

# Voluntary Sustainability Standards and BioTrade: Is there a connection?



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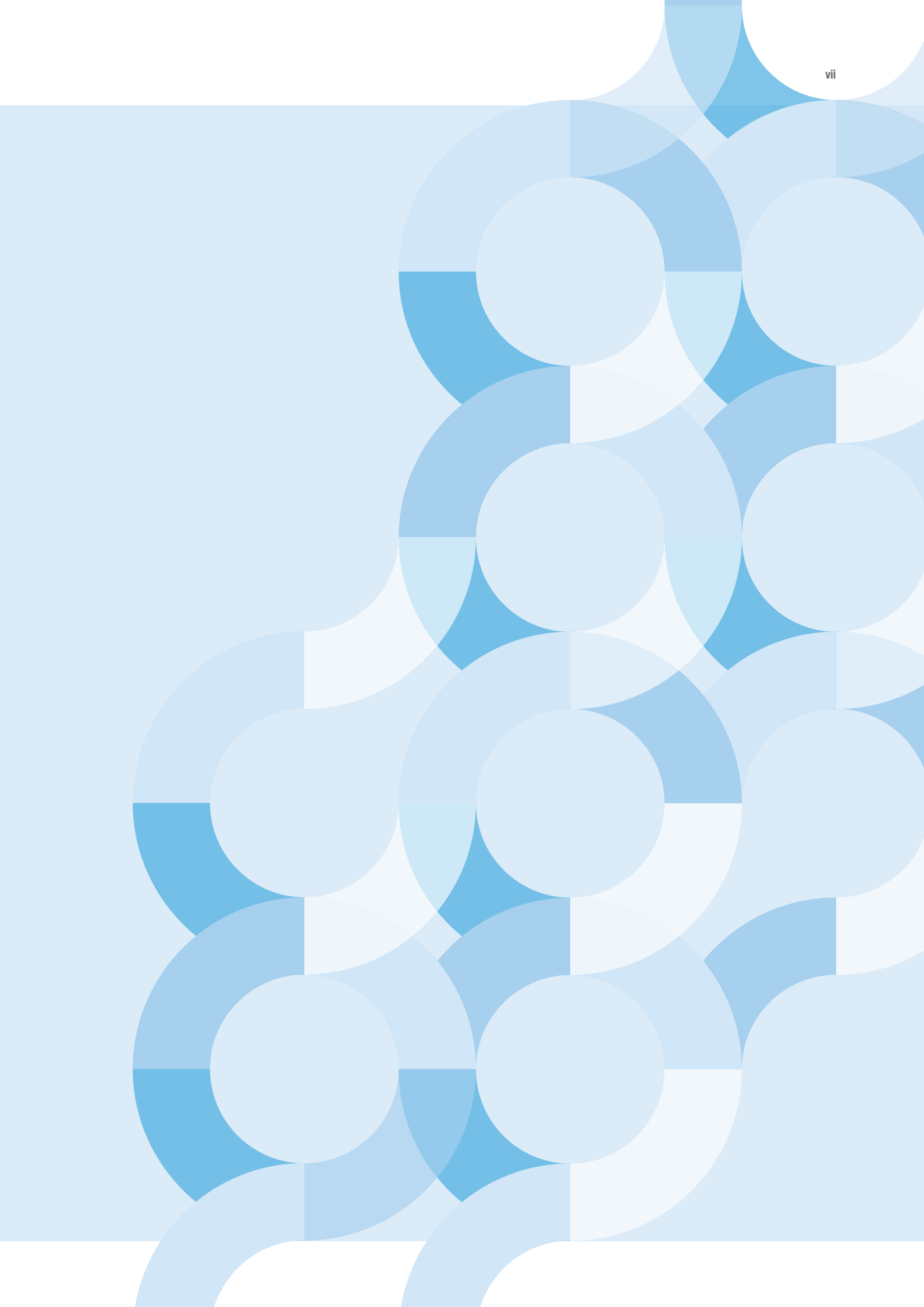
For more information on UNCTAD VSS Program, please visit: <https://unctad.org/topic/trade-analysis/voluntary-sustainability-standards> or send an inquiry at [UNFSS@unctad.org](mailto:UNFSS@unctad.org).

For information on UNCTAD’s BioTrade Initiative, please visit <https://unctad.org/biotrade> or send an inquiry to [biotrade@unctad.org](mailto:biotrade@unctad.org).



## Acronyms

<b>ABS</b>	Access and Benefit Sharing
<b>CBD</b>	Convention on Biological Diversity
<b>CITES</b>	Convention on International Trade in Endangered Species of Wild Flora and Fauna
<b>FSC</b>	Forest Stewardship Council Chain of Custody
<b>Global G.A.P.</b>	Global Good Agricultural Practices
<b>GMO</b>	Genetically Modified Organisms
<b>GSTC</b>	Global Sustainable Tourism Criteria- Hotel & Tours Operators
<b>GVCs</b>	Global Value Chains
<b>IFOAM</b>	International Federation of Organic Agriculture Movements
<b>ITC</b>	International Trade Centre
<b>MER</b>	Minimum Eligibility Requirement (BioTrade)
<b>MSC</b>	Marine Stewardship Council
<b>P&amp;C</b>	Principles & Criteria (BioTrade)
<b>RA-SAN</b>	Rainforest Alliance's Sustainable Agriculture Network
<b>RSPO</b>	Roundtable on Sustainable Palm Oil
<b>SAI Platform</b>	Sustainable Agriculture Initiative Platform (Farm Sustainability Assessment)
<b>SECO</b>	State Secretariat for Economic Affairs (Switzerland)
<b>SDGs</b>	Sustainable Development Goals
<b>VSS</b>	Voluntary Sustainability Standards
<b>UEBT</b>	Union for Ethical BioTrade
<b>UNCTAD</b>	United Nations Conference on Trade and Development





## Abstract

This report provides a synthesis of the connections between selected Voluntary Sustainability Standards (VSS) and the UNCTAD BioTrade Principles & Criteria (P&C). The growth in VSS-compliant production has been increasing, and in some sectors, even exceeding that of conventional production. While VSS have proliferated across multiple sectors, their role in trade and biodiversity still demands greater exploration. The BioTrade initiative, through its P&C, promotes sustainable trade and investment in biodiversity-based products and services. While these are two of the tools that can be used by public and private sector actors to mitigate their negative impacts on biodiversity, there has been little understanding of the alignment between these two tools. This is important to understand the opportunities for mutual recognition and support and to avoid the proliferation of tools.

This report thus aims to analyze the alignment between the selected VSS with the specific biodiversity-related objectives targeted by the BioTrade P&C. For the analysis, the data for the VSS is collected through the ITC Standards Map, and the VSS criteria categories within them are mapped to the BioTrade P&C. Through examining the links between BioTrade Minimum Eligibility Requirements (MER) and P&C and selected VSS, the report explores areas where these can be mutually supportive for advancing sustainable trade of biodiversity-based products to achieve objectives like biodiversity conservation and protection. The analysis indicates that overall, all 11 selected VSS have links with the BioTrade P&C and the terrestrial and marine MER. This suggests that both VSS and BioTrade are not competitive but are complementary tools to promote trade, provide diversification opportunities, and support the transfer of knowledge and technology as well as empower consumers and incentivize practitioners to make informed, responsible and sustainable choices towards key priorities like the achievement of the SDGs.





# Introduction

Biodiversity is the source of many products and services utilized by society and is the natural capital base for a sustainable economy. However, the rapid decline in biodiversity is affecting the provision of essential resources for our human needs and economy. The conservation of biodiversity and the sustainable use and trade of biodiversity-derived products and services can provide countries valuable opportunities for economic development and the improvement of livelihoods. There has thus been an increased focus on biodiversity conservation and the role that businesses and governments can play in it. Alongside this, there has also been an increase in the demand for tools and policies that can aid in protecting, conserving, and restoring biodiversity while advancing the world's sustainable development agenda.

In that context, UNCTAD's BioTrade Initiative aims to promote trade and investment in biodiversity-based products and services, and further sustainable development. The initiative defines Minimum Eligibility Requirements (MER) within the Principles and Criteria (P&C) as a set of guidelines for businesses, governments, and civil society wishing to support the conservation and sustainable use of biodiversity, as well as the fair and equitable sharing of benefits through trade. For over two decades, the BioTrade P&C have supported biodiversity conservation and sustainable use. However, many other tools are being used by businesses to showcase their work towards biodiversity conservation and protection in particular and the sustainability agenda in general.

Voluntary Sustainability Standards (VSS) are also one of the tools that can be leveraged to advance the goal of trade in sustainably sourced products and services based on biodiversity. VSS are market-based tools that specify a range of sustainability metrics. Through their labels and certification, VSS also allow for product differentiation and incentivize businesses to comply with sustainable practices. VSS thus also help consumers and producers identify sustainable products and production practices and sustainably produced products.

VSS are expanding in biodiversity-rich countries and cover important mandates such as reducing deforestation, which make them a key player in protecting biodiversity. They are widely used today to govern environmental, social, and ethical issues in global supply chains and have encouraged the references of its sustainability criteria as non-trade objectives in many trade agreements that encompasses sustainable development provisions- thus furthering sustainable trade. However, the extant research on VSS and their role in biodiversity protection is limited, and room for improvement remains.

The BioTrade P&C are not a standard or a certification scheme, but are a set of guidelines that can easily be adapted to many different areas, including VSS. Since the guidelines were first published in 2007, the BioTrade P&C have supported the conservation and sustainable use of biodiversity for over two decades. For example, the Ministry of Environment, as seen in Peru, have incorporated BioTrade P&C in their policies and national strategies for the sustainable use of biodiversity and benefit-sharing. In addition, private companies have adopted the BioTrade P&C to develop plans and tools such as business-to-business programs, marketing strategies, and traceability systems.

The objective of this report is to understand the complementarity between the BioTrade P&C and the selected set of VSS through a mapping process. While the BioTrade P&C set an ambitious agenda for links between trade, biodiversity, and human well-being, VSS are specific tools, some of which aim to deliver in this area. Moreover, with biodiversity loss becoming a global priority, the BioTrade P&C can complement VSS to address this issue, especially with the new biodiversity targets being negotiated for the Convention of Biological Diversity. This report thus tries to establish a link between the BioTrade P&C and a selected set of VSS. Through a mapping process between the P&C and VSS requirements, the report takes a look at how a selected set of VSS align with the BioTrade P&C. This would provide a synthesis that gives better insight into the role of standards for biodiversity protection and further reflect linkages between trade and biodiversity. The report seeks to identify opportunities for BioTrade and its partners to work with VSS organizations/schemes/certifications.

This would further help mainstream biodiversity conservation and increase awareness on the use of BioTrade and its P&C.

First, the report highlights in Chapter 2 what is UNCTAD's BioTrade concept, P&C and MER. Chapter 3 seeks to explain what VSS are and their link to trade and biodiversity. Chapter 4 then illustrates the methodology adopted for this report and explains the selection criteria for the VSS, with an overview of how the links between BioTrade and VSS were examined. Finally, the results and analysis are presented in Chapter 5, followed by discussion and recommendations in Chapter 6, and the conclusion in Chapter 7.



## 2

## UNCTAD's BioTrade initiative

Biodiversity is being lost at an unprecedented rate. This can be attributed to factors like land-use change, overexploitation, pollution, climate change, the introduction of invasive species, and other human activities (CBD, 2010). The significance of this challenge can be understood from the fact that the loss of biodiversity is expected to be the third most severe risk for the planet on a global scale, after climate action failure and extreme weather, over the next ten years (World Economic Forum, 2022). Furthermore, research indicates that by 2030, low and lower-middle-income countries, mainly in Sub-Saharan Africa and South Asia, are at risk of losing around 10 per cent of their annual GDP, if ecosystem services, such as those provided by forests, fisheries, and pollinators, collapse (World Bank, 2021).

While biodiversity is essential to a sustainable economy, countries rich in biodiversity are witnessing greater threats to species and ecosystems and increased deforestation rates. Balancing economic growth and biodiversity conservation has posed challenges for many developing countries. In light of those challenges, trade of sustainably sourced biodiversity products can be a part of the solution, since by 2030, at least 33 per cent of world trade is expected to be of biodiversity-based products (e.g., biodiversity prospecting and the commercialization of medicinal plants) and services, up from 4 per cent in 2013 (Gómez-García et al., 2014). The conservation of biodiversity and the sustainable use and trade of biodiversity-derived products and services can thus provide countries valuable opportunities for economic development and improvement of livelihoods.

BioTrade refers to activities related to the collection or production, transformation, and commercialization of goods and services derived from biodiversity (genetic resources, species, and ecosystems) under environmental, social and economic sustainability criteria- the criteria set under the BioTrade Minimum Eligibility Requirements and Principles & Criteria. UNCTAD launched the BioTrade Initiative in 1996 to further this objective. The BioTrade Initiative aims to promote trade and investment in biodiversity-based products and services and further sustainable development at national, regional and global level. In over two decades of its existence, BioTrade has collaborated with key partners across multiple sectors and expanded its geographical coverage in Africa, Asia, Latin America, the Caribbean and Europe. BioTrade activities also support the objectives of biodiversity-related multilateral environmental agreements (MEAs), including the Convention on Biological Diversity (CBD) and Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). In addition, UNCTAD partners with national and international organizations to develop biodiversity-based sectors.

### Box 1: The difference between BioTrade and biotrade<sup>1</sup>

While the terms 'BioTrade' and 'biotrade' may seem similar and are often used interchangeably, there is a fundamental difference between these two. BioTrade activities are characterized by respect for environmental, economic, and social criteria that is defined under the BioTrade Minimum Eligibility Requirements and Principles & Criteria. For example, BioTrade activities must maintain the characteristics of ecosystems and natural habitats of the species being collected or cultivated. Income should be generated and distributed at all levels and to all actors of the value chain. On the other hand, biotrade is a rather general term used to describe trade in biological resources, such as plant material for use as ingredients or inputs for food, cosmetic or industrial products.

In conclusion, the terms might seem similar. The products involved may also be comparable, in cases such as non-timber forest products (NTFPs); plant-based extracts, oils and other ingredients or compounds; and natural textiles. However, there is a significant and meaningful difference in the approaches and impacts of "BioTrade" and "biotrade" activities. BioTrade is furthermore governed by a set of formal rules (non-binding), which make it an "institutionalized" activity or process.

<sup>1</sup> For more detail, see page 5 of UNCTAD BioTrade Principles and Criteria document: [https://unctad.org/system/files/official-document/ditcted2020d2\\_en.pdf](https://unctad.org/system/files/official-document/ditcted2020d2_en.pdf).

The current phase of the BioTrade Programme (Global BioTrade Facilitation Programme) has been implemented since 2018 and aims to synchronize and leverage results from previous phases and thus contribute to unfolding the potential of the BioTrade approach for biodiversity conservation as well as poverty reduction. The program has the objective to support key stakeholders to seize and capitalize on trade opportunities. The program also aids in accelerating the achievement of the majority of the SDGs as well as the Aichi Targets (included in the Strategic Plan for Biodiversity, which is an agreed roadmap to implement the objectives of the Convention on Biological Diversity) and the future global biodiversity framework beyond 2020.

UNCTAD steers, coordinates and facilitates joint actions of key stakeholders at the national, regional, and international levels and addresses key concerns limiting the trade flows of biodiversity-based products and services. UNCTAD is also responsible for monitoring, internal evaluation, and reporting of the programme impacts, outcomes, and outputs. The program thus is implemented by UNCTAD in partnership with CITES, UEBT, ITC, ABS Initiative, Helvetas Swiss Interco-operation, PhytoTrade Africa, and regional and national partners. The program builds on the following three pillars<sup>2</sup>:

- I. Coordination and knowledge sharing among stakeholders
- II. Enabling favourable policy environment for BioTrade companies
- III. Facilitate market linkages for BioTrade companies

## 2.1. Minimum Eligibility Requirements for BioTrade activities

To be considered BioTrade, all related activities, should fulfil a minimum set of eligibility requirements, as well as work to implement BioTrade P&C, as shown in Table 1 below. These requirements can be further enhanced or reinforced by BioTrade partners, for example, according to their national and regional circumstances (UNCTAD, 2020).

**Table 1 BioTrade Minimum Eligibility Requirements**

Terrestrial BioTrade activities	Marine or Blue BioTrade activities
The activity focuses on material from terrestrial and inland biodiversity (e.g., living species).	The activity focuses on material derived from coastal and marine biodiversity (e.g., living coastal and marine species).
The activity does not include the extraction of minerals, such as sands, nor the extraction of metals, oil and gas, or the generation of energy.	The activity does not include the extraction of minerals, such as sands, nor the extraction of metals, oil and gas, or the generation of energy;
The activity does not seek to use or develop genetically modified organisms;	The activity does not seek to use or develop genetically modified organisms;
The activity does not introduce or cause the introduction of invasive species, as well as it does not use or foster the use of these species where the activity is developed, unless is to control the population or mitigate its adverse impacts on local ecosystems and actions are implemented to avoid its spread;	The activity does not introduce invasive species, as well as it does not use or foster the use of these species, unless is to control the population or mitigate its negative impacts on local ecosystems;
The activity does not collect, harvest, use, disrupt, or otherwise threaten endangered species, including those covered in CITES Appendix I and in national and regional endangered species lists;	The activity does not harvest/catch, use, disrupt, or otherwise threaten endangered species, including those covered in CITES Appendix I and in national and regional endangered species lists;
The activity does not contribute to the degradation or transformation of terrestrial and inland ecosystems, such as deforestation of primary forests;	The activity does not contribute to the degradation or transformation of marine and coastal ecosystems, such as the draining of wetlands or the deforestation of coastal areas;

<sup>2</sup> For more information on the three pillars of the current BioTrade Program, please check: <https://unctad.org/project/global-biotrade-facilitation-programme-linking-trade-biodiversity-and-sustainable>.

Terrestrial BioTrade activities	Marine or Blue BioTrade activities
The activity does not use agrochemicals banned by the Stockholm Convention on Persistent Organic Pollutants (POPs), listed in the Rotterdam Convention and in WHO Categories I and II, and/or banned in the relevant country(ies) where the activity takes place;	The activity does not incorporate or directly support any form of illegal, unreported, and unregulated (IUU) fishing or other illegal activity;
If the activities are done in protected areas or similar, these comply with the requirements defined in the regulations, plans strategies or programmes applicable to these areas;	If the activities are done in protected areas or similar, these comply with the requirements defined in the regulations, plans strategies or programmes applicable to these areas.
The organization ensures the respect for human rights and avoids immoral and illegal transactions in business operations; and	The organization ensures the respect for human rights and avoids immoral and illegal transactions in business operations; and
The activity must apply the precautionary approach, as defined in the Rio Principles and other related agreements.	The activity must apply the precautionary approach, as defined in the Rio Principles and the United Nations Fish Stocks Agreement (1995), inter alia.

