 2023

AIC Sustainability Programme Mass Balance Principles – Pillar 1

1. Introduction

The Mass Balance Principles adopted by the AIC Sustainability Programme are based on those developed for the Renewable Energy Directive (RED). These principles are consequently already widely used and accepted across the European Union and United Kingdom.

Mass Balance is a central element of the AIC Sustainability Programme. It establishes a connection between any sustainability claims being made by a Participant and the physical flow of product moving through an identified process or supply chain. It is an essential component in ensuring that any information provided with regard to the sustainability characteristics of raw materials, intermediate products and feed is credible with regard to its origin and type and can be verified along the entire process and supply chain.

2. Mass Balance

2.1. Mass Balance in accordance with these Principles must be managed as follows:

- a) First Gathering Points (where crops received from farmers are first stored by a purchasing company): Area Mass Balance (restricted at maximum to a state/province) or on a site-by-site basis.
- b) Processors (oilseed crushing plants, vegetable oil refineries, biodiesel facilities, etc. who will process the crop): Area Mass Balance (restricted at maximum to a state/province) or on a site-by-site basis.
- c) Feed Companies (shippers, traders, feed mills, blending plants, etc. who will trade/ produce feed using products/ coproducts produced by a processor): Area Mass Balance (restricted at maximum to a state/province) or on a site-by-site basis.

Further Information: Area Mass Balance is temporarily accepted by AIC as Participants move towards site-by-site Mass Balance. Participants should note that the Scheme requires accounting of all Mass Balances to be done on a site-by-site basis.

2.2. The diagram below explains how Mass Balance compares to other traceability models (based on RED)

Options for the traceability chain	Information concerning the sustainability characteristics of the raw materials/ feed available for every consignment	The raw materials/ feed can be completely traced back to cultivation/ origin	Complete separation of certified and non-certified raw materials/ feed at one site
Book & Claim process	YES	NO	NO
Area Mass Balance	YES	YES, to region/area	NO
Mass balance	YES	YES	NO
Segregation	YES	YES	YES
Identity Preservation	YES	YES	YES

3. Programme Principles for Mass Balance

3.1 Raw Materials/ Feed Entering and Leaving the Mass Balance

Participants must use a Mass Balance system that:

3.1.1 Ensures that only raw materials/ feed that will not compromise feed safety enters the Mass Balance

AND

3.1.2 Allows consignments of raw materials/ feed with differing sustainability characteristics to be commingled into one bulk

AND

3.1.3 Provides for the sum of all consignments withdrawn from the commingled bulk to be described as having the same sustainability characteristics, in the same quantities, as the sum of all consignments added to the commingled bulk.

Further Information: It is acceptable for a Participant to adopt more stringent controls if they so choose, for example Segregation.

3.2 Sustainability Characteristics

The sustainability characteristics attributed to any raw materials/ feed entering a Mass Balance must include:

3.2.1 The country(ies) and/ or regions of countries of origin

AND

3.2.2 The means by which the absence of deforestation and land conversion has been verified under a scheme recognised by AIC (e.g. RTRS, Company Scheme, etc.)

3.3 Process Losses and Fractionation

3.3.1 Wherever processing or handling results in product losses, such losses must be equally apportioned to both the 'sustainable' raw materials/ feed and other raw materials/ feed making up the commingled bulk.

3.3.2 Where processing results in raw materials being fractionated to produce different feeds, appropriate conversion factors must be used to assign the sustainability characteristics to each fraction.

Interpretation: For example, if 18% of soybean oil is extracted from 100 tonnes of whole soybeans, 18 tonnes of soybean oil can be claimed as having the sustainability characteristics originally assigned to the original soybeans.

