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**Sustainable and traceable cocoa —**  
**Part 3:**  
**Requirements for traceability**

*Cacao durable et traçable —*  
*Partie 3: Exigences de traçabilité*

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 415, *Sustainable and Traceable Cocoa*, in collaboration with ISO Technical Committee TC 34, *Food products*, Subcommittee SC 18, *Cocoa*, in accordance with the agreement on technical cooperation between ISO and CEN (Vienna Agreement).

A list of all parts in the ISO 34101 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

## Introduction

The ISO 34101 series specifies requirements for the sustainable production of cocoa beans, for traceability of sustainably produced cocoa and for the scheme for certifying sustainable and traceable cocoa.

Sustainably produced cocoa beans are obtained by fulfilling the management system requirements of either ISO 34101-1 or ISO 34101-4:2019, Annex A or B, and the performance requirements of ISO 34101-2.

The stepwise approach of the ISO 34101 series comprises three requirement levels: entry, medium and high. The requirements for the three levels for the performance requirements are all specified in ISO 34101-2. The requirements for the three levels for the cocoa sustainability management system requirements are specified in ISO 34101-1 or ISO 34101-4 as follows:

- entry: ISO 34101-4:2019, Annex A;
- medium: ISO 34101-4:2019, Annex B;
- high: ISO 34101-1.

An organization that is sustainably producing cocoa beans can apply for initial certification to any level and will then be on a path towards a higher level until the high level is reached. The path from entry level to medium level can take up to 60 months. The path from medium level to high level can take up to 60 months.

The performance requirements specified in ISO 34101-2 are complementary to the cocoa sustainability management system requirements. Only organizations that fulfil both the cocoa sustainability management system requirements (either ISO 34101-1 or ISO 34101-4:2019, Annex A or B) and the performance requirements (ISO 34101-2) may claim their cocoa beans have been sustainably produced.

This document specifies the requirements for traceability of sustainably produced cocoa (fulfilling the requirements of the ISO 34101 series) from an organization that is sustainably producing cocoa beans and throughout the cocoa supply chain.

ISO 34101-4 specifies the requirements for the scheme for certifying traceable, sustainably produced cocoa conforming to the requirements of the ISO 34101 series and includes the requirements for the entry and medium level for the cocoa sustainability management system.

Document	Subject	Intended to be applied by
ISO 34101-1	High-level requirements for cocoa sustainability management systems. (Entry- and medium-level requirements for cocoa sustainability management systems are specified in ISO 34101-4.)	Registered cocoa farmers and organizations that are sustainably producing cocoa beans.
ISO 34101-2	Entry-, medium- and high-level requirements for performance (related to economic, social, and environmental aspects).	
This document	Requirements for traceability.	The cocoa supply chain actors.
ISO 34101-4	Requirements for certification schemes. Entry- and medium-level requirements for cocoa sustainability management systems. (The high-level requirements for cocoa sustainability management systems are specified in ISO 34101-1.)	Certification scheme owners and certification bodies certifying conformity to the ISO 34101 series. Organizations wishing certification by an accredited third-party certification body in order to make claims of conformity. Registered cocoa farmers and organizations that are sustainably producing cocoa beans applying the entry- or medium-level requirements for cocoa sustainability management systems.

This document specifies the requirements for the traceability of sustainably produced cocoa. A traceability system for sustainably produced cocoa is a technical tool to assist a cocoa supply chain actor operating within a cocoa supply chain to achieve defined sustainable cocoa objectives. The complexity of the traceability system for sustainably produced cocoa may vary depending upon requirements of each stage of the cocoa supply chain and the objectives to be achieved.

It is intended to be flexible enough to allow cocoa supply chain actors within the sustainably produced cocoa supply chain to achieve identified objectives but robust enough to ensure credible implementation. The choice of a traceability system for sustainably produced cocoa is influenced by applicable requirements, product characteristics and customer expectations.

Traceability determines the history or location of sustainably produced cocoa. Due to the complexity of the cocoa supply chain, mass balance is an acceptable traceability system in this document.

The mass balance system administratively monitors the trade of conforming cocoa throughout the cocoa supply chain, and facilitates the development of mainstream trade in sustainably produced cocoa. The mass balance system allows everyone within the cocoa supply chain to demonstrate their commitment to sustainable cocoa production.

Traceability requires the engagement and collaboration of actors along the entire cocoa supply chain. Developments in technology and demands for greater transparency from both business and government sectors are making this increasingly more manageable.