Source: UNCTAD, 2020.

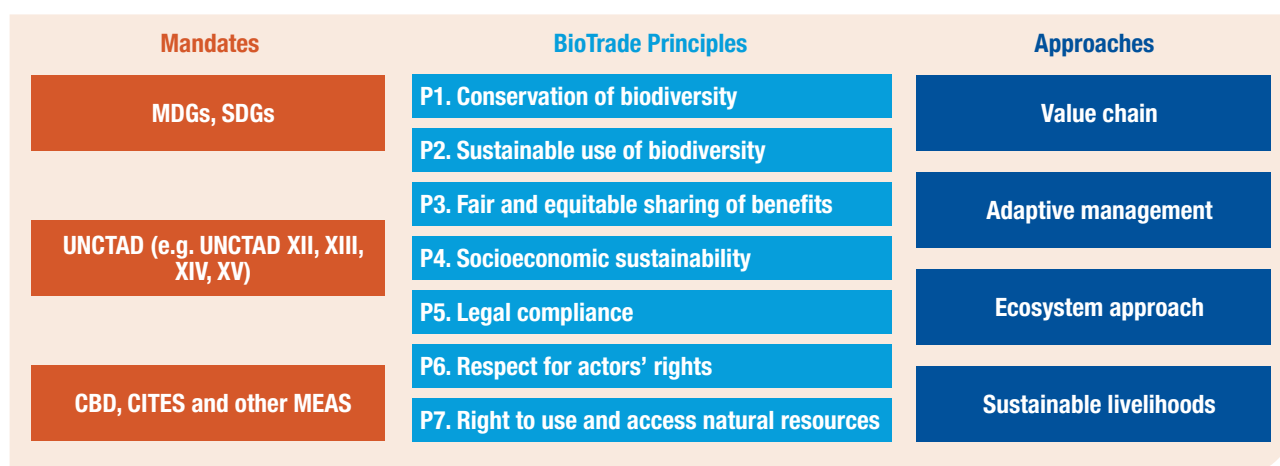
The BioTrade Principles and Criteria are applied in different contexts, from assessing social, economic, and environmental impacts of a project and guiding elements to be included in a policy, to evaluating supply chains for financial or market initiatives and verifying good practices. As a result, the BioTrade P&C lay out the general guidance which can be and has been adapted for specific applications. They can also be applied both at the institutional (e.g., national, or regional programmes) and supply-chain actors' level (e.g., business or producer association).

## 2.2. BioTrade Principles and Criteria

BioTrade is defined as the collection, production, transformation and commercialization of products and services derived from biodiversity under social, economic and environmental sustainability criteria (UNCTAD, 2021). These criteria known as the BioTrade Principles and Criteria (P&C) were developed building on the experience of BioTrade practitioners and partners and have been the core foundation that guide the implementation of activities of the UNCTAD BioTrade Initiative, the BioTrade programmes and other related activities since their inception in 2007.

The BioTrade P&C seek to encourage trade and investment in biodiversity, including various species of flora and fauna, genetic resources and ecosystems, while ensuring their long-term conservation and enhancement. BioTrade P&C also implement the Value-chain approach, Adaptive management approach, Ecosystem approach, and the sustainable livelihoods approach. BioTrade conceptual framework: mandates, 2020 UNCTAD Principles and approaches can be seen in Figure 1.

**Figure 1 BioTrade conceptual framework: mandates, 2020 UNCTAD Principles and approaches**



Source: UNCTAD, 2020.

The BioTrade P&C were revised in 2020, are applicable to terrestrial, avian, and marine and other aquatic biodiversity, as well as to biodiversity-based goods and services and are now being implemented in over 90 countries in Asia, Africa, Latin America and the Caribbean and Europe. The revised BioTrade P&C (see Table 2) also reflect the recent developments in international law and policy, in particular, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits arising from their Utilization (herein after referred to as “Nagoya Protocol”) was adopted under the aegis of the CBD. These P&C also take into consideration the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs), and the Paris Agreement under the United Nations Framework Convention on Climate Change (UNCTAD, 2020). Further, the 2020 version of the BioTrade P&C also responds to the experiences gathered through implementing the BioTrade Principles and Criteria earlier and their relevance in a growing number of contexts, including marine and coastal species and ecosystems, as well as for ecosystem services such as sustainable tourism.

BioTrade P&C are used as a set of guidelines for businesses, governments, and civil society wishing to support the conservation and sustainable use of biodiversity and the fair and equitable sharing of benefits through trade. The application of the BioTrade P&C in different contexts drives BioTrade processes in the promotion and conservation of biodiversity through sustainable commercial use. These P&C can be used in various scenarios- from assessing social, economic, and environmental impacts of a project and guiding elements to be included in a policy, to evaluating supply chains for financial or market initiatives and verifying good practices. The BioTrade P&C present a general guidance which can be and has been adapted for specific applications. They can also be applied both at the institutional (e.g. national or regional programmes) and supply-chain actors’ level (e.g. business or producer association) (UNCTAD, 2020).

Lastly, it is important to emphasize that the BioTrade P&C are neither standards nor certification programmes. They are guidelines which are publicly available and accessible. They can be adapted as VSS requirements or be used by national programmes. For example, the National BioTrade Program of Colombia was created in 2014 to support biodiversity-based business and ecosystem conservation through providing market incentives and assisting with increased market access. The National Program for the Promotion of BioTrade in Peru was launched in 2004 with the aim to implement policies to support businesses in biodiversity. In addition, private companies, including transnational companies such as Weleda and the Body Shop, have adopted the BioTrade P&C to develop plans and tools such as business-to-business programmes, marketing strategies, and traceability systems<sup>3</sup>.

The BioTrade P&C play a key role in achieving development goals through practical tools so that governments and companies to protect biodiversity and support rural communities in many sectors. The P&C have been used in a variety of contexts, including by governments, SMEs, producers’ associations, transnational corporations, NGOs and standard setting organizations (UNCTAD, 2021).

**Table 2 BioTrade Principles and Criteria**

Principles and Criteria	
<b>Principle 1.</b>	<b>Conservation of biodiversity</b>
1.1	Activities contribute to maintaining, restoring, or enhancing biodiversity, including ecosystems, ecological processes, natural habitats, and species, particularly threatened or endangered species.
1.2	Genetic variability of flora, fauna, and microorganisms (for use and conservation) is maintained, restored, or promoted.
1.3	Activities are aligned with national, regional, and/or local plans for sustainable management, conservation, and restoration of biodiversity, in coordination with the relevant authorities and actors involved.

<sup>3</sup> From the forthcoming UNCTAD BioTrade Report: Advances in BioTrade and ABS in selected countries: policy and institutional experiences, challenges and looking forward” by Manuel Ruiz Muller (expected to be published October 2022).

<b>Principles and Criteria</b>	
<b>Principle 2.</b>	<b>Sustainable use of biodiversity</b>
2.1	The use of biodiversity is sustainable, based on adaptive management practices that advance the longterm viability of the biological resources used, and supported by training of workers and producers on good collection, harvesting, cultivation, breeding, or sustainable tourism practices.
2.2	Measures are taken to prevent or mitigate negative environmental impacts of the activities, including in relation to flora and fauna; soil, air, and water quality; the global climate; use of agrochemicals; pollution and waste disposal; and energy consumption.
2.3	Activities contribute to measures that strengthen resilience and the adaptive capacity of species and ecosystems to climate-related hazards and natural disasters.
<b>Principle 3.</b>	<b>Fair and equitable sharing of benefits derived from the use of biodiversity</b>
3.1	Activities are agreed upon and undertaken based on transparency, dialogue, and longterm partnerships between all organizations involved in the supply chain.
3.2	Prices take into account the costs of value chain activities (e.g., production, investment, R&D, marketing, commercialization, etc.) according to these Principles and Criteria and allow for a profit margin.
3.3	Activities contribute to sustainable local development, as defined by producers and their local communities.
3.4	Activities comply with applicable legal requirements and/or relevant contractual arrangements on access to biodiversity, including biological and genetic resources, their derivatives and associated traditional knowledge, and on the fair and equitable sharing of benefits derived from their utilization.
3.5	In cases where there are no applicable legal requirements, utilization of genetic resources and associated traditional knowledge takes place with prior informed consent and mutually agreed terms.
<b>Principle 4.</b>	<b>Socio-economic sustainability (productive, financial and market management)</b>
4.1	The organization demonstrates the integration of these Principles and Criteria in its business and supply chain management.
4.2	The organization has a quality management system in line with its market requirements.
4.3	A system is in place to allow for supply chain traceability up to the country of origin and/or the place of collection, harvesting and/or cultivation.
<b>Principle 5.</b>	<b>Compliance with national and international legislation</b>
5.1	The organization complies with applicable legal and administrative requirements at local, national, and regional levels. If measures required by local, national, or regional legislation are less strict than those required by these Principles and Criteria, the organization meets the stricter requirements.
5.2	Activities respect the principles and obligations of relevant international agreements and instruments, such as the CBD, the Nagoya Protocol, the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Bonn Convention on Migratory Species (CMS), the International Labour Organization (ILO) Conventions, the United Nations Declaration on the Rights of Indigenous Peoples, and the United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas.
5.3	When dealing with marine and coastal biodiversity, activities respect the principles and obligations established under the United Nations Convention on Law of the Sea (UNCLOS), United Nations Fish Stocks Agreement (UNFSA), and any subsequent instrument on biodiversity in areas beyond national jurisdiction, as well as relevant conventions and instruments adopted under the United Nations Conference on Trade and Development, (UNCTAD), Food and Agricultural Organization of the United Nations (FAO), UN Environment, International Maritime Organization (IMO) and International Labour Organization (ILO).
5.4	The organization gathers and maintains information and records required to ensure the legality of access to and use of biodiversity, such as the country of origin, geographical location of capture or introduction from the sea, existence of applicable laws or regulations, and relevant permits and certificates.

<b>Principles and Criteria</b>	
<b>Principle 6.</b>	<b>Respect for the rights of actors involved in BioTrade activities</b>
6.1	The organization respects fundamental human rights, in keeping with the United Nations Guiding Principles on Business and Human Rights and relevant ILO Conventions.
6.2	The organization respects worker rights, provide adequate working conditions, and prevent any negative impacts on the health and safety of workers, in accordance with national legislation.
6.3	The organization respects the rights of indigenous peoples and local communities, women, children, and other vulnerable groups involved in BioTrade activities, in accordance with national legislation and the United Nations Declaration on the Rights of Indigenous Peoples.
<b>Principle 7.</b>	<b>Clarity on right to use and access to natural resources</b>
7.1	The organization uses natural resources in compliance with all relevant laws and regulations and preventing any negative impacts on the health, safety, and wellbeing of surrounding populations.
7.2	In cases where required by international, national, local, or customary law, as well as Criteria 3.5, the organization accesses natural resources and associated traditional knowledge with prior informed consent of, and subject to mutually agreed terms with, the party that provides them.
7.3	The organization respects the rights of indigenous peoples and local communities over land, natural resources and associated traditional knowledge in accordance with national legislation and the United Nations Declaration on the Rights of Indigenous Peoples.
7.4	The organization does not threaten the food diversity or food security of producers and their local communities.

Source: UNCTAD, 2020.



## 3

## Introduction to Voluntary Sustainability Standards and their link to trade and biodiversity

Voluntary sustainability standards (VSS) are standards specifying requirements that producers, traders, manufacturers, retailers or service providers may be asked to meet, relating to a wide range of sustainability metrics, including respect for basic human rights, worker health and safety, environmental impacts, community relations, land-use planning and others (UNFSS, 2013). VSS most often refer to standard systems that are voluntary, private, multistakeholder initiatives (Komives and Jackson, 2014).

Over the last decade, VSS have grown in terms of sectoral and topical coverage, going from an original focus on agriculture, forestry and fair trade in the early nineties, to a broad range of issues and sectors nowadays. Well-known examples of VSS include Fairtrade International, Rainforest Alliance and the Forest Stewardship Council. VSS are market-based tools that aim to promote sustainable production and business practices and further sustainable development. As their name suggests, their adoption is intended to be voluntary and they are not created, run, or required by governments or government regulation (Komives and Jackson, 2014; Marx et al., 2022) and governments have limited role to play in VSS adoption, however, they may be involved in the development of standards. When governments do play a role, it is often sector-specific without promoting individual businesses or VSS. Table 3 shows the different type of VSS:

**Table 3** Types of Voluntary Sustainability Standards

Standard Designer	Standards	Example
Private Sector	Company led standards/ codes of conduct	Starbucks – CAFÉ, Unilever - Sustainable Agriculture Code
Industry consortium of private companies	Industry association or group led	Global GAP
NGOs	NGO led	Fairtrade, Rainforest Alliance
Alliance of NGOs	Group of NGOs come together to develop a standard	Clean clothes campaign (CCC)
Public sector led standards	Government led standards with support from NGOs and business	USDA Organic
Collaborative agreements/ multi stakeholder	Jointly governed by NGOs and business	Forest Stewardship Council; Round Table on sustainable palm oil (RSPO)

Source: Adapted from UNCTAD, 2020.

VSS usually have a process to develop standards and have systems in place to assess and monitor conformity with standards. According to Marx et al. (2021), VSS aim to target to ensure that the products and production processes comply with a set of social and environmental requirements based on the following three steps:

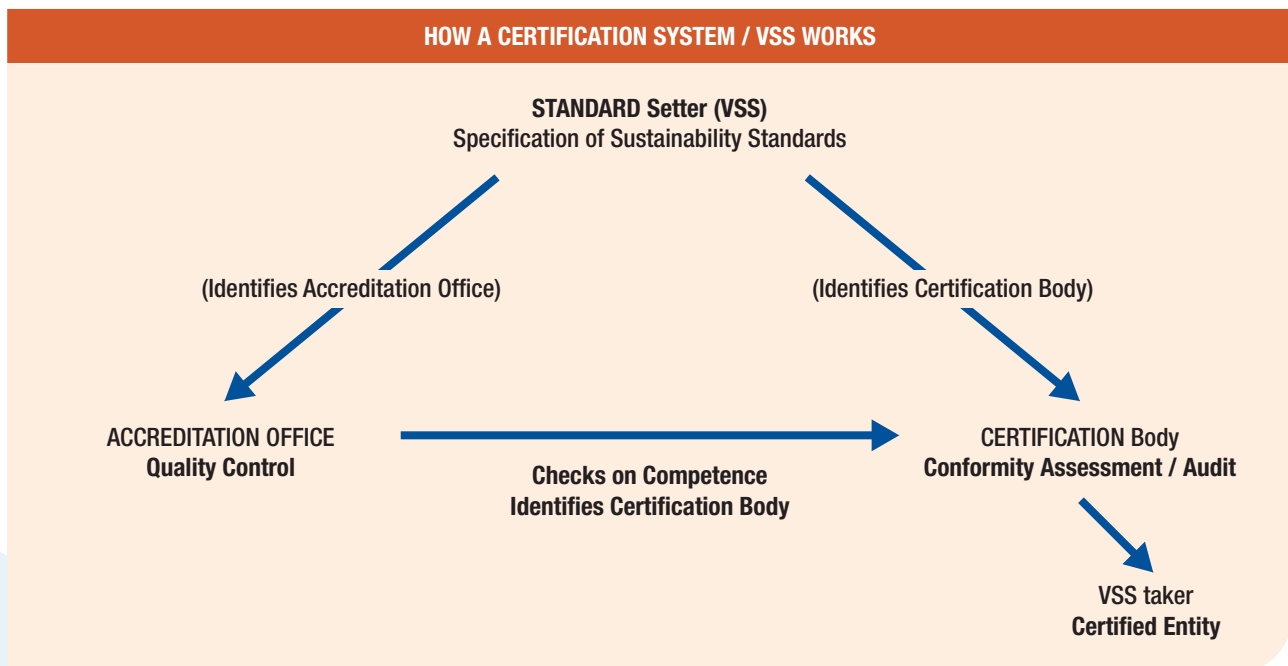
- I. Most VSS start with developing a general mission and set of principles on which they are based, and these are mostly constructed in reference to existing international rules/agreements/principles.
- II. VSS then translate these international norms into specific standards, indicators, and benchmarks, which can be used for the compliance process.
- III. VSS put systems in place to assess conformity with standards and monitor continuous compliance with standards. This is often done by an independent third-party.

VSS thus, in a narrow sense, are documents that list sustainability requirements for businesses. Producers, manufacturers or—depending on the scope of the standard—traders and retailers who wish to become (and stay) certified under a given VSS need to prove that they fulfil these requirements

in (usually third-party) certification/verification audits (Blankenbach, 2020). The certification process has been illustrated in Figure 2.

All VSS, however, also have a 'system' that goes beyond their requirements, implying that they are not just a set of standards with a mandatory list of practices and performances, but they go beyond it in order to drive a change (Derx and Glasbergen, 2014; Komives and Jackson, 2014). Komives and Jackson (2014), also describe the four market mechanisms that form a crucial part of the standard system: "assurance, labels and claims, traceability, and capacity building". Labels that VSS are used are most common way for them to enable product differentiation for certified products and a way to communicate the sustainability of the product and VSS are considered instrumental in transmitting this information from producers to the consumers via labelling (Fiorini et al., 2019; Larson, 2003; Verma, 2021) VSS standards seek to create a market for sustainable products and aim to increase sustainable production and consumption (Komives & Jackson, 2014; Verma, 2021). Through all their elements, VSS seek to also help consumers and producers identify sustainable products and production practices, enable sustainable supply-chain management, and act as a viable market governance tool (Henson and Jaffee, 2004).

**Figure 2 Certification process**



Source: UNCTAD, 2021.

VSS have also seen interactions with private actors, civil society, and governments. Ever since the 1992 Rio Summit and, subsequently, the 2030 sustainable development agenda, there has been an accelerated interest among governments in promoting good practices that push for sustainable development. VSS can provide an avenue to promote these good practices and push for sustainable development. Governments, international organizations, NGOs or other public actors can drive the expectations on sustainability, which can provide an incentive for business sectors to take up sustainability practices through VSS, among other means.

Similarly, VSS have gained considerable traction in the private sector. There has been, for example, growth in both government and private-sector commitments to support sustainable production by purchasing VSS-endorsed commodities, stressing the market potential for VSS to create more sustainable food production around the globe (Smith et al., 2019). Private sector benefits from VSS initiatives by creating and meeting diversity sourcing targets, acquiring a larger market share, and increasing worker and supplier satisfaction to reduce costs of training, turnover, and procurement,

among others (Rubin, 2018). In the recent years, VSS have rather been used to address a market failure - the asymmetry of information between producers and consumers about the sustainability of production processes. Thus, the existence of VSS systems enables in turn the existence of markets for sustainable products and services.