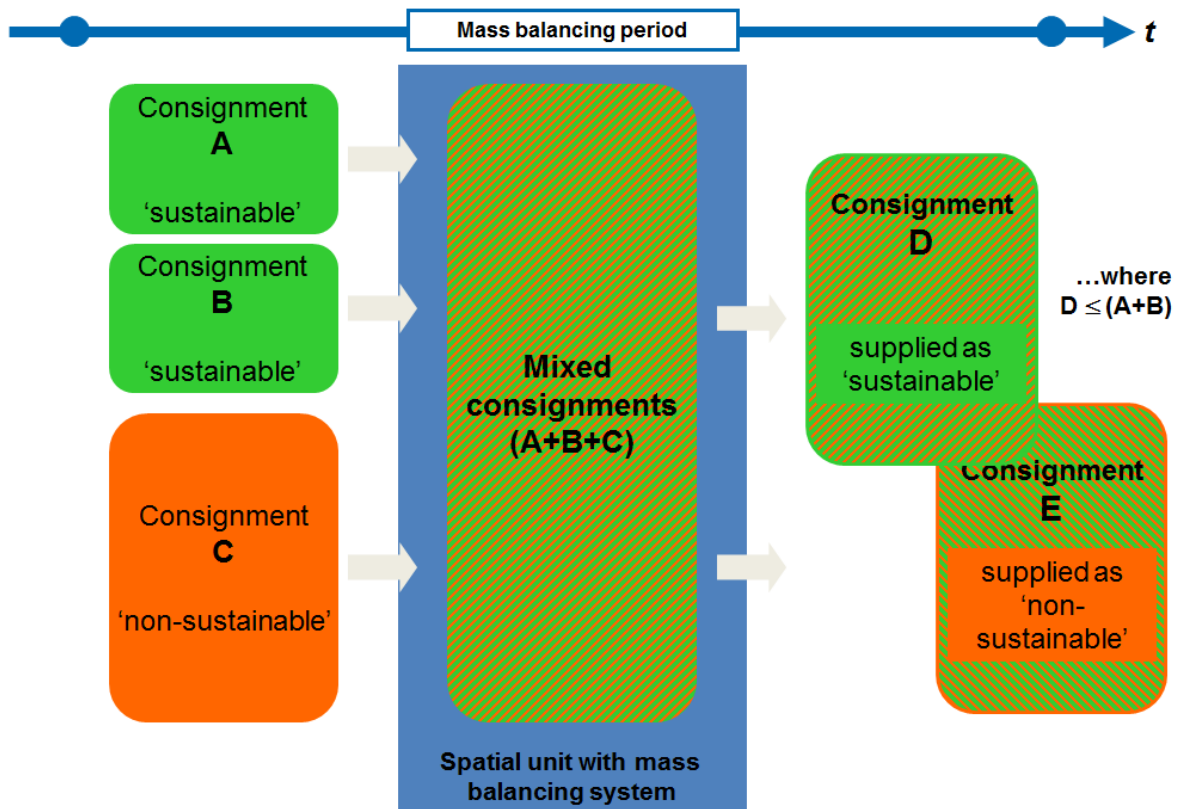
3.3.3 The same sustainability characteristics attributed to a raw material must be assigned to the feed(s) derived from it.

Interpretation: For example, if a commingled bulk includes 50% of certified sustainable soybeans, 50% all feed products derived from that bulk can be claimed as sustainable.

It is NOT permissible to transfer sustainability characteristics between the different fractions derived from a raw material. For example, if there is a high demand for 'sustainable' soybean meal but not for soybean oil, it is NOT permitted to assign the sustainability characteristics of the oil to create additional 'sustainable' meal.

