



**International  
Standard**

**ISO 17317**

**Biodiversity — Requirements and  
guidelines for the characterization  
of native species and products  
derived from native species**

*Biodiversité — Exigences et lignes directrices pour la  
caractérisation des espèces indigènes et des produits issus  
d'espèces indigènes*

**First edition  
2026-06**

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Published in Switzerland

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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 document 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)).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at [www.iso.org/patents](http://www.iso.org/patents). ISO shall not be held responsible for identifying any or all such patent rights.

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 Technical Committee ISO/TC 331, *Biodiversity*.

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

This document was developed to characterize native species and products derived from native species, with the aim of enhancing the sustainable collection, harvesting, or production of these products and the conservation of their ecosystems. This document is aimed at farmers, producers, exporters, importers, authorities, indigenous peoples, and local communities, containing information on quality infrastructure to support efforts in biodiversity conservation. Native species are part of “natural capital” and their commercialization can only be assured on a long-term basis if the multilateral environmental agreements<sup>[24]</sup> related to biodiversity are fully implemented. Furthermore, it is recommended that local communities be included in the commercialization process.

There is strong global demand for native species and products derived from native species as their origin and natural properties support a range of applications delivering benefits in health, well-being and agri-food sector. This document describes the characterization of native species and products derived from native species, which enables the identification of physical, chemical and biological requirements, which are then provided to interested parties. These requirements allow the commercial demand for these products to be met in a sustainable manner that is compatible with conservation efforts, and which guarantees the quality and safety of the products.

Biodiversity is important for the survival of humankind and therefore, protection and sustainable management of resources that concern biodiversity are a priority. This includes the genetic value of native species and related ecosystem services. Using biodiversity resources and services in a sustainable way benefits their conservation and contributes to equitable social and economic growth.

Requirements for native species and products derived from native species can be determined in various stages of the value chain, including:

- raw material collection or production;
- transformation into end products;
- the final consumption or use of these products.

Establishing requirements for native species and products derived from native species through standardization facilitates their access to foreign markets through a systematic approach that responds to market demand.

Many products derived from native species are produced by micro, small and medium enterprises (MSMEs). Their processing and transformation provide income and economic growth opportunities. By adequately characterizing native species and products derived from native species, the creation of technical standards is supported, thus adding value in the supply chain and contributing to the sustainable growth of organizations such as MSMEs. Properly characterized native species and products derived from native species can also help to minimize market barriers and contribute to efforts for conservation and sustainable use of biodiversity resources. For a better comprehension of how this document applies to the interested parties, see [Table 1](#) and [Figure 1](#).