### 3.1. Voluntary Sustainability Standards and trade

The 2030 Agenda for Sustainable Development and the outcome of the 3rd International Conference on Financing for Development (FfD) (the Addis Ababa Action Agenda) acknowledge international trade as “an engine for inclusive economic growth and poverty reduction and contributes to the promotion of sustainable development” (Paragraph 68 and Paragraph 79, respectively). Furthermore, the recently approved UNCTAD XV Bridgetown Covenant recalls that “today, many Sustainable Development Goals are behind schedule, and, despite remarkable efforts and progress, many people and places have not managed to enjoy the benefits of progress. The tools of trade, investment, technology and finance can do more to change this reality and foster a more inclusive, sustainable, equitable and resilient world.”

Participation in Global Value Chains (GVCs), however, does not automatically result in an overall economic upgrade, especially when considering the economic losses from environmental damages that may have been caused by GVCs. Trade needs complementary tools, and VSS are one of them. VSS can help to empower developing countries to effectively use GVCs to achieve the Sustainable Development Goals (SDGs) and foster sustainable development. Over the years, VSS have gained a significant momentum in the sphere of governance of international trade and production. In terms of agricultural commodities, for example, there has been a considerable growth in VSS-compliant production of crops. A lot of this growth can be attributed to the concurrent expansion of global value chains, that enables companies to source products from anywhere in the world (Fiorini et al., 2019; Kaplinsky, 2010; Manning et al., 2012).

However, the effect of VSS on trade has been a widely debated topic, with two streams of discussions: VSS as a catalyst to trade and VSS as a barrier to trade. There are concerns that the increased proliferation and influence that VSS exercise over the markets, has become a concern for suppliers, especially in low-income countries. In cases where VSS compliance is de-facto mandatory, small-scale producers lie at a risk of being excluded from export value chains due to high compliance costs and increasing monitoring costs (Andersson, 2019; Fiorini et al., 2016; Masood and Brümmer, 2014; Meemken et al., 2021). However, VSS can affect trade in different ways and most often exhibit influence on trade through their role in global value chains and through their effect on the structure of market (Elamin and Fernandez de Cordoba, 2020; Marx et al., 2021).

Through their labelling, assurance and certification system, VSS allow for product differentiation which in turn is an indicator of compliance with various sustainability requirements. Thus, VSS signal sustainable production practices and high product quality, provide a competitive advantage and can potentially increase exports, especially to foreign markets with stricter regulations (Andersson, 2019; Masood and Brümmer, 2014; Piao et al., 2019). VSS can also be trade-enhancing since they influence and modernize value chains and reduce information asymmetries and transaction costs (Andersson, 2019; Beghin et al., 2015; Henson and Jaffee, 2008; Piao et al., 2019). Andersson (2019) also argues that from the importer’s point of view, certification to private standards could reduce both variable and sunk trade costs.

### 3.2. Voluntary Sustainability Standards and biodiversity

Growth in VSS has been driven by a growing awareness, and an increased demand for sustainably produced goods and services by consumers. From the 1992 Rio Summit to the latest 2030 Agenda for Sustainable Development, one of the key focus areas has been responsible production and consumption, and thus demand for proof of sustainably produced goods has also been on the rise. This emphasis also lays a path for development of multistakeholder environmental standards (Jeria and Vera, 2014). The early 1990s saw the uprise and strengthening of Fairtrade labelling organization and that was followed by the development of standards for forestry, fisheries, agriculture, and labor- Forest Stewardship Council (FSC), Marine Stewardship Council (MSC), the Rainforest Alliance’s

Sustainable Agriculture Network (RA-SAN), and Social Accountability International (SAI), respectively, were developed (Komives and Jackson, 2014; Marx et al., 2021: 201; Smith and Fischlein, 2010). This then set the foundation for commodity-based standards, like Global Good Agricultural Practices (Global G.A.P.), and later commodity-based multistakeholder roundtables, like Roundtable on Sustainable Palm Oil (RSPO) (Jeria & Vera, 2014).

The growth of VSS represents an important opportunity for all stakeholders to play a proactive role in encouraging and managing the transition toward more sustainable future, by enabling informed consumer choice and direct participation in rule setting for international trade (Potts et al., 2017). VSS organizations focused on agro-commodities are considered especially relevant given how the agricultural sector, operating on large tracts of land, impacts biodiversity (Fransen, 2018). Research highlights that VSS criteria do cover components on biodiversity protection and some point out that standard compliant farms are more biodiversity-friendly than non-standard compliant farms, with observed positive effects being less deforestation, higher species richness, and healthier riparian zones (Blackman and Naranjo, 2012; Fransen, 2018; Milder et al., 2015; Newsom and Milder, 2018; Potts et al., 2017; Takahashi and Todo, 2013; Tschardt et al., 2015). However, studies focusing on VSS, and biodiversity conservation are few, they are mostly focused on gaining insights into the potential for VSS to protect biodiversity. They usually have mixed results and are focused on a set of standards (See Table 4 for examples). Most studies have focused on the forestry, fisheries and agriculture standard, with a few also related to tourism.

The link between VSS and biodiversity is thus not extensively studied but there has been a growing attention to this domain and more evidence is being gathered on the potential role that VSS can play in biodiversity conservation. For example, the State of the World's Forests report 2020 recommends using VSS to trace responsibly managed forest products, improve environmentally friendly agricultural practices, and to support companies in meeting sustainability targets (FAO, 2020). Research published in 2020 by the Netherlands Environmental Assessment Agency concluded that within deforestation-free commodity value chain approaches, VSS were the only tool with evidence of showing positive impacts in conserving forests, while Public-Private Partnerships (PPPs) and corporate pledges could also prove to be promising (Ingram et al., 2020). But there appears to be limited evidence and much more focus on agriculture-based VSS. Moreover, the complexity of sustainability standards can be challenging, and can lead to inequalities and vulnerabilities, especially for small producers in developing countries, who might also face challenges in complying with VSS due to high costs.

**Table 4 Overview of evidence from literature on the role of Voluntary Sustainability Standards for biodiversity conservation (blue rows are for favourable results and orange for mixed)**

Authors and Year	Research Assumption/question	Standards	Result and Conclusion
Fransen et.al. (2018)	What is potential for voluntary sustainability standards (VSS) organizations to contribute to policymaking on biodiversity protection?	IFOAM, UTZ, Rainforest Alliance, Better Cotton Initiative, 4C, FLO, Cotton made in Africa, Bonsucro, Better Cotton Initiative, Roundtable on responsible soy, Roundtable on sustainable biomaterials	The paper concludes tentatively that based on their analysis of standard stringency, coverage, and proximity to biodiversity hotspots, few VSS were in a promising position to potentially contribute to biodiversity protection goals via their policymaking activities. The report also concludes that based on analysis of network positions VSS organization that link to relevant biodiversity actors and institutions are still quite scarce. This indicates that their ability to engage in collaborative policymaking and policy exchange with relevant biodiversity policymakers is, at present, limited.

Authors and Year	Research Assumption/question	Standards	Result and Conclusion
Tayleur et.al (2017)	What is the potential contribution of sustainability standards to biodiversity conservation and other aspects of agricultural sustainability?	IFOAM, RSPO, Rainforest Alliance, Fairtrade, Proterra, 4C, UTZ, Cotton made in Africa, Bonsucro, Better Cotton Initiative, Roundtable on responsible soy, Roundtable on sustainable biomaterials	Their analysis indicates that while VSS have increased over the past years, most cropland is not yet covered by them. According to the results of the paper VSS do have a considerable potential to contribute to conservation, but there is an ongoing need for better evaluation of how effectively they are implemented. They identify two opportunities for certifications to contribute to biodiversity conservation: 1. Mandating the adoption of standards or their components (as in requirements) by public and corporate organizations, in areas of high-risk and 2. Increasing role of certifications in setting good-practices at the field level (for e.g., traceability). However, they also point out that VSS alone will not ensure biodiversity protection or agricultural sustainability, but their mission-driven nature and private governance structures put them in a unique position to innovate and demonstrate best practice.
Potts et.al. (2016)	What is the potential of agricultural standards for biodiversity protection?	Fairtrade International, Rainforest Alliance, Ethical Tea Partnership, Global Coffee Platform (formerly 4C, UTZ, IFOAM (organic), Proterra, Roundtable on Responsible Soy, RSPO, Bonsucro, Better Cotton Initiative, Cotton Made in Africa, GlobalGAP, Roundtable for Sustainable Biomaterials	The report's results suggest that VSS requirements prioritize protection against habitat loss, which has been one of the most driver of agriculturally caused biodiversity loss. The report also highlights that VSS are rather less prepared to address impending drivers of biodiversity loss such as climate change. Further, the report suggests that existing VSS prescribe practices rather than performance outcomes which creates a gap regarding availability of evidence and actual impacts.
Milder et.al. (2016)	What are the effects of a tourism sustainability standard and associated training program on threats posed to biodiversity?	Rainforest Alliance sustainable tourism standard	The paper focuses on the Rainforest Alliance sustainable tourism standard and associated training program. They conclude that the standard contributed significantly to the improvements in sustainability practices linked to biodiversity threat reduction across 106 small- and medium-sized hotels in Latin America. The paper reports that for selected sample of hotels that undertakes the standard, there was an increase in uptake of good practices, including wildlife protection, support for nearby protected areas, improved waste management, reduced water pollution and improved environmental awareness on the part of visitors and employees. Overall, the results suggested that VSS and their training program can help recognize existing good practices and to drive incremental improvement in enterprises that were previously less sustainable.
Milder et.al. (2015)	What are the biodiversity conservation impacts of agricultural VSS?	Multiple	The paper reports that is evidence on impacts of VSS work can be generated, then VSS could definitely become one of the main tools to translate public demand and corporate commitments for sustainability into real conservation benefits. The paper shows that it is both possible and necessary to provide such evidence by coordinating a range of existing monitoring and research activities and supplementing these with targeted new initiatives.

Authors and Year	Research Assumption/question	Standards	Result and Conclusion
Tscharntke et.al (2015)	To what extent certification is the cause of improved conservation outcomes?	Based on content of certifications in coffee and cocoa sector	The paper reports that certifications are a promising mitigating strategy for the current rapid global biodiversity loss caused by agricultural expansion. The paper reports that certification of tropical agroforestry crops is very well established and is accepted by the likes of farmers, food companies, and retailers. This indicates a strong potential for sustainability standards and certifications to further conservation benefits. However, the paper also points out that most certification schemes do not explicitly aim at biodiversity conservation as a major goal. The paper suggests that certifications could be integrated into landscape approaches which could improve their role in landscape conservation.
Englund and Berndes (2015)	How and to what extent 26 sustainability standards consider biodiversity?	26 different standards	The paper reports that for the assessed standards, there was a consideration of habitat destruction, fragmentation, degradation, modification, and over exploitation. On the other hand, invasive species and GMOs, research, awareness, and education, energy use and green-house gases were poorly considered. The paper also reports that among the standards studied, there was a notable difference in stringency even among the standards that has similar scopes.
Takahashi and Todo (2013)	What is the impact of a shade coffee certification program on forest conservation?	Rainforest Alliance and other forest coffee certifications	The paper studies the impact of shade coffee certification program on forest conservation via studies in Belete-Gera Regional Forest Priority Area in Ethiopia. The paper reports that forests under the coffee certification program were less likely to be deforested than forests without forest coffee. The results indicate that the difference in the degree of deforestation between forests with forest coffee but not under the certification program and forests with no forest coffee is statistically insignificant. This, the paper highlights that, is indicative of the fact that the certification program has had a large effect on forest protection, decreasing the probability of deforestation by 1.7 percentage points. According to the paper, thus, forest coffee certification program has had a positive effect on forest conservation.
Blackman et.al (2012)	Does eco-certification have environmental benefits? Focus on Organic coffee in Costa Rica	Organic coffee certifications	The paper identifies and highlights that there is inclusion of biodiversity protection in the VSS criteria of the VSS that were studied. Further for the data and time period of the study, it was concluded that certification significantly reduced use of all three chemical inputs for which they had data—chemical pesticides, fertilizers, and herbicides—and increased adoption of at least one of the four environmentally friendly management practices for which they had data—organic fertilizer.

### 3.3. Voluntary Sustainability Standards and the post-2020 global biodiversity framework:

Alongside the negotiations of the post-2020 global biodiversity framework, UNCTAD organized various discussions and workshops. One area of discussion was on 'mainstreaming of biodiversity'- the need for governments, economic sectors, financial institutions, and society at large, to be working together to achieve the biodiversity goals. VSS, in that aspect, can be a bridge between these actors and translate these global objectives for biodiversity conservation and protection, into more

sector specific and local actions. In addition, VSS can be a practical and innovative way to engage businesses in the implementation of the post-2020 global biodiversity framework.<sup>4</sup>

The post-2020 global biodiversity framework can contribute to a strengthened focus of VSS on biodiversity conservation issues. The current negotiation text of the post-2020 global biodiversity framework includes Target 15(a), which aims to “Take legal, administrative or policy measures to [ensure that all] [significantly increase the number or percentage of] business and financial institutions [particularly those] [with significant impacts on biodiversity,] [and large and transnational companies] [that]:

(a) [Through mandatory requirements] Regularly monitor, assess, and fully and transparently disclose their [dependencies and] impacts on biodiversity [along their operations, supply and value chains and portfolios]” (CBD, 2022).

If this target is adopted by the 15th Conference of the Parties to the Convention on Biological Diversity in December 2022 in Montreal, Canada, it may provide an entry point for a more proactive engagement of organizations and companies working with VSS. Additionally, there may also be other targets in the post-2020 global biodiversity framework in which the use of VSS may be applicable

It is also worth noting that many standards derive their requirements from international regulations (as pointed out in section 1.2) and the development of the post-2020 global biodiversity framework is likely to increase awareness of the importance of biodiversity among VSS. Discussions among practitioners and academicians highlight that it can be beneficial to establish processes, for implementation of post-2020 global biodiversity framework, that include VSS. Further, there are recommendation for the integration of VSS as part of policy tools and instruments set up for the post-2020 global biodiversity framework. VSS can also contribute to the current ongoing biodiversity negotiations for the Convention on Biological Diversity, and they could also be used as a tool for implementing the new biodiversity targets.

The post-2020 global biodiversity framework includes global biodiversity targets, negotiated by country parties of the Convention of Biological Diversity (CBD). The new framework will contribute to the 2030 Agenda and the Sustainable Development Goals (SDGs), which gave international trade a prominent role as “an engine for inclusive economic growth and poverty reduction”. With VSS increasingly being referenced in trade agreements to foster sustainable development and good governance, VSS can be an effective tool to provide incentives for governments and companies to adopt practices that are in line with environmental, social, and economic objectives without reinventing the wheel.

VSS can play a vital role in biodiversity conservation and promotes its sustainable use. Biodiversity loss is aggravating at a record pace and is among the global top threats according to the World Economic Forum (WEF). The trade of unsustainable production and consumption of biodiversity-based products and services have been identified as one of the indirect drivers of biodiversity loss in a report by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES<sup>5</sup>). VSS are expanding in biodiversity-rich countries, like Brazil, and cover crucial mandates such as reducing deforestation, which make them a key player in protecting biodiversity. VSS are widely used today to govern environmental, social and ethical issues in global supply chains and have encouraged the references of its sustainability criteria as non-trade objectives in many trade agreements that encompass sustainable development provisions and advance sustainable trade.

UNCTAD’s BioTrade Programme promotes the sustainable trade of biodiversity-based products as a way to support livelihoods. The BioTrade P&C have been a foundation for the work undertaken by the programme. In recent years the interest of biodiversity friendly products has been increasing (for example, the UEBT Biodiversity Barometer report<sup>6</sup>), the interest in certification has also been rising both from companies and consumers. This report explores the degree of alignment present between the two tools and areas for mutual recognition. Following this, the report aims to highlight the convergence between the BioTrade P&C and the VSS initiatives. This is done by understanding the link between the BioTrade P&C and the sustainability requirements specified by a selected set of VSS operating in multiple sectors and across different geographies (see Section 4).

4 For more information, please see: <https://unctad.org/system/files/information-document/ditc-ted-24032021-post2020-report-5.pdf>.

5 For more information in the report, check the report: The global assessment report on BIODIVERSITY AND ECOSYSTEM SERVICES: [https://ipbes.net/sites/default/files/inline/files/ipbes\\_global\\_assessment\\_report\\_summary\\_for\\_policymakers.pdf](https://ipbes.net/sites/default/files/inline/files/ipbes_global_assessment_report_summary_for_policymakers.pdf).

6 The report can be accessed at: <http://www.biodiversitybarometer.org/>.

## 4

## Methodology

This section describes the methodology adopted for this report. As mentioned earlier, this report aims to illustrate and understand the linkages of selected VSS to the UNCTAD BioTrade P&C. The methodology of this report draws inspiration from the mapping methodology adopted in the report '[Linking Voluntary Standards to Sustainable Development Goals](#)' undertaken by ITC, UNCTAD, the European University Institute, the German Development Institute and the University of Amsterdam (Bissinger et al., 2020). The report also takes inspiration from multiple other reports and research articles that examine the alignment of VSS with the global sustainable development agendas. In particular, the steps involved in the methodology of this report are explained as follows:

### 4.1. Selected set of Voluntary Sustainability Standards

VSS are ever growing in number and have expanded across commodities and geographies. Depending on the dataset, such as the ITC Standards Map or the Ecolabel Index, there are at least around 200-400 VSS operating across the globe. As such, it would not be possible to benchmark the BioTrade Principles and Criteria against all the VSS in the timeframe of this project. The focus of this report will be on a set of 11 VSS, selected through a Purposive sampling technique<sup>7</sup> to provide a first insight into the link between VSS and BioTrade. The selected sample is a basis for understanding the opportunities of linking the work of BioTrade and VSS and also to find openings on how BioTrade Initiative can work more with VSS. The 11 VSS were chosen based on:

1. Their inclusion in the ITC Standards Map<sup>8</sup>.
2. The following conditions:
  - Are not country or commodity or company specific.
  - Are not VSS specific to energy, minerals, metals, gas (under MER) as well as forestry or livestock since these where BioTrade does not work in these areas.
3. Recommendations/suggestions by BioTrade partners.
4. Internal discussions within the BioTrade team on what would be the strategic VSS we could work with.

The ultimate aim of this report is to find potential areas and opportunities for the BioTrade Initiative (as well as its partners) to collaborate with VSS organizations/schemes/certifications to further mainstream biodiversity conservation as well as BioTrade and its BioTrade P&C. **The selected VSS was chosen based on the above-mentioned criteria as well as on the consultation with the implementing partners of the BioTrade programs.**

The VSS selected for this review are shown in Table 5 below.