The implementation by a cocoa supply chain actor of a traceability system for sustainably produced cocoa depends on technical limits inherent to the cocoa supply chain actor and the cocoa (e.g. the nature of the raw cocoa, size of the lots, collection, handling, transport, production and processing procedures), and the cost and benefits of applying such a system.

In this document:

- “shall” indicates a requirement;
- “should” indicates a recommendation;

- “may” indicates a permission;
- “can” indicates a possibility or a capability.

Information marked “NOTE” is for guidance in understanding or clarifying the associated requirement.

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# Sustainable and traceable cocoa —

## Part 3: Requirements for traceability

### 1 Scope

This document specifies basic requirements for the design and implementation of traceability systems within the cocoa supply chain for sustainably produced cocoa beans and cocoa products derived from sustainably produced cocoa beans that conform to ISO 34101-2 and either ISO 34101-1 or ISO 34101-4:2019, Annex A or B, as described in the Introduction.

This document also specifies administrative requirements for a mass balance system whereby cocoa conforming to this document can be used together with nonconforming cocoa and which provides the necessary traceability within a manufacturing process.

This document specifies requirements for traceability of sustainably produced cocoa from an organization that is sustainably producing cocoa beans to the point of exit from the manufacturer of the final retail product.

This document does not apply to a credit system.

### 2 Normative references

There are no normative references in this document.

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 34101-1 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

#### 3.1 audit

systematic, independent and documented *process* (3.20) for obtaining objective evidence and evaluating it objectively to determine the extent to which the audit criteria are fulfilled

Note 1 to entry: An audit can be an internal audit (first party), or an external audit (second party or third party), and it can be a combined audit (combining two or more disciplines).

Note 2 to entry: An internal audit is conducted by the *organization* (3.19) itself, or by an external party on its behalf.

Note 3 to entry: “Audit evidence” and “audit criteria” are defined in ISO 19011.

Note 4 to entry: External audits include those generally called second and third-party audits. Second-party audits are conducted by parties having an interest in the organization, such as customers, or by other persons on their behalf. Third-party audits are conducted by external, independent auditing organizations.

[SOURCE: ISO 34101-1:2019, 3.2, modified — Note 5 to entry has been deleted.]

## ISO 34101-3:2019(E)

### 3.2

#### **cocoa**

*cocoa beans* (3.3) or derived *products* (3.21)

[SOURCE: ISO 34101-1:2019, 3.7]

### 3.3

#### **cocoa bean**

seed of the cocoa tree (*Theobroma cacao* Linnaeus)

Note 1 to entry: Commercially, and for the purposes of this document, the term refers to the whole seed, which has been fermented and dried.

[SOURCE: ISO 2451:2017, 3.5]

### 3.4

#### **cocoa product**

*product* (3.21) derived from the processing of the *cocoa bean* (3.3), including nibs, cocoa liquor/mass, cocoa butter, cocoa cake and cocoa powder

### 3.5

#### **cocoa supply chain**

sequence of the stages and operations involved in the movement and processing of *cocoa* (3.2), from farm to the point of exit from the factory door of the manufacturer of the final retail *product* (3.21)

### 3.6

#### **cocoa supply chain actor**

*organization* (3.19) that physically handles, takes legal ownership or makes claims of *sustainably produced cocoa* (3.27)

Note 1 to entry: The requirements for sustainably produced cocoa are specified in ISO 34101-2 and either ISO 34101-1 or ISO 34101-4:2019, Annex A or B, as described in the Introduction.

### 3.7

#### **competence**

ability to apply knowledge and skills to achieve intended results

Note 1 to entry: Demonstrated competence is sometimes referred to as qualification.

[SOURCE: ISO 34101-1:2019, 3.15, modified — Note 2 to entry has been deleted.]

### 3.8

#### **conformity**

fulfilment of a requirement

[SOURCE: ISO 34101-1:2019, 3.16, modified — Note 1 to entry has been deleted.]

### 3.9

#### **corrective action**

action to eliminate the cause of a nonconformity and to prevent recurrence

Note 1 to entry: There can be more than one cause for a nonconformity.

Note 2 to entry: Corrective action is taken to prevent recurrence whereas preventive action is taken to prevent occurrence.

[SOURCE: ISO 34101-1:2019, 3.20, modified — Note 3 to entry has been deleted.]