**Table 1 — Correlation between the interested parties and the clauses of this document**

Users /target audience	Clause/subclause
Farmers, aquacultures	<p><a href="#">Clause 4</a>: Sustainable management of natural resources (excluding <a href="#">4.6</a> and <a href="#">4.9</a>)</p> <p><a href="#">6.4.1</a>: Methodological framework for determining quality parameters and their categories (excluding <a href="#">6.4.1.7</a> and <a href="#">6.4.1.11</a>)</p> <p><a href="#">Clause 7</a>: Biodiversity- responsible value chain (excluding <a href="#">7.5</a>)</p> <p><a href="#">Annex A</a>: Good practices and tools for measuring elements of biodiversity, collecting species and ecosystem data</p>
Producers	<p><a href="#">Clause 4</a>: Sustainable management of natural resources (excluding <a href="#">4.8</a>, <a href="#">4.10</a> and <a href="#">4.11</a>)</p> <p><a href="#">Clause 5</a>: Prioritization of the product: Risks and opportunities from a market perspective</p> <p><a href="#">6.3</a>: Native species and products derived from native species identification</p> <p><a href="#">6.4.1</a>: Methodological framework for determining quality parameters and their categories (excluding <a href="#">6.4.1.11</a>)</p> <p><a href="#">Clause 7</a>: Biodiversity- responsible value chain</p> <p><a href="#">Annex A</a>: Good practices and tools for measuring elements of biodiversity, collecting species and ecosystem data</p>
Trade partners (such as exporters, among others)	<p><a href="#">4.6</a>: Market requirements</p> <p><a href="#">Clause 5</a>: Prioritization of the product: Risks and opportunities from a market perspective</p> <p><a href="#">6.3</a>: Native species and products derived from native species identification</p> <p><a href="#">6.4.1</a>: Methodological framework for determining quality parameters and their categories (excluding <a href="#">6.4.1.11</a>)</p> <p><a href="#">Clause 7</a>: Biodiversity- responsible value chain (excluding <a href="#">7.1.2</a>)</p>
Regulatory and controlling bodies	<p><a href="#">Clause 4</a>: Sustainable management of natural resources</p> <p><a href="#">6.2</a>: Literature review and systematization</p> <p><a href="#">6.3</a>: Native species and products derived from native species identification</p> <p><a href="#">7.1</a>: Monitoring of biodiversity (excluding <a href="#">7.1.3</a>)</p> <p><a href="#">7.2</a>: Respecting limit values to avoid overexploitation</p> <p><a href="#">Annex A</a>: Good practices and tools for measuring elements of biodiversity, collecting species and ecosystem data</p>
Researchers, bio-prospectors and academic institutions	<p><a href="#">Clause 4</a>: Sustainable management of natural resources (excluding <a href="#">4.2</a> and <a href="#">4.6</a>)</p> <p><a href="#">Clause 5</a>: Prioritization of the product: Risks and opportunities from a market perspective</p> <p><a href="#">Clause 6</a>: Product characterization (excluding <a href="#">6.4.2</a>)</p> <p><a href="#">A.2</a>: Best practices for collecting species and ecosystem data</p>

Table 1 (continued)

Users /target audience	Clause/subclause
Indigenous peoples and local communities	<a href="#">Clause 4</a> . Sustainable management of natural resources (excluding <a href="#">4.2</a> and <a href="#">4.6</a> ) <a href="#">7.1</a> : Monitoring of biodiversity (excluding <a href="#">7.1.3</a> ) <a href="#">7.2</a> : Respecting limit values to avoid overexploitation
Consumers	<a href="#">4.6</a> : Market requirements <a href="#">6.3</a> : Native species and products derived from native species identification <a href="#">7.5</a> : Information and awareness raising of consumers
Laboratories, metrology institutes, conformity assessment bodies	<a href="#">6.2.4</a> : Step three: Properties <a href="#">6.4.2</a> : Laboratory methods and metrology <a href="#">6.5</a> : Documents and publication of results