7 Purposive sampling (also known as judgment, selective or subjective sampling) is a sampling technique in which researcher relies on his or her own judgment when choosing members of population to participate in the study. <https://research-methodology.net/sampling-in-primary-data-collection/purposive-sampling/>.

8 The ITC Standards Map is a comprehensive database of over 270 standards which cover fifteen sectors-agriculture, consumer products, electronics, energy, fish aquaculture, fish-wild capture, industrial products, jewellery, forestry, livestock, mining, processed foods, services, textiles and toys. More info at: <https://www.standardsmap.org/en/home>.



**Table 5 Focus Voluntary Sustainability Standards for this study**

VSS Organization	Standard in focus (version used)	Sector(s)
Fair for Life	<b>Fair for Life Certification</b> (FAIR FOR LIFE Certification standard for Fair Trade and responsible supply-chains Version April 2019)	Agriculture, fisheries, manufactured products
Fairtrade International	Fairtrade Certification (Fairtrade Standard for Hired Labour 15.01.2014_v1.5)	Agriculture including commodities, Textile
Forest Stewardship Council (FSC)	FSC - Forest Management (FSC® INTERNATIONAL STANDARD Principles and Criteria for Forest Stewardship FSC-STD-01-001-V5-2 EN)	Forestry products
Global Sustainable Tourism Criteria (GSTC)	Certification for tourist destinations	Tourism and hospitality sector
International Federation of Organic Agriculture Movements (IFOAM )	*IFOAM family of Standards (© IFOAM-Organics International, October 2019 (Edited version of the IFOAM Norms 2014)	Agriculture sectors
LIFE Certification (by LIFE Institute)	LIFE Certification	Targets all sectors that enable organizations to quantify objectively their impact on natural resources.
Marine Stewardship Council (MSC)	MSC Fisheries standard	Products from wild fisheries. Does not include aquaculture
Proterra	ProTerra certification (ProTerra Standard V3.0 (Draft))	Agricultural sector
Rainforest Alliance	Sustainable Agricultural Certification (2020 Rainforest Alliance Sustainable Agriculture Standard: Farm Requirements V1.1)	Agriculture and forestry sectors
Sustainable Agriculture Initiative Platform (SAI Platform)	Farm Sustainability Assessment	Agriculture and horticulture sectors
Union for Ethical BioTrade (UEBT)	UEBT Standard (UEBT standard 2020)	Cosmetics and food sectors

## 4.2. Understanding Voluntary Sustainability Standards criteria coverage for BioTrade - process overview

For this report, to understand the link between selected VSS and the BioTrade P&C, a mapping process was followed. This process, as explained earlier, draws inspiration from the mapping methodology similar to the one adopted in the report: Linking Voluntary Standards to Sustainable Development Goals (Bissinger et al., 2020) and other mapping reports for VSS.

The ITC Standards Map<sup>9</sup> is the source of the data for the selected VSS as it provides one of the most comprehensive information on VSS requirements in the field of sustainable trade. The standards map has information on almost 300 VSS across multiple product groups and 15 sectors. This includes data pertaining to the 11 VSS selected in Section 1.2. The ITC database provides, among other things, a specific set of criteria and whether that is covered or not by the VSS.

To conduct the mapping, the first step was to link around 720 sustainability requirements listed in the ITC Standards Map to the BioTrade P&C which was done through the use of selected keywords

<sup>9</sup> More details can be found under <https://www.standardsmap.org>. Please note that the online tool does not contain the full database, which was used as a basis for this paper.

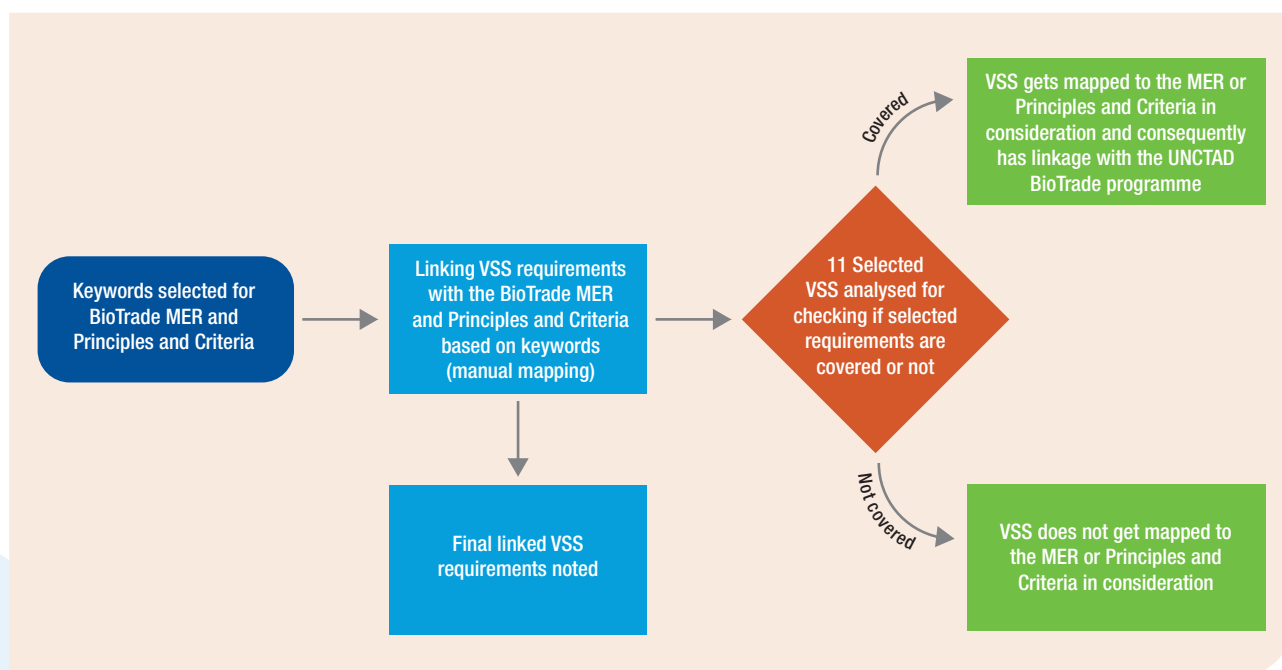
(see Annex 1). Based on this, each of the requirements of the standards map was manually coded according to whether or not it is linked to the content of the BioTrade requirements. A VSS requirement was considered linked to a BioTrade criteria when the requirement's specified criteria and actions are relevant for achieving the objective of the BioTrade criteria. For the linkage<sup>10</sup> to be considered valid, two conditions need to be met:

1. The VSS requirement must be well-defined and not be abstract in nature.
2. The content of VSS requirement should be closely related to that of the minimum eligibility requirements and criteria (and consequently the principle) of the BioTrade.

For a better understanding of what this entails, for each of the BioTrade Principles and Minimum Eligibility Requirement, the selected VSS criteria from the standards map, is shown in Annex 2. Further, the results for the linkages of the 11 selected standards were analyzed and evaluated based on whether the requirements were covered or not covered as per the ITC Standards Map. This mapping, methodology and results were also reviewed internally.

The steps included in the methodology can be seen in Figure 3.

**Figure 3** Flowchart for methodology adopted for the report



### 4.3. Scope and limitations

As the aim of the report is provide a first synthesis of links between BioTrade and VSS and understand opportunities for complementary work in future, the report focuses on only the selected set of 11 VSS. From among those, there is only Marine Stewardship Council which focuses specifically towards BioTrade MER marine activities. Further, the mapping is based only on the data sourced from the ITC Standards Map, as of 2021. This data might have been updated and that might also affect the results. Additional information beyond the ITC Standards Map is not included in the scope of this report and not used in the analysis.

<sup>10</sup> It must be noted that the scope of this report is to simply point out the convergence between the requirements of the selected VSS and the BioTrade P&C. The report does not illustrate the evidence of this linkage or the strength and that is a domain for future research. See Section 8 for more details.

## 5

## Results and analysis

### 5.1. Overall coverage

For the BioTrade minimum eligibility requirements for both terrestrial and marine requirements, overall, all 11 selected VSS have linkages, which indicates the aims that they specify in their requirements align with the objectives of BioTrade MER. This shows that in the selected set of VSS, despite the varying geographical areas and sectors that they cover, there is some form of connection that they have in their own requirements with the BioTrade minimum eligibility requirements. A variation is observed only when the linkages at individual minimum eligibility requirement are checked (and not the whole set) and that is reported in the further sections of the report.

The case is similar when observing the overarching linkage to the 7 BioTrade principles. All of the 11 selected VSS for this study have alignment with each of the principles overall. The variation happens only at the criteria level. Deviations in the linkage are also explained in the following sections.

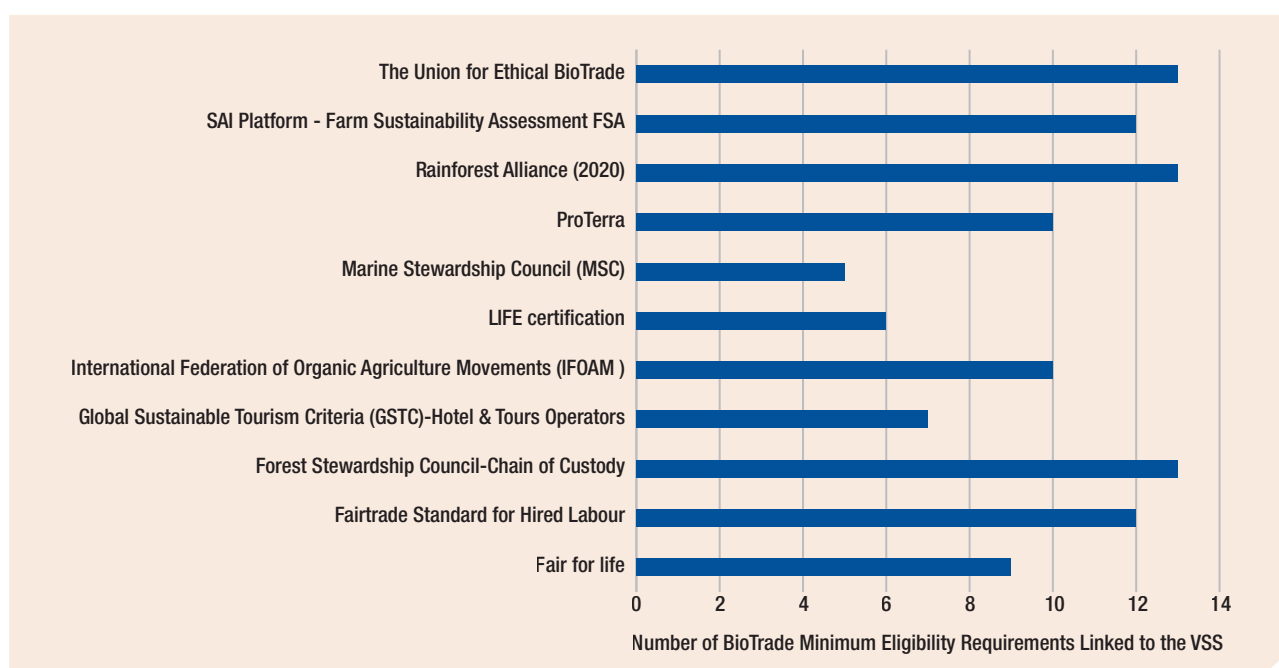
### 5.2. Criteria coverage

As explained in Section 4.2, for each of the BioTrade P&C and MER, VSS criteria were mapped using selected keywords. Based on this methodology, the linkages with VSS can be observed as below:

#### 5.2.1. BioTrade Minimum Eligibility Requirements

There are two sets of BioTrade MER: Terrestrial and Marine. These are explained in Section 1.2, in Table 1. The MERs determine whether, in the first instance, an activity is considered BioTrade or not. Within each of these terrestrial and marine MER, there are 10 requirements, which makes in total 20 MER. Together for the marine and terrestrial minimum eligibility requirements, the linkages with selected VSS can be observed according to the Figure 4 below. The figure shows that the VSS with the maximum number of linkages is UEBT, Rainforest Alliance, and FSC, which have linkages with 13 out of 20 BioTrade MER. They are followed by the SAI Platform and Fairtrade Standard for Hired Labour. Our analysis indicated that overall, for both sets of MER, all of the selected 11 VSS have a linkage, indicating a rather strong overall linkage. The variation happens when looking at the individual minimum eligibility requirements.

**Figure 4 Linkage of selected set of Voluntary Sustainability Standards with BioTrade Minimum Eligibility Requirements (for both terrestrial and marine activities)**



From Table 1, it can be seen that while there are two sets of MER, terrestrial and marine, there are some common MER that are present in both. Both sets of MER mandate that the activities do not involve use or development of genetically modified organisms (GMO). This is also a requirement to comply with all selected VSS for this study, except the GSTC-Hotel & Tours Operators, LIFE certification, and Marine Stewardship Council (MSC). Natural habitat conversion and a high GMO adoption have been a widely discussed and scrutinized problem in many sectors. The observed linkage can also be explained by the fact that research indicates that specifically for the food-sector, where agricultural VSS are most active, most retailers and brands have tried to incorporate voluntary non-GMO labels and brands (Bain and Dandachi, 2014).

This draws attention to another common MER which prohibits activities from the introduction of invasive species or causing their introduction. It also mentions that activities must not use or foster the use of these species where the activity is developed unless it is to control the population or mitigate its negative impacts on local ecosystems and actions are implemented to avoid its spread. From among the 11 VSS, 6 also have linkages with this MER, which are: Fairtrade Standard for Hired Labour, FSC, GSTC-Hotel & Tours Operators, Rainforest Alliance, SAI Platform, and UEBT. In line with this MER, is another requirement which specifies that activities “do not collect, harvest, use, disrupt, or otherwise threaten endangered species, including those covered in CITES Appendix I<sup>11</sup> and in national and regional endangered species lists” which also finds 7 (Fair for life, Fairtrade Standard for Hired Labour, FSC, GSTC, MSC, Rainforest Alliance, and UEBT) out of the 11 VSS linked. CITES<sup>12</sup> is one of the main conventions that provides signatory countries the framework to regulate the trade of wild species so that they are safeguarded from overexploitation and not threatened with extinction. Its Appendix I includes species like Tiger (*Panthera tigris*), Fin whales (*Balaenoptera physalus*), and rosewood (*Dalbergia nigra*)<sup>13</sup>. Plants and animals maintain the health of the ecosystem, and becoming endangered is indicative of ecosystem imbalance. It is of utmost importance to protect the endangered species and the alignment of VSS with the objectives set under BioTrade MER and consequently with the CITES, reflects that VSS are moving towards protection of these species.

Further, another MER is that “If the activities are done in protected areas or similar, these comply with the requirements defined in the regulations, plans strategies or programmes applicable to these areas”. Pertaining to that, Fairtrade Standard for Hired Labour, FSC, IFOAM, LIFE certification, ProTerra, Rainforest Alliance, SAI Platform, and UEBT have links to this MER. They have, in their standard requirements, a criterion that calls for protected areas to be clearly defined in terms of geographical space, recognized, dedicated and managed, through legal or other effective means, in order to achieve the long-term conservation of nature with associated ecosystem services and cultural values.

Lastly, one of the MER requires that organizations should ensure respect for human rights and avoid immoral and illegal transactions in business operations. All 11 VSS have links with this MER because VSS essentially promote sustainable production practices and most VSS in their requirements, refer to a range of human rights/labour rights (Blankenbach, 2020). The link with VSS and their requirements focusing on human rights and fair businesses practices has been adequately established by extant research.

None of the selected VSS have links with the MER that mandates activity to not include the extraction of minerals, such as sands, nor the extraction of metals, oil and gas, or the generation of energy. This might follow the reason that most VSS selected for this study have a scope of operation for agricultural or nature-based products, and thus it would be odd if they did cover these aspects. However, VSS operating in other sectors might still align with/contribute to these MER. In the case where MER specifies the adoption of a precautionary approach, as defined in the Rio Principles and other related agreements, there are also no links based on the data provided in the ITC standards map. However, MSC, in some of its documents<sup>14</sup> does refer to the precautionary principles.

11 Appendix I includes species threatened with extinction. Trade in specimens of these species is permitted only in exceptional circumstances. For more information: <https://cites.org/eng/disc/how.php>.

12 For more information, please see: <https://cites.org/eng/disc/what.php>.

13 See: <https://cites.org/eng/app/appendices.php>.

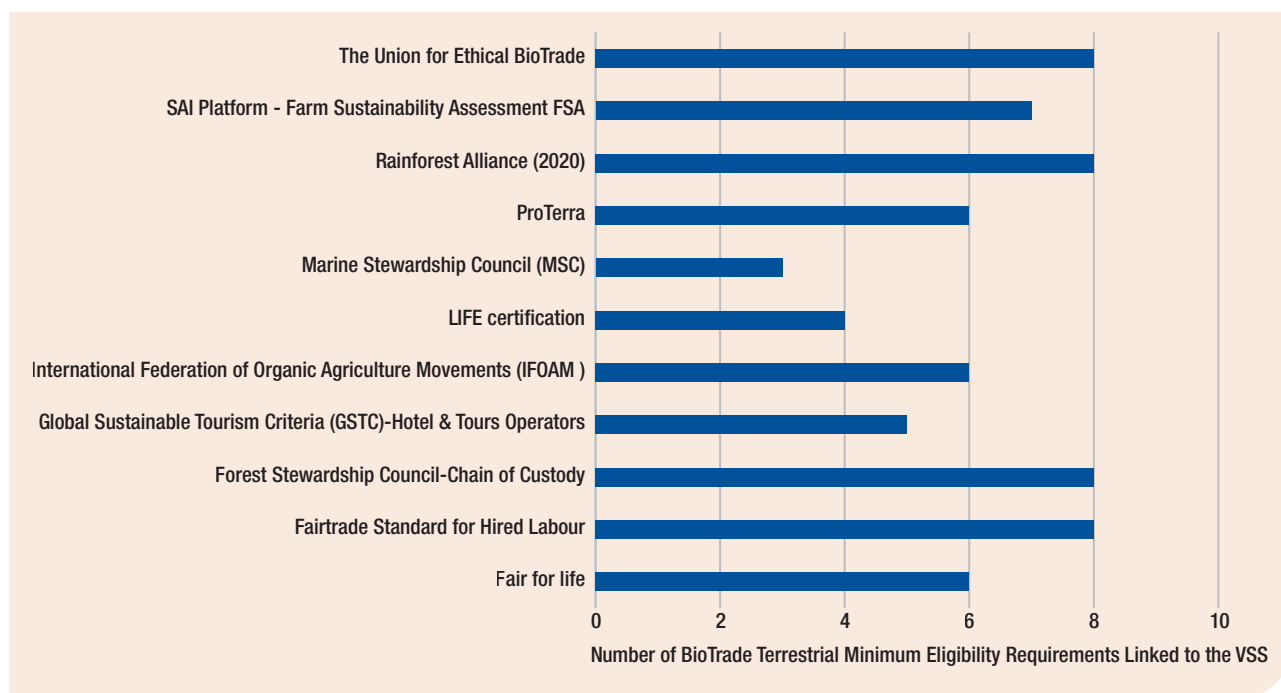
14 For more information, please see: <https://www.msc.org/standards-and-certification/developing-our-standards/the-fisheries-standard-review/projects/risk-based-framework-review> and [https://www.msc.org/docs/default-source/default-document-library/for-business/program-documents/fisheries-program-documents/msc-fisheries-standard-v2-01.pdf?sfvrsn=8ecb3272\\_19](https://www.msc.org/docs/default-source/default-document-library/for-business/program-documents/fisheries-program-documents/msc-fisheries-standard-v2-01.pdf?sfvrsn=8ecb3272_19).