3.4 The Mass Balance Models

3.4.1 Model 1 applies typically where no processing is taking place.

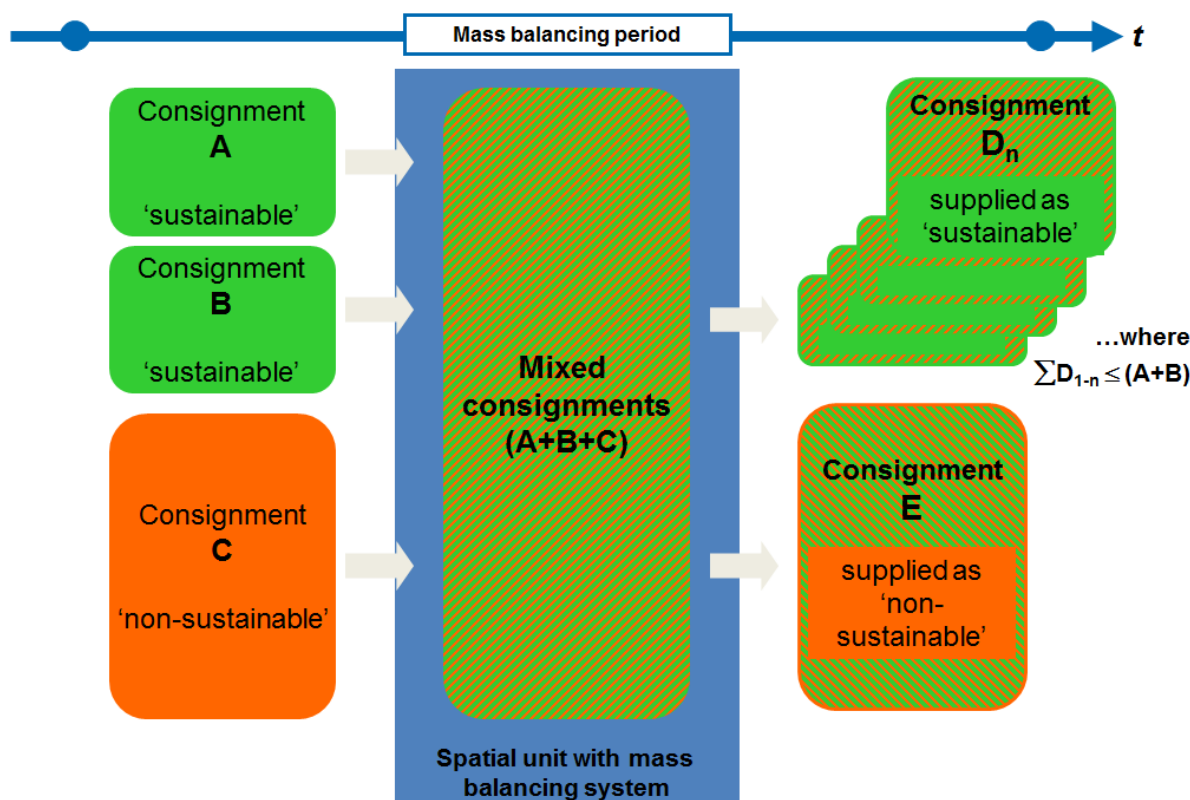


This gives rise to the following mass balancing formula:

$$D \leq (A+B)$$

where $D = (A+B) \times \text{handling/ processing losses}$

3.4.2 Model 2 applies typically where processing is taking place.



The following mass balancing formula applies here:

$$\sum D_{1...n} \leq (A+B)$$

where $\sum D_{1...n} = A+B \times \text{processing conversion factor} \times \text{handling/ processing losses}$

Further Information: Note that, in accordance with 3.1.1 (above), raw materials/ feeds entering a commingled bulk should not compromise feed safety.

4. Mass Balance Periods

4.1 Participants must strive to maintain a positive Mass Balance for any sustainable raw material(s)/ feed.

Interpretation: For practical purposes, in the event of logistical issues the tonnage of raw material(s)/ feed despatched from the Mass Balance may exceptionally be permitted to exceed the tonnage of raw material(s)/ feed received into the Mass Balance for a period not exceeding three months.

5. Spatial Boundaries

5.1 Participants must establish a separate Mass Balance for each of their premises, identified by the address where the facility is located.

5.2 Each Mass Balance must be clearly identified by its associated address and each consignment entering and leaving the Mass Balance must be traceable to this address.

Interpretation: Where a Participant operates two facilities in close proximity, but with separate addresses, each will be required to operate its own Mass Balance.

6. External Storage and Third-Party Storage

6.1 Where a Participant operates or contracts a dedicated store at a different address to its other facilities to hold sustainable raw materials/ feeds, the store must operate its own Mass Balance.

6.3 Where a third-party store holds sustainable raw materials/ feeds on behalf of one or more Participants, a separate Mass Balance must be maintained for each Participant.

7. Transfer of Mass Balances

7.1 The administration of Mass Balances must be aligned with the physical movement of goods into or out of a specific Mass Balance.

Interpretation: A Participant will increase the quantity accounted for in their Mass Balance upon physical receipt of raw materials/ feed meeting the sustainability criteria of that Mass Balance. Similarly, a Participant will reduce the quantity accounted for in their Mass Balance upon the physical despatch of raw materials/ feed meeting the sustainability criteria of that same Mass Balance.

This means that where Participant 1 at a step in the supply chain supplies raw materials/ feeds to Participant 2 at the next step in the supply chain, Participant 1's Mass Balance stock will be reduced when the raw materials/ feed is despatched and Participant 2's Mass Balance stock will be increased upon receipt of the raw materials/ feed on the site where their Mass Balance is located, regardless of whether the governing contract was on an 'ex' or 'delivered' basis.