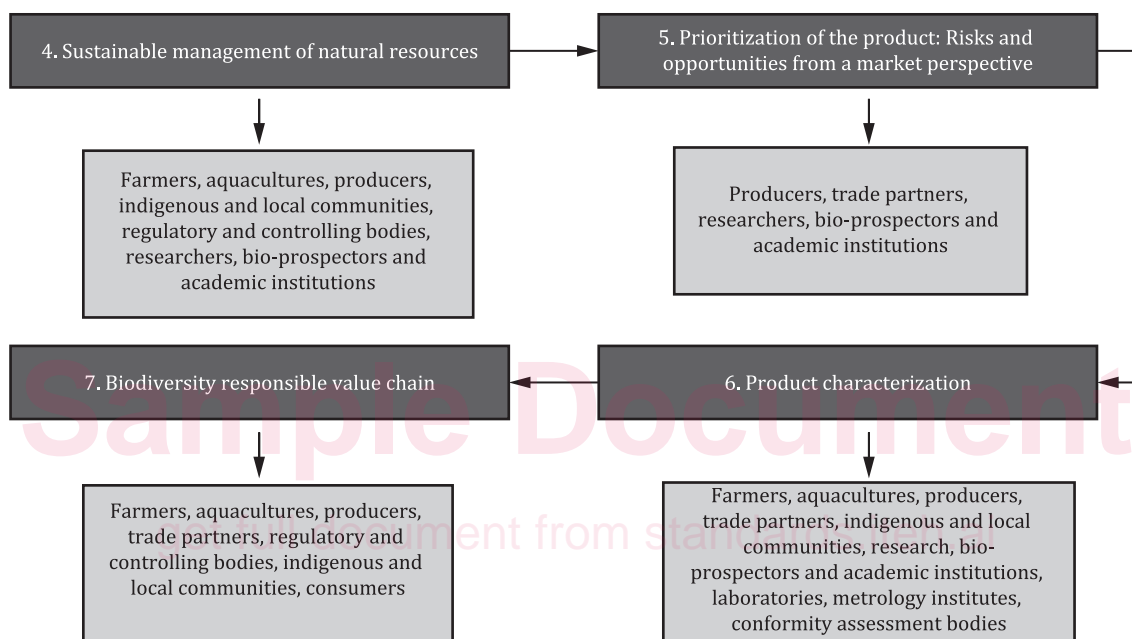


Figure 1 — Relationship between the clauses of this document and the target audience

# Biodiversity — Requirements and guidelines for the characterization of native species and products derived from native species

## 1 Scope

This document provides requirements and guidelines for the characterization of native species of plants, algae and fungi and the products derived from them, which have been collected, harvested or processed. This document aims to enable the establishment of minimum quality and safety requirements considering sustainable management of biodiversity. This document also covers the protection of biodiversity along all steps of the value chain of the products derived from native species through the application of a biodiversity management plan.

This document does not apply to native animal species, timber and wood products.

## 2 Normative references

There are no normative references in this document.

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

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

### 3.1 acceptance and rejection criteria

evidence required for considering that requirements have been fulfilled or not

[SOURCE: ISO 22263:2008, 2.1, modified — “rejection criteria” has been added to the term and “or not” has been added to the definition.]

### 3.2 biodiversity

#### biological diversity

variability among living organisms on the earth, including the variability within and between species, and within and between ecosystems

[SOURCE: ISO 14050:2020, 3.8.22]

### 3.3 characterization of native species

description of the specific and inherent attributes, qualities or traits of a *native species* (3.7), such that it is distinguishable from other species

**3.4  
collection  
gathering**

removal of terrestrial and aquatic algae, fungi, and plants (other than trees) or parts thereof from their habitats

[SOURCE: IPBES, n.d [39]]

**3.5  
environmental impact assessment**

EIA

tool used to identify the environmental impacts of a project, asset and activity prior to decision-making

Note 1 to entry: The tool can be used to assess a project, asset and activity during its various stages, including when it is finished.

[SOURCE: ISO 14100:2022, 3.1.6, modified — Note 2 to entry has been deleted.]

**3.6  
mitigation hierarchy**

step-by-step tool used to limit the negative impacts of development which has four steps that are followed in order, avoid, then minimise, then restore impacted areas and finally offset any impacts that remain

[SOURCE: IWA 45:2024, 3.13]

**3.7  
native species**

indigenous species

fauna, flora, fungi, algae or other microbial species that occur in a given area without intentional or unintentional human introduction

Note 1 to entry: Native species can be seen as the opposite of alien species.

Note 2 to entry: In this document, it is assumed that endemic species and native species are related terms but refer to different concepts. Endemic species are uniquely confined to a single geographic area, whereas native species are those naturally found within a region but can also occur elsewhere.

**3.8  
primary forest**

forest that has never been logged or cut and has developed following natural disturbances and under natural processes, regardless of its age

[SOURCE: ISO 34101-2:2019, 3.17]

**3.9  
products derived from native species**

product wholly or partly derived from *native species* (3.7)

**3.10  
prospecting**

search for plants, animals, and microbial species for academic, pharmaceutical, biotechnological, agricultural, and other purposes

[SOURCE: Nambisan, 2017[38], modified — "industrial" removed from the definition.]