**Minimum Eligibility Requirements – Terrestrial activities**

A better understanding of the linkage of selected VSS to the MER is provided when separated into 2 categories - marine and terrestrial. From Figure 5, for the 10 MER for Terrestrial Activities, most of the 11 selected VSS aligned have high linkages. These MER focus on activities that involve material derived from terrestrial and inland biodiversity. They mandate that there should be no degradation or transformation of terrestrial and inland ecosystems, such as deforestation of primary forests and prohibition on use of GMOs. Overall, it is observed that all of the 11 selected VSS have linkages. MSC has least number of linkages to terrestrial MER, but this can be attributed to the fact that the MSC standard’s scope is on marine/aquatic systems.

Further, this set of MER mandates that the activity does not use agrochemicals banned by the Stockholm Convention on Persistent Organic Pollutants (POPs), listed in the Rotterdam Convention and in World Health Organization (WHO) Categories I and II, and/or banned in the relevant country(ies) where the activity takes place. From among the 11 standards, Fair for life, Fairtrade Standard for Hired Labour, FSC, IFOAM, ProTerra, Rainforest Alliance, SAI Platform and UEBT, have specific requirements that prohibit the use of hazardous chemicals (as defined by WHO 1A and B and the Stockholm and Rotterdam conventions).

**Figure 5 Linkage of selected set of Voluntary Sustainability Standards with BioTrade Minimum Eligibility Requirements – Terrestrial**



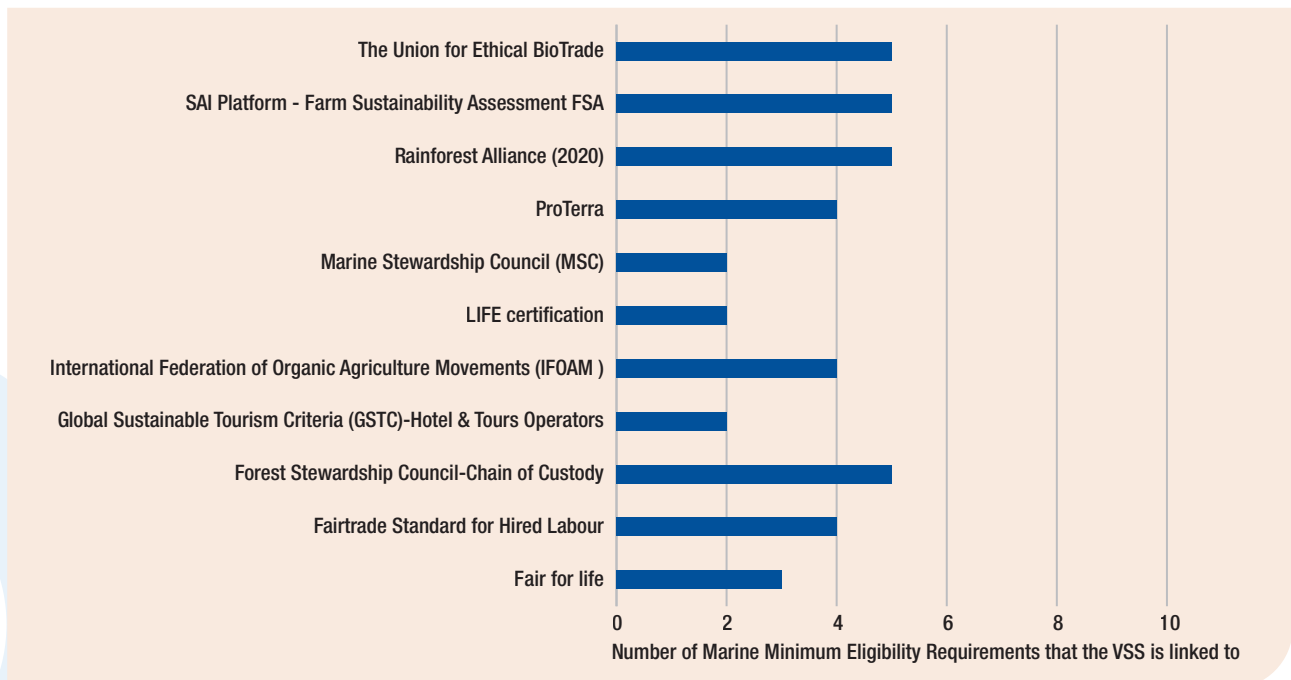
### ***Minimum Eligibility Requirements – Marine or Blue BioTrade activities***

While Figure 6 suggests that there are lesser linkages with the marine MER than with the terrestrial MER, at the outset, it must be mentioned that this can be due to the scope of the 11 VSS selected for this study, most of which are focused on land-based activities.

For this set of MER, the first criterion mentions that “activity focuses on material derived from coastal and marine biodiversity”. None of the VSS have requirements that relate directly to this specific criterion, however, through its scope of work, MSC finds links with the MER. The same can be implied for the MER that mentions that activities do not incorporate or directly support any form of illegal, unreported, and unregulated (IUU) fishing or other illegal activity. This, again, can be attributed to the scope of the study and the 11 VSS selected for the study. Illegal fishing<sup>15</sup> is among the main drivers of global overfishing and is a threat to the marine ecosystem. It is also a major threat to food security as illegal, unreported and unregulated fishing activities are responsible for the loss of 11–26 million tons of fish each year (UN, 2022). It is thus an important BioTrade MER and the linkage with VSS is indicative of some form of awareness to address the issue, at the least, among the VSS community.

Further, Fair for life, FSC, ProTerra, Rainforest Alliance, SAI Platform, IFOAM, and UEBT have criteria that relate to the MER which states “The activity does not contribute to the degradation or transformation of marine and coastal ecosystems, such as the draining of wetlands or the deforestation of coastal areas”. This is interesting since most of them are largely focused on activities on land. They have a focus on deforestation, and, in theory, this is not limited to land or coastal areas.

**Figure 6 Linkage of selected set of Voluntary Sustainability Standards with BioTrade Minimum Eligibility Requirements – Marine**

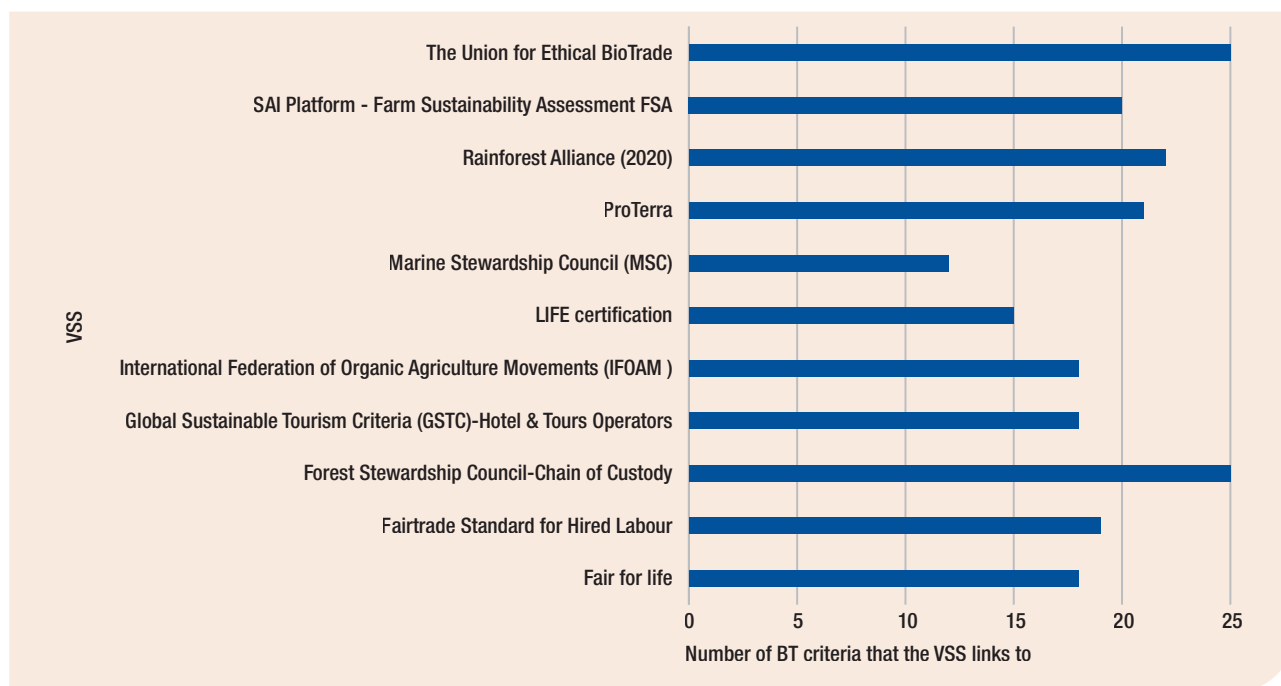


<sup>15</sup> Illegal, unreported and unregulated (IUU) fishing is a broad term that captures a wide variety of fishing activity. IUU fishing is found in all types and dimensions of fisheries; it occurs both on the high seas and in areas within national jurisdiction. It concerns all aspects and stages of the capture and utilization of fish, and it may sometimes be associated with organized crime.”(FAO, n/d).

### 5.2.2. BioTrade Principle and Criteria

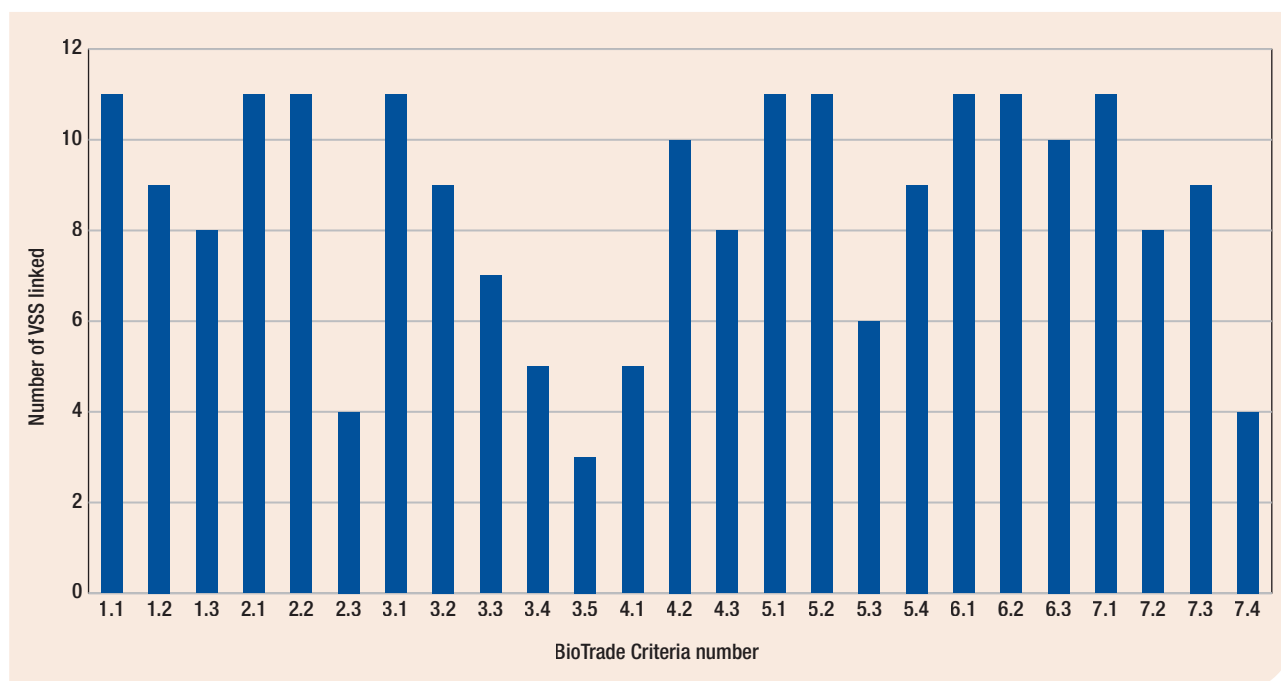
The linkage with the BioTrade P&C, as explained earlier, is seen among all of the 11 selected VSS. However, it can be seen that, some VSS find more linkages than the others (see Figure 7). Figure 7 helps observe the linkages from VSS perspective. It can be seen that UEBT has the maximum linkages (with all 25 criteria combined from 7 Principles).

**Figure 7 Linkage of selected Voluntary Sustainability Standards with BioTrade Criteria**



Further, the linkages at the individual criterion level can be seen in Figure 8, which highlights how linkages with some criteria (and principles consequently) are stronger than the others.

**Figure 8 Number of Voluntary Sustainability Standards linked with each BioTrade Criteria**



Observing the linkages at the individual criterion level, higher linkages are present with criterion 1.1, 2.1, 2.2, 5.1, 5.2, 6.1, 6.2, and 7.1 (see Table 6). For each of these, all of the 11 selected standard have some form of linkage. In detail, these criteria and their corresponding principles can be seen in Table 6 below. From Figure 8, it can also be clearly seen that for all BioTrade Principles, overall, all of the 11 VSS that are selected for this study, have a linkage. The variation occurs only at a criterion level, and this is explained for each of the BioTrade Principles in the following sections.

**Table 6 BioTrade P&C with which selected Voluntary Sustainability Standards exhibit maximum linkages**

Principle	Criteria
Principle 1: Conservation of biodiversity	1.1 Activities contribute to maintaining, restoring, or enhancing biodiversity, including ecosystems, ecological processes, natural habitats, and species, particularly threatened or endangered species.
Principle 2: Sustainable use of biodiversity	2.1 The use of biodiversity is sustainable, based on adaptative management practices that advance the long-term viability of the biological resources used, and supported by training of workers and producers on good collection, harvesting, cultivation, breeding, or sustainable tourism practices.
	2.2 Measures are taken to prevent or mitigate negative environmental impacts of the activities, including in relation to flora and fauna; soil, air, and water quality; the global climate; use of agro-chemicals; pollution and waste disposal; and energy consumption.
Principle 5: Compliance with national and international legislation	5.1 The organization complies with applicable legal and administrative requirements at local, national, and regional levels. If measures required by local, national, or regional legislation are less strict than those required by these Principles and Criteria, the organization meets the stricter requirements.
	5.2 Activities respect the principles and obligations of relevant international agreements and instruments, such as the CBD, the Nagoya Protocol, the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Bonn Convention on Migratory Species (CMS), the International Labour Organization (ILO) Conventions, the United Nations Declaration on the Rights of Indigenous Peoples, and the United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas.
Principle 6: Respect for the rights of actors involved in BioTrade activities	6.1 The organization respects fundamental human rights, in keeping with the United Nations Guiding Principles on Business and Human Rights and relevant ILO Conventions.
	6.2 The organization respects worker rights, provide adequate working conditions, and prevent any negative impacts on the health and safety of workers, in accordance with national legislation.
Principle 7: Clarity on right to use and access to natural resources	7.1 The organization uses natural resources in compliance with all relevant laws and regulations and preventing any negative impacts on the health, safety, and wellbeing of surrounding populations.

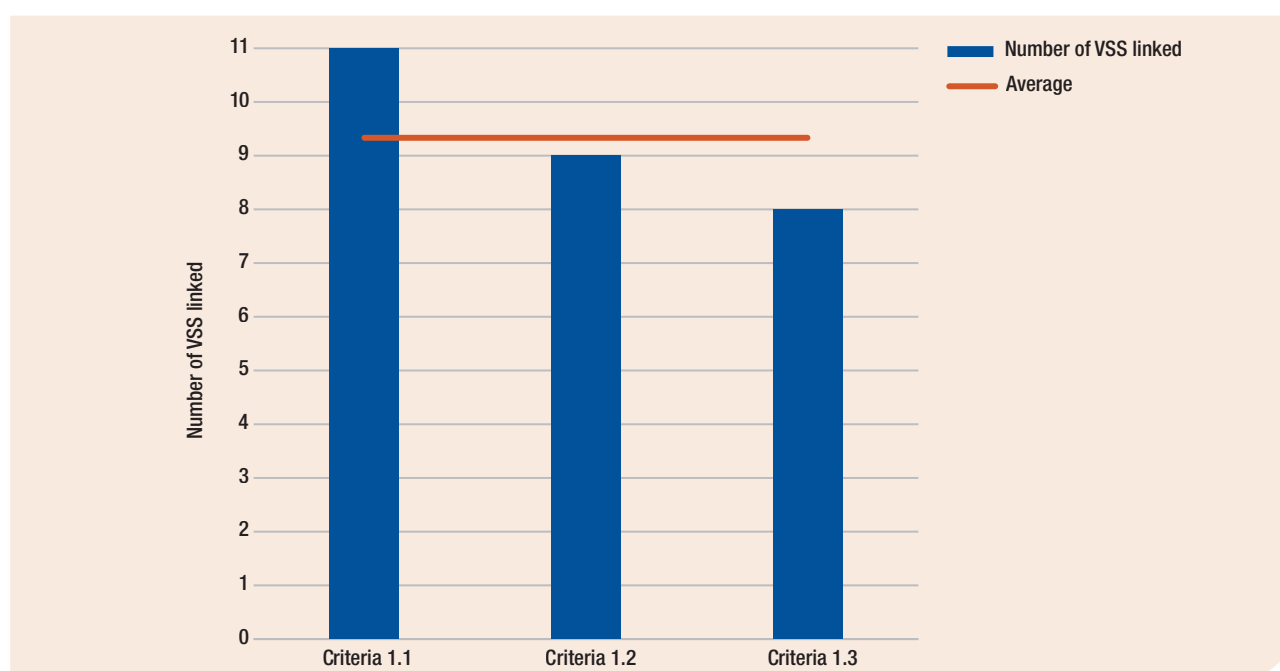


### ***BioTrade Principle 1: Conservation of biodiversity***

This Principle focuses on one of the objectives of the Convention on Biological Diversity (CBD), which seeks to preserve the wealth of species, ecosystems, and genetic diversity. The principle calls for “framing BioTrade activities in the context of any species, habitats, or ecosystems that are involved”. Alongside protecting biodiversity, the principle also focuses on restoring and enhancing it.