### 3.10

#### **flow of cocoa**

movement of *cocoa* (3.2) at any point in the *cocoa supply chain* (3.5)

**3.11****flushing**

cleaning equipment used in a *process* (3.20) to be able to start a new process to reduce contamination to an agreed level

Note 1 to entry: In this document, contamination could be a mixture of *sustainably produced cocoa* (3.27) and non-sustainably produced cocoa.

**3.12****identity**

characteristics of *cocoa* (3.2) maintained to determine its origin

**3.13****identity preserved****IP**

maintained *segregation* (3.22) and documented *identity* (3.12) of *cocoa* (3.2) from an *organization* (3.19) that is sustainably producing *cocoa beans* (3.3) (e.g. an individual farmer or a group of registered farmers) throughout the whole *cocoa supply chain* (3.5) until manufacture of final consumer *product* (3.21)

**3.14****location**

place of production, processing, distribution, storage or handling from primary production to consumption

**3.15****lot**

*set* (3.23) of units of *cocoa* (3.2) in bags or in bulk established at any point in the *cocoa supply chain* (3.5) or a set of units of cocoa which have been produced and/or processed or packaged under similar circumstances

Note 1 to entry: The lot is determined by parameters established beforehand by the *cocoa supply chain actor* (3.6).

Note 2 to entry: A set of units may be reduced to a single unit of *product* (3.21).

Note 3 to entry: Lot can also be expressed as “batch” when applied to goods produced by the industrial processing of cocoa.

**3.16****mass balance administration**

*cocoa supply chain* (3.5) model for mixing and/or *substitution* (3.26) of *sustainably produced cocoa* (3.27)

**3.17****multi-site mass balance**

*mass balance administration* (3.16) performed at multiple *sites* (3.25) within one *cocoa supply chain actor* (3.6)

**3.18****one step forward and one step back**

identification from where the *cocoa* (3.2) came and to where the cocoa went

[SOURCE: CAC/GL 60 2006,<sup>[6]</sup> modified — In the definition, “food” has been substituted by “cocoa”.]

**3.19****organization**

person or group of people that has its own functions with responsibilities, authorities and relationships to achieve its objectives

Note 1 to entry: The concept of organization includes, but is not limited to sole-trader, cooperative (coop), company, corporation, firm, enterprise, authority, partnership, association, charity or institution, or part or combination thereof, whether incorporated or not, public or private.

## ISO 34101-3:2019(E)

[SOURCE: ISO 34101-1:2019, 3.38, modified — Note 1 to entry has been modified and Notes 2, 3 and 4 to entry have been deleted.]

### 3.20

#### **process**

*set* (3.23) of interrelated or interacting activities which transforms inputs into outputs

Note 1 to entry: Inputs to a process are generally the outputs of other processes.

Note 2 to entry: Processes in an *organization* (3.19) are generally planned and carried out under controlled conditions to add value.

[SOURCE: ISO 34101-1:2019, 3.43, modified — Note 3 to entry has been deleted.]

### 3.21

#### **product**

output of an *organization* (3.19) that can be produced without any transaction taking place between the organization and the customer

### 3.22

#### **segregation**

*process* (3.20) that separates conforming from nonconforming *cocoa* (3.2) but allows mixing of conforming cocoa from different *cocoa supply chain actors* (3.6)

### 3.23

#### **set**

number of similar activities in different *locations* (3.14) falling under the same *multi-site mass balance* (3.17) system

EXAMPLE      Roasting and grinding.

### 3.24

#### **single-site mass balance**

guarantee provided by the *cocoa supply chain actor* (3.6) of the *conformity* (3.8) of a single *site* (3.25)

### 3.25

#### **site**

*location* (3.14) where value-added manufacturing *processes* (3.20) occur

### 3.26

#### **substitution**

specific amount of conforming *cocoa* (3.2) that can be substituted for the same amount of nonconforming cocoa

### 3.27

#### **sustainably produced cocoa**

*cocoa beans* (3.3) that are produced in an economically viable, socially responsible and environmentally sound manner within an *organization* (3.19)

Note 1 to entry: The requirements for an economically viable, socially responsible and environmentally sound manner are specified in ISO 34101-2 and either ISO 34101-1 or ISO 34101-4:2019, Annex A or B, as described in the Introduction.

[SOURCE: ISO 34101-1:2019, 3.53, modified — Note 1 to entry has been added.]

### 3.28

#### **traceability**

ability to follow the physical movement and/or mass *conformity* (3.8) of *sustainably produced cocoa* (3.27) through specified stage(s) of production, processing and distribution