**3.11  
sample**

subset of a population made up of one or more sampling units

[SOURCE: ISO 2859-5:2005, 3.15]

### 3.12

#### **sample size**

number of sampling units in a *sample* (3.11)

[SOURCE: ISO 2859-5:2005, 3.16]

### 3.13

#### **sampling plan**

plan that describes how samples are to be selected

[SOURCE: ISO 13053-2:2011, 2.28]

### 3.14

#### **target population**

population of interest in the research project to which inferences are to be made

[SOURCE: ISO 20252:2019, 3.99]

### 3.15

#### **traditional knowledge**

knowledge, innovations and practices of indigenous peoples and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of *biological diversity* (3.2)

Note 1 to entry: The traditional knowledge has been developed from experience gained over the centuries and adapted to the local culture and environment.

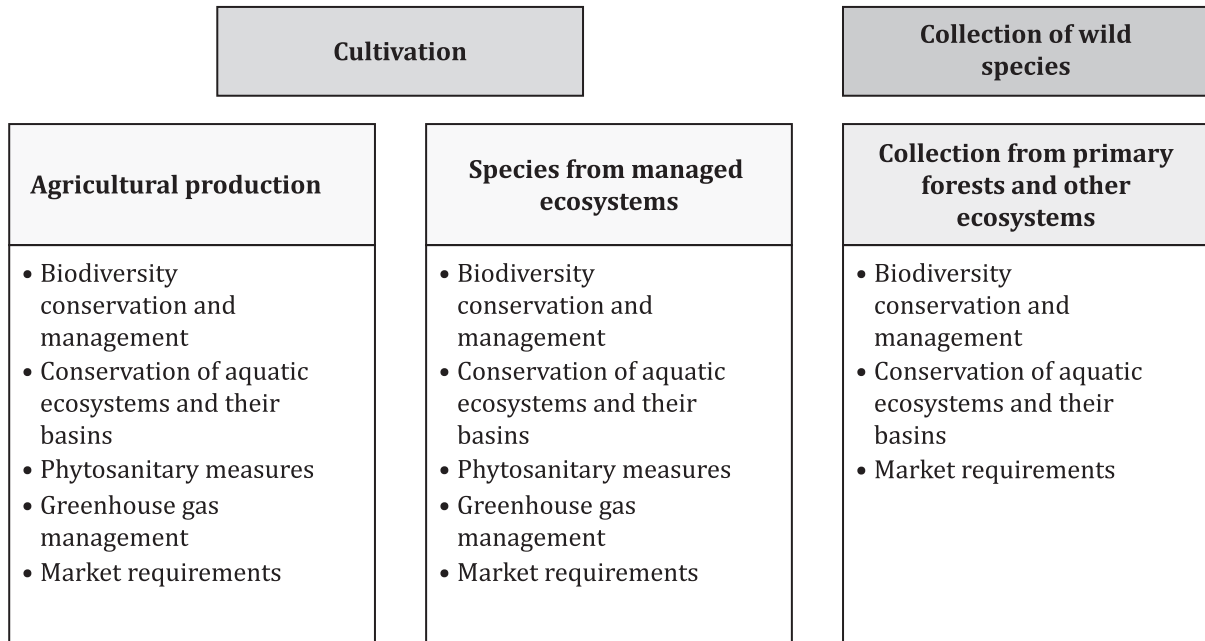
## 4 Sustainable management of natural resources

### 4.1 General

This clause describes some aspects that should be considered to ensure the sustainable management of natural resources in relation to the different origins from where native species are obtained. These aspects include:

- agricultural production (4.2.3 and 4.2.4), which is the controlled and planned cultivation of native species;
- ecosystem management (4.2.4), which promotes sustainable management to ensure the conservation of native species;
- wild collection (4.2.2), which refers to the direct obtaining of native species from nature. These activities should result in effective biodiversity conservation and management.

The principles for the cultivation and collection of native species aim for a harmonious balance between economic viability and conservation of the environment. Figure 2 presents these principles, which should be considered to achieve a sustainable production, cultivation and collection of native species.



**Figure 2 — Sustainable cultivation and collection of products from native species**

It is important to consider the relationship between the characterization of native species and the responsible use and sustainable management of natural resources. For this purpose, [Figure 3](#) presents some key aspects to facilitate a sustainable value chain of products derived from native species, in harmony with biodiversity conservation and management.

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