A higher linkage is observed amongst the VSS samples with this Principle, (see Figure 9), particularly with criterion 1.1. VSS, as mentioned in Section 3.3, have started focusing on biodiversity conservation. The high linkage with this Principle can be explained by the fact that many VSS are making efforts to meet the objectives of biodiversity conservation through identifying and incorporating the practices that promote conservation of biodiversity (Fransen et al., 2018; Potts et al., 2017; Castka, 2016).

**Figure 9** Voluntary Sustainability Standards linkage with BioTrade Principle 1



In reference to BioTrade criteria 1.1. and 1.2, which call for maintaining and restoring biodiversity and lays importance on the genetic diversity of flora and fauna, it must be noted that among the VSS studied, requirements pertaining to conservation of forests, habitat/eco-system restoration/rehabilitation, maintaining/protecting native species, and maintaining soil functions have a strong presence. However, while these action-oriented requirements were found in most of the 11 standards under study, it is also worth mentioning that requirements like no net loss in biodiversity, and maintenance of biodiversity hotspots, were rather rare. The absence of these biodiversity management requirements can undermine the role that VSS can play in facilitation of sustainable trade of bio-based products.

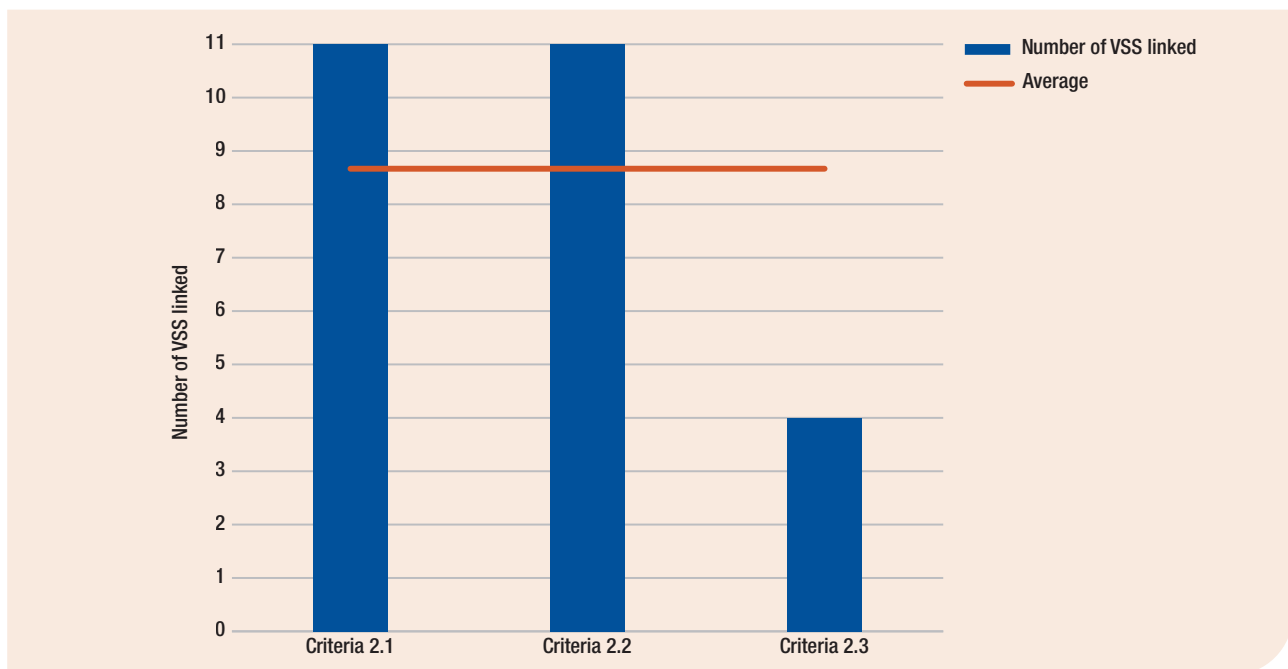
It is also observed that in the standards studied, more requirements are focused on the protection of biodiversity, while very few requirements are targeted at restoration and enhancement of biodiversity and related goods. Further, in line with BioTrade criteria 1.3, VSS also include requirements that relate to legally protected and internationally recognized areas for their biodiversity. This is also a requirement that is included in eight (Fairtrade Standard for Hired Labour, FSC, IFOAM, LIFE certification, ProTerra, Rainforest Alliance, SAI Platform, and UEFT) of the eleven VSS under study. This presents an opportunity for VSS to play a more proactive role in the promotion of broader public biodiversity strategies and encouraging a benefit for the conservation of biodiversity.

### ***BioTrade Principle 2: Sustainable use of biodiversity***

BioTrade Principle 2 is aligned with the second objective of CBD which is using biodiversity in a way that maintains its potential to meet the needs and aspirations of future generations, i.e., through sustainable use. For an activity to be considered 'BioTrade', it should be based on adaptive management practices and adoption of measures to prevent or mitigate negative environmental impacts.

Linkages of the selected VSS are also high with this BioTrade Principle, specifically for criteria 2.1 and 2.2, which has linkages with all of the 11 selected standards (Figure 10). High linkage can also be associated with the extant research on agricultural VSS which indicates that agricultural standards emphasize the use of sustainable agricultural practices. These practices have an inherent focus on a sustainable reliance upon, and use of, existing genetic biodiversity (Potts et al., 2017). And the fact that 7 out of our 11 selected standards are agriculture based, also supported this high linkage.

**Figure 10** Voluntary Sustainability Standards linkage with BioTrade Principle 2



For VSS that show linkage with BioTrade criteria 2.1 and 2.2, requirements linked include sustainable management and use of natural resources, requirement on workers awareness of procedures and best practices, requirement chemicals handling and exposure and waste treatment and disposal. It must also be noted that while VSS promote the use of organic fertilizers, only 4 of the 11-standards mandate following a list of prohibited chemicals. While these indicate linkages with the criteria 2.1 and 2.2, it must be noted that there is still a need to check for evidence of contribution towards the targets that VSS mention, in order to understand exact contributions.

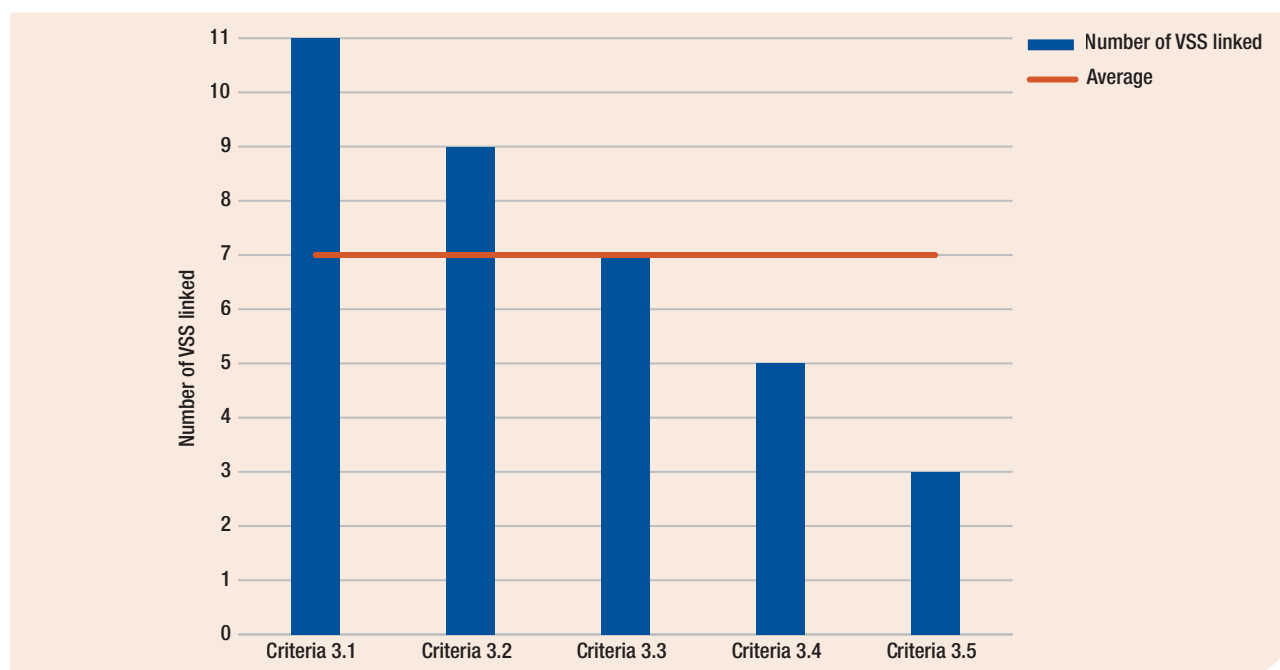
It is also observed that very few VSS requirements link with the criterion 2.3 (See appendix 2), which says "Activities contribute to measures that strengthen resilience and the adaptive capacity of species and ecosystems to climate-related hazards and natural disasters." From among the VSS being studied, only 4 (Fairtrade Standard for Hired Labour, FSC, Rainforest Alliance, and UEBT) have link to this criterion. It directs to the fact that although many VSS might have climate-related objectives, it is still not adequately translated into their mandated requirements. The impact/action on this need further investigation. From among the standards studied, requirements pertaining to specific climate adaptation activities are included by only four of the 11 standards (Fairtrade Standard for Hired Labour, FSC, Rainforest Alliance (2020), and UEBT); and requirements to have specific emergency responses to climate related hazards (caused by extreme weather events) in place, are included by only three VSS (FSC, LIFE certification, and Rainforest Alliance).

### ***BioTrade Principle 3: Fair and equitable sharing of benefits derived from the use of biodiversity***

This Principle is in line with the third CBD objective which focuses on fair and equitable sharing of benefits derived from the utilization of genetic resources. BioTrade Principle 3 addresses the social and economic aspects of biodiversity and requires all BioTrade activities to have long-term partnerships along the supply chain, ensure fair prices and promote local sustainable development. This Principle also calls for compliance with rules and agreements on access and benefit-sharing.

For the 11 selected VSS, the linkage with this requirement can be observed from Figure 11. All of the VSS align with criterion 3.1, which refers to “Activities are agreed upon and undertaken based on transparency, dialogue, and long-term partnerships between all organizations involved in the supply chain.” This is inherently the premise of many VSS and most of them, through their consumer-facing label, provide a first step to ensuring some form of traceability of their products. It is therefore expected for this criterion to be linked with all of the 11 selected VSS for the study. Further, 9 (Fair for life, Fairtrade Standard for Hired Labour, FSC, GSTC, MSC, ProTerra, Rainforest Alliance, SAI Platform, and UEBT) out of the 11 VSS in the study also have requirements that call for the unit of operation to identify and engage with key external stakeholders and development of collaborative relationships.

**Figure 11** Voluntary Sustainability Standards linkage with BioTrade Principle 3



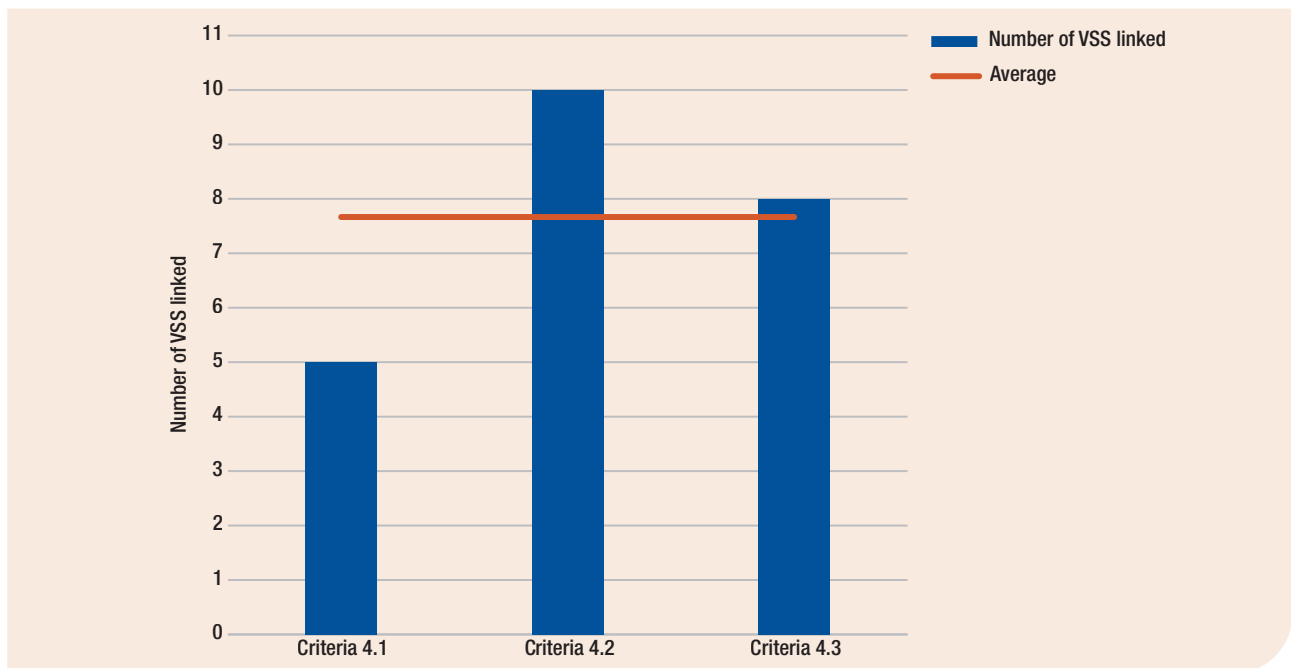
Some VSS, like UEBT, have specific requirements that refer to “fair and equitable sharing of benefits derived from the use of biodiversity”. However, this is not commonly the case and even with ‘price premiums’ which is among the most discussed benefits of VSS, there is not much evidence available. Most VSS certainly require minimum wages to be paid. In addition, VSS like Fairtrade, make indirect reference to benefit sharing via their mandates to ensure equitable trading relationship by the incorporation of economic criteria in their standard, which they also enable through promises of better market access and price premiums.

It can also be seen that there are fewer linkages for criteria 3.4 and 3.5. Criterion 3.4 specifies that “Activities comply with applicable legal requirements and/or relevant contractual arrangements on access to biodiversity, including biological and genetic resources, their derivatives and associated traditional knowledge, and on the fair and equitable sharing of benefits derived from their utilization.” Among the 11 VSS, Fair for life, Fairtrade Standard for Hired Labour, FSC, ProTerra and UEBT have linkage with this criterion. Further, Criterion 3.5 specifies that “In cases where there are no applicable legal requirements, utilization of genetic resources and associated traditional knowledge takes place with prior informed consent and mutually agreed terms” and FSC, ProTerra and UEBT have some form of linkage with this criterion. This calls for attention of VSS.

**BioTrade Principle 4: Socio-economic sustainability (productive, financial and market management)**

BioTrade Principle 4 follows up on the earlier Principles. In that, it calls for the BioTrade activities to deliver on its commitments to conservation and sustainable use of biodiversity, and to fair and equitable sharing of benefits. The Principle further states that these activities must be based on solid business policies, procedures and practices and requires organizations working with BioTrade activities to ensure necessary business systems are in place and in line with the industry and market requirements. The linkages can be seen in Figure 12.

**Figure 12** Voluntary Sustainability Standards linkage with BioTrade Principle 4



The rather high linkage with criterion 4.2 can be explained by the fact that it specifies that organizations should have a quality management system in line with its market requirements. Among the selected VSS for this study, for example, Fair for life, GSTC, ProTerra, Rainforest Alliance, SAI Platform, and UEBT have general requirements for Quality Policy as per which they mention the requirement to have a quality management system (QMS).

The criterion 4.3 refers to “A system is in place to allow for supply chain traceability up to the country of origin and/or the place of collection, harvesting and/or cultivation”. This also has 8 (Fair for life, Fairtrade Standard for Hired Labour, FSC, IFOAM, ProTerra, SAI Platform, UEBT and Rainforest Alliance) out of the 11 selected VSS linked. Supply chain traceability is an important concern which VSS aim to address. Traceability is one of the main aspects of the sustainability claims made by VSS systems wherein they aim to provide the proof of ‘chain of custody’ of products. This aspect of traceability is what VSS try to incorporate through audits, labels and other means (Komives and Jackson, 2014; Castka et al., 2020).

The low linkage observed with criterion 4.1 can be explained by the fact that it does not have a direct relation to the work that VSS do and in some sense lies beyond the scope of standard systems. The criterion says “The organization demonstrates the integration of these Principles and Criteria in its business and supply chain management.” This might not have many linkages yet because not all VSS directly incorporate the BioTrade Principles, even though some might have some indirect links.

### ***BioTrade Principle 5: Compliance with national and international legislation***

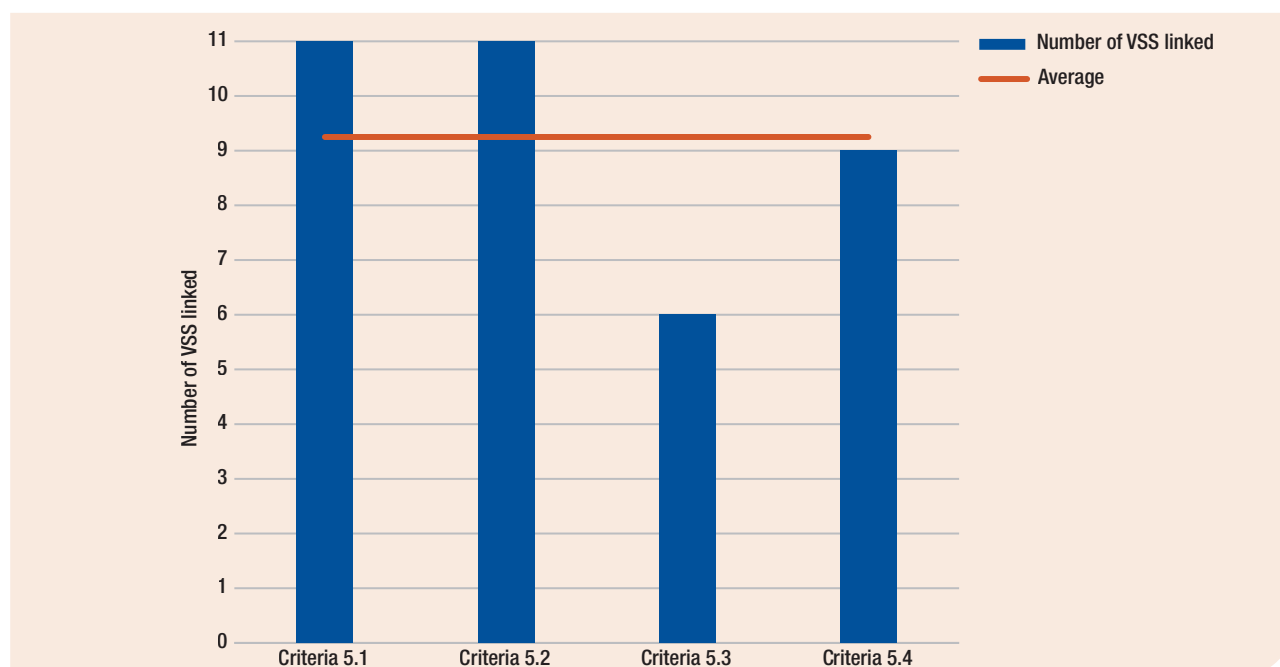
This Principle reflects that UNCTAD BioTrade Principles and Criteria are built to align with applicable rules under local, national, and international legislation and, by outlining these obligations, it seeks to facilitate legal compliance.

Selected VSS have rather high linkages with this Principle (see Figure 13). This can be drawn from prior research on VSS which illustrates that VSS do not create new rules but rather operationalize existing international commitments as they are strongly rooted in existing international law and regulations (Marx, 2017). This also explains why all of the 11 selected VSS align with criteria 5.1 and 5.2 which require organizations to “comply with applicable legal and administrative requirements at local, national, and regional levels” and calls for activities to “respect the principles and obligations of relevant international agreements and instruments.”

Research on VSS also suggests that they, in most cases, specify outcomes by either setting resource use or output targets; or by requiring compliance with local laws. The reference to local laws allows standard setters to leverage local rules for identifying adequate performance outcomes for local conditions and settings (Potts et al., 2017).

The standards however have fewer linkages with criterion 5.3 which focuses on marine and coastal biodiversity activities and respect the obligations specified under the principles and obligations established under the United Nations Convention on Law of the Sea (UNCLOS),<sup>16</sup> United Nations Fish Stocks Agreement (UNFSA)<sup>17</sup>, and any subsequent instrument on biodiversity in areas beyond national jurisdiction, as well as relevant conventions and instruments adopted under the UNCTAD, FAO, UN Environment, IMO, and ILO. This does not necessarily reflect a gap in the VSS requirements but is only reflective of the sample set of 11 VSS which has largely land-based VSS.

**Figure 13** Voluntary Sustainability Standards linkage with BioTrade Principle 5



<sup>16</sup> United Nations Convention on Law of the Sea (UNCLOS): [https://www.un.org/depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf).

<sup>17</sup> United Nations Fish Stocks Agreement (UNFSA): [https://www.un.org/ga/search/view\\_doc.asp?symbol=A/CONF.164/37](https://www.un.org/ga/search/view_doc.asp?symbol=A/CONF.164/37).

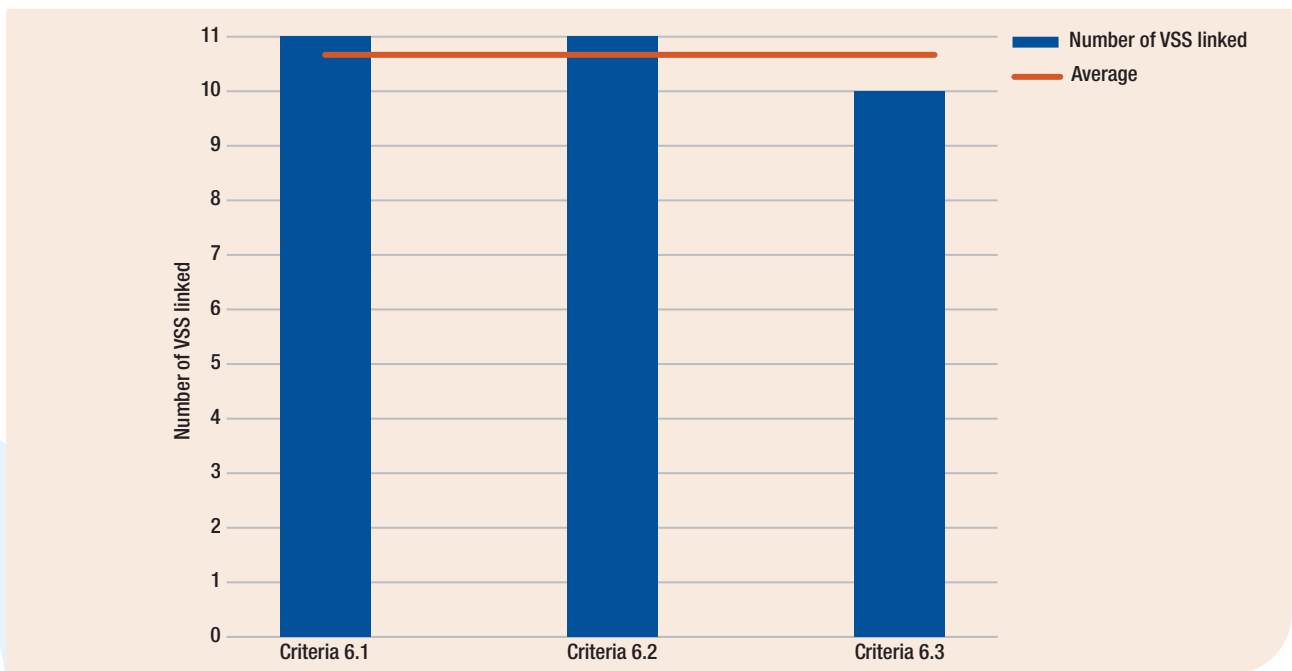
**BioTrade Principle 6: Respect for the rights of actors involved in BioTrade activities**

This Principle is focused on actors involved in BioTrade activities and aims to promote and protect rights of these actors. These include fundamental human rights, working rights, and rights of vulnerable groups.

This Principle sees maximum linkages with the 11 VSS under study (Figure 14). The requirements of most VSS refer to a range of human rights/labour rights and mandate the abolition of forced and child labour (Blankenbach, 2020). It has also been argued that VSS develop labour standards on the basis of the same norms and principles which can be found in trade agreements and have a comprehensive institutional framework to monitor compliance with these standards, which allows them to foster labour rights (Marx et al., 2017).

This aspect is thus reflected in the fact that all 11 selected VSS align with criteria 6.1 and 6.2. The standards, as mentioned in previous section, also incorporate ILO standards in their requirements. From among the VSS, Fairtrade Standard for Hired Labour, FSC, Rainforest Alliance and UEBT also have requirements on occupational health and safety, including safety at work. According to ILO estimations<sup>18</sup>, more than three million workers die each year due to work related accidents and millions are injured. Having health and safety requirements should therefore see an increased uptake across VSS. 7 out of the 11 VSS also lay specific requirements for relating to provision of women’s rights at work.

**Figure 14 Voluntary Sustainability Standards linkage with BioTrade Principle 6**



18 [https://www.ilo.org/moscow/areas-of-work/occupational-safety-and-health/WCMS\\_249278/lang--en/index.htm](https://www.ilo.org/moscow/areas-of-work/occupational-safety-and-health/WCMS_249278/lang--en/index.htm).

### ***BioTrade Principle 7: Clarity on right to use and access to natural resources***

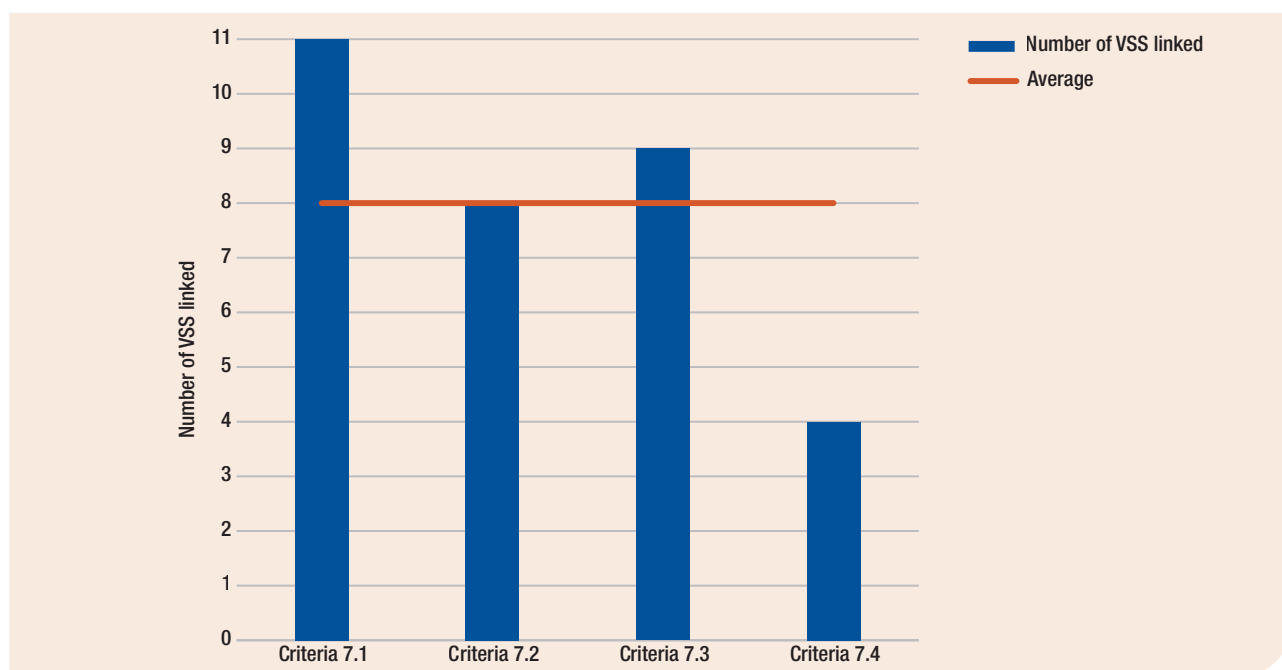
BioTrade Principle 7 mentions that all the BioTrade activities respect land tenure and rights to use of access to natural resources, as well as associated traditional knowledge. This Principle has criteria not just for actors involved in BioTrade activities, but also related communities.

The linkages of 11 selected VSS can be seen in Figure 15. For criterion 7.1, which is “The organization uses natural resources in compliance with all relevant laws and regulations and preventing any negative impacts on the health, safety and wellbeing of surrounding populations”, all 11 VSS have links and FSC, GSTC, ProTerra, Rainforest Alliance (2020), SAI Platform, and UEBT also have requirements that mention that activities do not adversely affect local communities’ access to livelihoods.

Nine out of the 11 VSS also link with criterion 7.4, which calls for respect for the rights of indigenous peoples and local communities over land, natural resources, and knowledge. While there has been recent work on the examine the issue of Indigenous Peoples’ right to Free, Prior and Informed Consent, or FPIC<sup>19</sup>, there is still lack of robust evidence. Extant research in this area is also sparse and more focused on the mining sector (Wilson, 2020). Legal land rights allow for making sure that land was acquired with consent and this protects secure and equal access to land which further has related benefits like reducing poverty, and increased prosperity (Elder et al., 2021).

From among the criteria, least number of linkages are found with criterion 7.4. This criterion mentions “The organization does not threaten the food diversity or food security of producers and their local communities.” The low linkages might be explained by the fact that VSS do not directly contribute to food security but rather indirectly through other efforts like improving wages, gender equality, and access to land (Schleifer and Sun, 2020).

**Figure 15** Voluntary Sustainability Standards linkage with BioTrade Principle 7



<sup>19</sup> Please see <https://www.equitableorigin.org/2017/11/enabling-free-prior-and-informed-consent-through-voluntary-standards/> for more information on the work.

## 6

## Discussion and recommendations

Based on the results and analysis, it is clear that there is a rather high focus on biodiversity conservation, among the selected VSS. However, it must be noted that while they are adopting requirements that focus on the restoration and protection of biodiversity, in line with the BioTrade Principle 1, the impacts of implementation of such requirements will largely depend on the actual outcome that can demonstrate their ability to protect ecosystems. VSS can implement these by including specific requirements related to monitoring any biodiversity loss and ensuring that these are mandatory requirements; and offering and ensuring market advantage to the ones who comply with the standards. This will in turn encourage the use of biodiversity-friendly policies and practices across markets.

Moreover, as it is with any other VSS requirement, any biodiversity-protection requirement's ability to protect and conserve might be limited, given the nature of VSS (voluntary) and limitations with respect to sectoral coverage. This then calls for an enabling policy environment where VSS practices and requirements can fully contribute to sustainable economic, social and environmental development whilst also positively influencing the creation of robust policy and regulatory frameworks. BioTrade is an 'incentive measure' to conserve and sustainably use biodiversity (Article 11, CBD) and can serve this purpose. Promoting implementation of BioTrade at the national level creates an enabling policy environment supportive of VSS, which will then impact the country's capacity to comply with its obligations under the CBD and other MEAs. BioTrade, might just prove to benefit alongside VSS, with the possibility to serve across countries, sectors and provide credible impacts since it is being used in practice already.

In addition, there were very few linkages found with BioTrade criterion 2.3 which relates to strengthening resilience and the adaptive capacity of species and ecosystems to climate-related hazards and natural disasters. This can be an opportunity for VSS to illustrate impact in this domain and offer credible solutions to meet these challenges. It is also important to address this issue since climate change is one of the biggest threats to biodiversity. It is evident from results of Principle 2 that VSS have a focus on sustainable use, conservation and protection of biodiversity. Practices promoted by VSS, like soil conservation, waste reduction, and reduction in energy consumption, certainly promote a sustainable use of biodiversity related products on an overarching level, which is also cited in the BioTrade Principle 2. It must be reiterated that the analysis presents linkages and there is a further need to establish whether these are meaningful measures and contributions. However, VSS, more than often, try to also provide for proof of this via inclusion of practices like segregation and traceability.

This further connects to the point of strong linkages that were observed between 11 selected VSS and BioTrade Principle 3, which calls for transparency across value chains. This also can be understood in conjunction with the BioTrade Principle 4 which promotes fair and equitable sharing of benefits through ensuring robust business systems and traceability along the supply chain. Research indicates that broadly, VSS have traceability systems in place. In fact, in research conducted on VSS in the ITC Standards database covering 220 standards, around 50% publicly share the certification applications and forms, standard development procedures and policies; and 61% provide information on certified operations accessible to stakeholders, and 88% provide public access to their standard documents (Fiorini et al., 2019).

Since VSS allow some form of traceability, it might be beneficial for BioTrade to align with VSS to incorporate traceability aspect. Moreover, in some instances, it is observed that VSS offer their compliers better market access and price premiums. In cases where this ties up with a use and trade of biodiversity related goods, VSS can be leveraged to generate market benefits and foster the BioTrade principles, via enabling access and benefit sharing (ABS). However, while this can be a tangible benefit, it is worth noting that explicit references to ABS are rather an uncommon occurrence in VSS requirements. It might also prove beneficial in such cases to align with the BioTrade principles, since it is also focusing on achieving the same goals. Further, since ABS measures are relatively less established and less known, for example in comparison to labour rights, knowledge dissemination on these ABS rights for providers (including countries and value chain actors) under the Nagoya Protocol should be improved and expanded.



For the remaining two BioTrade Principles 6 and 7, the results also showed rather high linkages with the 11 selected VSS. In fact, the maximum number of linkages with Principle 6 which is based on respecting the rights of actors involved in BioTrade activities. This also comes from the fact, as explained earlier, that many VSS are: a) built upon existing legislations and rules and do not intend to create new ones and b) have in their requirements the need to comply with fundamental human and/or labour rights. If these claims from VSS come with robust audits and evidence of impact, these can be a very good fit for the BioTrade Principles and complements the BT Principle protecting the rights and well-being of its practitioners and the community surrounding them.

**Table 7 Potential areas where Voluntary Sustainability Standards can aid in BioTrade work**

BioTrade Principles	Potential Contribution/Benefit of VSS based on the sample of VSS studied
Minimum Eligibility Requirements	VSS, especially the ones active in the agriculture sector, can enable safeguarding ecosystems by mandating non-GMO activities, restoration of high-biodiversity ecosystem, protection of endangered species, and protection of human rights.
BioTrade Principle 1: Conservation of biodiversity	VSS can enable biodiversity conservation and protection by ensuring that sustainable production practices are in place, many of these practices are aimed towards various components of biodiversity protection, restoration and conservation. Further they allow to mainstream products that are in-line with this objective and are biodiversity friendly, which also fosters this objective.
BioTrade Principle 2: Sustainable use of biodiversity	VSS have requirements that promote sustainable consumption, which foster sustainable use. Furthermore, through their labels and other traceability/accountability mechanisms, they can be of use to BioTrade to ensure that there is no cross-contamination and that trade in biobased products is happening in a sustainable manner.
BioTrade Principle 3: Fair and equitable sharing of benefits derived from the use of biodiversity	VSS, through promotion of sustainable production practices, and implementation of practices like price premiums, create benefits for multiple stakeholders (including farmers) by enabling production efficiency and market access while improving global food security (consumer and society benefits).
BioTrade Principle 4: Socio-economic sustainability (productive, financial and market management)	Most VSS have a quality management system in place, and these can be leveraged for fostering this BioTrade principle.
BioTrade Principle 5: Compliance with national and international legislation	Most VSS requirements are already rooted in the existing laws and regulations and the same can be observed from the linkages of 11 VSS selected for this report. This can help aid BioTrade and certifiers complying with VSS would also be furthering this BioTrade principle.
BioTrade Principle 6: Respect for the rights of actors involved in BioTrade activities	Many VSS mandate compliance with fundamental worker rights, equality for all workers and provision of fair working conditions.
BioTrade Principle 7: Clarity on right to use and access to natural resources	Many VSS incorporate requirements that call for Free, Prior and Informed Consent of local communities. This aligns with some criteria in the BioTrade Principle 7.

Further, it can be beneficial for VSS to align with BioTrade P&C, especially in sectors where both are mutually existent. As BioTrade P&C are not standards, a certificate or label is not used. That being said, implementing them it ensures that companies/organization are contributing to biodiversity conservation especially in the sense that:

- BioTrade P&C are one of the very few guidelines that **not only** explores how to mitigate biodiversity loss **but also biodiversity recovery and resilience**.
- P&C are flexible, **which ensures** that biodiversity conservation is applicable across different contexts and sectors.
- P&C are in line with and abide by other environmental global conventions and agreements (CBD, CITES, etc)
- By adapting the P&C, organizations can not only make their products biodiversity friendly, but it will make it more resilient because the P&C can help build more sustainable and durable supply chains.
- P&C is not just a theoretical concept, but it is based on real experiences from **actual practitioners** who implement BioTrade and its guidelines **on the ground for almost two decades**

This alignment can benefit VSS through:

- Providing stronger support for biodiversity protection and better implementation of conservation, protection and restoration practices.
- Supporting VSS in development of effective requirements, in line with CBD, and other, especially in areas where there is currently less focus of VSS.
- Ensuring there is more credibility and accountability in claims that VSS make by aiding in providing evidence.
- Incentivizing VSS members/practitioner as adoption of BioTrade P&C is an ‘incentive measure’ for the sustainable use and conservation of biodiversity (Art.11 of the CBD).
- Boosting research to sustainably use and conserve biodiversity as the BioTrade P&C and VSS can jointly support a country to comply with its national ABS legislation obligation under Art. 8 of the Nagoya Protocol.



# 7

## Conclusion

In recent years, given the growing concern and importance of biodiversity protection, there has been a rapid increase in demand from businesses and governments for tools that can aid in accounting for their impacts on and the value of biodiversity and the goods and services derived from nature. This is also driven by multiple factors which include, but are not limited to, regulations, consumer awareness on sustainability issues, market changes, reputational risks, and ability to access finance.

With the increased prominence of VSS, a better understanding of their contribution to initiatives like BioTrade can benefit multiple stakeholders, including policymakers, regulators, governments, and businesses. An alignment with BioTrade P&C helps understand the contribution of VSS to biodiversity and the trade of products related to biodiversity.

Our study of 11 selected VSS provides an insight into the growth and alignment of these initiatives with relevance to broader biodiversity conservation and protection goals and in particular to the objectives set forth by the UNCTAD BioTrade Initiative. VSS offer private governance avenues that aim to foster positive sustainability outcomes. Even though it is broadly argued that VSS have mechanisms of operation beyond their requirements, it is still true that the VSS requirements do provide a first insight into the evidence of what is being prioritized by these VSS systems, with respect to key issues like biodiversity. And this is the case for understanding their alignment with the BioTrade Principles.

In terms of linkages among the VSS reviewed, strongest alignment was observed with the Principle on Respect for actors' rights and Conservation of biodiversity. The link to actors' rights reflects on the aspect that VSS do cover, in their sustainable production practices, the need for presence of fundamental rights and also aim to establish equality amongst all stakeholder involved, especially among the plausible entities wanting to gain certification. Further, the primacy with the principle on biodiversity conservation only reflects a deep alignment between the VSS and the efforts being undertaken to promote biodiversity-friendly practices and trade in commodities that also support the same. Even though the standards reviewed revealed relatively broad coverage of key issues and objectives under UNCTAD's BioTrade P&C, it is also true that there were fewer linkages with criteria (and Principles) that are BioTrade specific (Principle 4.1), as well as requirements on the fair and equitable sharing of benefits.

Sustainability standards' management decisions are oriented by compliance with the standard, achievement of certification and often continuous improvement. Thus, more research, greater sample set of VSS, and impact-based methodologies will be needed to provide robust alignment and a better use of complementarity of the BioTrade Initiative and VSS. Nonetheless, this analysis provides a synthesis of an alignment between the two- information that can be useful as businesses across the globe face the dilemma of choosing from the multiple tools and processes to evaluate and manage their relationship with biodiversity, and their role in its sustainable use and protection.

# 8

## Future research

The analysis in this report uses the requirements set forth by the selected Voluntary Sustainability Standards. It must be noted that this analysis seeks to provide an introductory indication of the breadth of the links with BioTrade MER and P&C, i.e., the number of issues addressed by the VSS requirements in accordance with BioTrade. VSS requirements also have a stringency level or a degree of obligation, which shows in what amount of time the specific requirement is to be met by the specific VSS. While the analysis in this report captures the breadth of the VSS, it does not cover the intensity of compliance, insofar as it does not include the analysis of the degree of obligation of the VSS requirements. Since this ranges from “immediate requirements” (which are to be met to get certified by the VSS) to “within 5 years” (to be met within 5 years but the certification will still be given despite these not being met at the time of application) to even “recommendation” (which means that they do not even need to be met to get certified by the VSS). It is important to analyze the linkage based on the degree of obligation in order to gain a better understanding of the linkage of the selected VSS with BioTrade. This is an area of research that can be explored further from the analysis presented in this report.

It must also be noted that the analysis done in this report is based on the desktop research on the requirements of the VSS vis-à-vis BioTrade P&C and not on actual evidence on the ground. This method has provided a snapshot of the actual and/or potential linkages between VSS and BioTrade. This cannot be and should not be considered a proxy for research done on the actual outcomes of VSS. To further strengthen this analysis going forward, the work being done by VSS must be supplemented by the impact reports available.

Lastly, the study focuses on a selected sample set of VSS, and more research is needed based on a larger sample set, to assess better the alignment of VSS and BioTrade, and identify mutually reinforcing opportunities.



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# Annex

## Annex 1. Keywords for BioTrade Minimum Eligibility Requirements and Principle and Criteria

### Minimum Eligibility Requirements

Main keywords or phrases	Alternative wording
Material or service derived from terrestrial biodiversity	Land/inland biodiversity, species, genetic resources, habitats and/or ecosystems
Material or service derived from marine and other aquatic biodiversity	Coastal biodiversity, marine species, marine ecosystems, aquatic ecosystems or species or genetic resources or habitat
Prohibits extraction of minerals, metals, oil, gas, generation of energy	<ul style="list-style-type: none"> <li>- Minerals (for a list of common minerals <a href="#">see here</a>)</li> <li>- Metals (List of metals <a href="#">see here</a>)</li> <li>- Petrol/oil</li> <li>- Hydropower</li> <li>- Natural gas</li> <li>- Biomass</li> <li>- Fracking</li> <li>- Hydroelectric</li> <li>- Geothermal</li> <li>- Coal</li> </ul>
(Prohibits) genetically modified organisms	
(Prohibits introduction or inducing) invasive species	Non-native, alien, introduced, non-endemic, exotic
(Prohibits activities of) CITES Appendix I species National and Regional endangered species list	<a href="https://cites.org/eng/app/appendices.php">https://cites.org/eng/app/appendices.php</a>
(Prohibits) Agrochemicals banned by: <ul style="list-style-type: none"> <li>- Stockholm Convention on Persistent Organic Pollutants (POPs),</li> <li>- Rotterdam Convention</li> <li>- World Health Organization (WHO) Categories I and II</li> </ul>	

**BioTrade Principles & Criteria (P&C)**

Main keywords or phrases	Alternative wording
<b>Principle 1</b>	
Conservation of biodiversity	Protect, maintain, restore, improve, foster, regenerate or enhance biodiversity, ecosystems, stocks (related to marine/fish), ecological processes, ecosystem services, and/or habitats
Genetic variability of flora, fauna and/or micro-organisms	<ul style="list-style-type: none"> <li>- Genetic diversity</li> <li>- Plant/species diversity</li> <li>- Variability of species/plants</li> </ul>
Sustainable management of biodiversity	<ul style="list-style-type: none"> <li>- Conservation plan</li> <li>- Restoration</li> <li>- Sustainable use of biodiversity</li> <li>- Sustainable management plan (national, regional and/or local)</li> </ul>
<b>Principle 2</b>	
Sustainable use of biodiversity	Adaptive management practices, trainings, monitoring, consistent improvement
Good practices	Good, environmental, sustainable practices on collection, harvesting, cultivation, breeding or sustainable tourism
Prevent/mitigate negative impacts to the environment	<p>Prevent/mitigate/avoid/reduce</p> <ul style="list-style-type: none"> <li>- degradation of soil/air/water quality</li> <li>- agrochemicals (including pesticides, herbicides, harmful chemicals)</li> <li>- impacts on flora and fauna, global climate</li> <li>- pollution and waste disposal</li> <li>- energy consumption</li> </ul>
Climate resilience	<ul style="list-style-type: none"> <li>- Activities against climate change</li> <li>- Climate change adaptation and mitigation</li> <li>- Strengthen resilience against climate change</li> <li>- Resilient against climate related hazards, natural disasters</li> <li>- Resistance to climate shocks</li> <li>- Preparedness for climate change</li> <li>- Adaptive capacity</li> <li>- Prepare/reduce/recover/adapt to climate impact/climate change/climate hazards</li> </ul>



Main keywords or phrases	Alternative wording
<b>Principle 3</b>	
Fair and equitable sharing of benefits	<ul style="list-style-type: none"> <li>- Access and Benefit Sharing (ABS)</li> <li>- Nagoya Protocol</li> <li>- Fair and/or equitable sharing of the utilization of genetic resources and their derivatives, traditional knowledge</li> <li>- Fair and/or equitable sharing of the utilization of biodiversity, biological resources and their derivatives, species and/or ecosystems, traditional knowledge,</li> <li>- Comply with contractual arrangements</li> <li>- Respect of mutually agreed terms, prior informed consent</li> <li>- Abide and respect internationally recognized agreements</li> </ul>
Transparent activities in the supply chain	<ul style="list-style-type: none"> <li>- Provide access to information to all stakeholders, supply and/or value chain actors</li> <li>- Engagement in dialogue among stakeholders, supply and/or value chain actors</li> <li>- Partnerships (long-term, mutually beneficial)</li> <li>- Mutually beneficial activities among stakeholders, supply and/or value chain actors</li> </ul>
Fair price	<ul style="list-style-type: none"> <li>- Prices taken into account in terms of costs of value chain activities and good practices</li> <li>- Supporting of livelihoods</li> <li>- Equitable price</li> <li>- Fair market value</li> <li>- Just price</li> </ul>
Sustainable local development	<ul style="list-style-type: none"> <li>- Community-level sustainable development</li> <li>- Community enhancement</li> <li>- Local sustainable development</li> <li>- Respect and support sustainable development</li> </ul>
<b>Principle 4</b>	
Socio economic sustainability	<ul style="list-style-type: none"> <li>- Solid business policies, procedures, and practices</li> <li>- Business systems to function in line with industry and market requirements</li> <li>- Fair business activities</li> <li>- Sustainable supply chain management</li> </ul>
Quality management system	Set of policies and procedures to plan and execute activities in line with market and consumer requirements
Supply chain traceability	<ul style="list-style-type: none"> <li>- Tracing the country of origin</li> <li>- Place/geographical location of collection/harvesting/cultivation/production/capture or introduction (for marine species)</li> <li>- Supply chain transparency</li> <li>- Documentation/registration/recording system</li> </ul>

Main keywords or phrases	Alternative wording
<b>Principle 5</b>	
Legal compliance	Compliance with local, national and international legislation Documentation/records on legal access to and use of biodiversity (e.g., permits, quotas, others)
Respect of international agreements	Compliance with international/multilateral: <ul style="list-style-type: none"> <li>- Treaties</li> <li>- Agreements</li> <li>- Instruments</li> <li>- Conventions</li> <li>- Declarations</li> </ul>
<b>Principle 6</b>	
Respect of human rights	<ul style="list-style-type: none"> <li>- Promote, protect rights of actors along their supply/value chain</li> <li>- Prevention, mitigation, remediation</li> </ul>
Respect of workers' rights	<ul style="list-style-type: none"> <li>- Adequate working conditions</li> <li>- Prevent negative impacts on the health and safety of workers</li> <li>- Right to decent work</li> <li>- Freedom of association</li> <li>- Protection of discrimination</li> <li>- Right to a safe workplace</li> <li>- All local and national laws related to labor</li> <li>- Fair retribution</li> </ul>
Respect rights of indigenous people and local communities	<ul style="list-style-type: none"> <li>- Respect the rights of indigenous peoples and local communities</li> <li>- Rights of women, minorities, children, disabled, elderly, etc.</li> <li>- Rights of vulnerable people</li> <li>- Protection against physical, psychological, social risks, violence, poverty, social exclusion, discrimination</li> </ul>

Main keywords or phrases	Alternative wording
<b>Principle 7</b>	
Respect of tenure rights	<ul style="list-style-type: none"> <li>- Recognition of land/inland/marine/aquatic resources</li> <li>- Entitlement to tenure/use/access to natural resources</li> </ul>
Right to use of access to natural resources	<ul style="list-style-type: none"> <li>- Ownership and right of tenure/use of natural resources</li> <li>- No negative impact to natural resources and/or indigenous or local communities (e.g., food security)</li> <li>- Respect of indigenous people/local communities rights over land and natural resources</li> </ul>
Respect of traditional knowledge	<ul style="list-style-type: none"> <li>- Prior informed consent (PIC)</li> <li>- Mutually agreed terms (MAT)</li> <li>- Respect of indigenous people/local communities rights over (associated) traditional knowledge</li> <li>- Respects relevant laws (customary, local, national international)</li> </ul>
Respect of natural resources	<ul style="list-style-type: none"> <li>- Compliance of laws and regulation of the area where activity take place</li> <li>- Prevention of negative impact of health, safety, wellbeing of local and surrounding populations</li> </ul>
Does not threaten food diversity or food security	Adequate food supply for producers and local communities.

## Annex 2. Voluntary Sustainability Standards criteria selection (according to ITC standards Map) corresponding to BioTrade P&C and Minimum Eligibility Requirements

### Minimum Eligibility Requirements – Terrestrial activities

Criteria
Criteria on soil contamination
Principles and criteria for the conversion of agriculture land to non-agriculture purposes
Criteria relating to identifying risks and impacts on ecosystem services
Criteria for the monitoring and protection of High Conservation Value Areas
Criteria related to legally protected and internationally recognized areas for their biodiversity
Criteria on biodiversity hotspots
Criteria to prevent deforestation
Criteria on general prohibition of use of GMOs / genetically modified varieties
Criteria on the protection of ecosystems against invasive species
Criteria on maintaining or protecting rare, threatened, or endangered ecosystems
Criteria on protection of rare, endangered, or threatened species and their habitats
Criteria on rare, threatened, or endangered wildlife species
Criteria for the conversion of forests into production lands
Criteria on prohibition of use of hazardous chemicals (as defined by WHO 1A and B, 2 and the Stockholm and Rotterdam conventions)
Criteria on respect list of prohibited chemicals as harmful or a risk to the environment
Criteria on prohibition of use of hazardous chemicals (as defined by PAN International List of Highly Hazardous Pesticides and REACH Convention)
Criteria on prohibition of use of any pesticides and other related chemical substances
Criteria on human rights: general principle
Criteria on policies and procedures addressing human rights
Criteria on setting up procedures to manage basic labour rights in the workplace
Criteria on the prohibition of monetary deposits, financial guarantees, or retention of personal possessions
Criteria on illegal/excessive deductions or fees (incl. Recruitment fees)
Criteria related to worst forms of child labour (ILO 182)
Criteria on non-discrimination at work (ILO 111)
Criteria related to child labour and minimum age (ILO 138)
Criteria on voluntary employment – No forced labour (ILO 29 & 105)
Criteria on assessment of impacts of local activities on local human rights such as health, safety, and security
Criteria on impact assessment for local communities' access to basic services such as electricity, water, sanitation, etc.

Criteria
Criteria on compliance with local zoning and protected or heritage area regulations and laws
Ethics: anti-corruption and bribery principles and criteria
Criteria on corruption / bribery prevention
Criteria on illegal/excessive deductions or fees (incl. Recruitment fees)
Criteria on anti-bribery – Gifts, hospitality, and expenses
Criteria relating to verification of business license and legality of activities / settlement

### Minimum Eligibility Requirements – Marine or Blue BioTrade activities

Criteria
Specific criteria for wild catch fisheries: procedures regarding management and reduction of discards - non target species
Specific criteria for wild catch fisheries: prohibition of destructive fishing methods such as dynamite and poison
Specific criteria for wild catch fisheries: sustainable exploitation of marine resources including restoration of overfished and depleted stocks
Criteria on natural wetlands maintained in undrained conditions
Specific criteria for aquaculture: polyculture
Specific criteria for aquaculture: analysis of water quality
Specific criteria for aquaculture: prohibition of prophylactic use of antimicrobials
Criteria on general prohibition of use of GMOs / genetically modified varieties
Criteria on rare, threatened, or endangered wildlife species
Criteria on the protection of ecosystems against invasive species
Criteria to prevent deforestation
Principles and criteria for the conversion of agriculture land to non-agriculture purposes
Criteria for the conversion of forests into production lands
Criteria on biodiversity hotspots
Criteria related to legally protected and internationally recognized areas for their biodiversity
Criteria on human rights: general principle
Criteria on policies and procedures addressing human rights
Criteria on setting up procedures to manage basic labour rights in the workplace
Criteria on the prohibition of monetary deposits, financial guarantees, or retention of personal possessions
Criteria on illegal/excessive deductions or fees (incl. Recruitment fees)
Criteria related to worst forms of child labour (ILO 182)
Criteria on voluntary employment - No forced labour (ILO 29 & 105)
Criteria related to child labour and minimum age (ILO 138)

Criteria
Criteria on non-discrimination at work (ILO 111)
Criteria relating to women's rights at work
Criteria relating to sexual exploitation / harassment
Criteria on assessment of impacts of local activities on local human rights such as health, safety, and security
Criteria on impact assessment for local communities' access to basic services such as electricity, water, sanitation, etc.
Criteria on compliance with local zoning and protected or heritage area regulations and laws
Ethics: anti-corruption and bribery principles and criteria
Criteria on corruption / bribery prevention
Criteria on anti-bribery - Gifts, hospitality, and expenses
Criteria relating to verification of business license and legality of activities / settlement

### BioTrade Principle 1

- 1.1** Activities contribute to maintaining, restoring, or enhancing biodiversity, including ecosystems, ecological processes, natural habitats, and species, particularly threatened or endangered species.

Criteria
Criteria on soil quality, productivity, and biodiversity
Criteria on natural wetlands maintained in undrained conditions
Criteria on safeguards against fragmentation of ecosystems/habitats
Criteria on habitat/eco-system restoration/ rehabilitation
Criteria on maintaining, restoring, prioritizing native species
Criteria on wildlife - general principle
Criteria on rare, threatened, or endangered wildlife species
Criteria on biodiversity hotspots
Criteria for no net loss in biodiversity
Criteria for net positive gain in biodiversity
Criteria for monitoring / preserving aquaculture density/ diversity
Specific criteria for wild catch fisheries: procedures regarding management and reduction of discards - non target species
Criteria to prevent deforestation
Criteria on regeneration of tree cover after logging
Criteria to remediate deforestation
Criteria to enhance conservation of forests
Criteria on restricted use of other substances which have impact on human health and the environment
Criteria on natural wetlands and/or watercourses affected by production

Criteria
Criteria on maintaining or protecting rare, threatened, or endangered ecosystems
Criteria on protection of rare, endangered, or threatened species and their habitats
Specific criteria for aquaculture: polyculture
Criteria on natural wetlands and/or watercourses affected by production
Specific criteria for aquaculture: analysis of water quality
Specific criteria for aquaculture: prohibition of prophylactic use of antimicrobials

1.2 Genetic variability of flora, fauna, and micro-organisms (for use and conservation) is maintained, restored, or promoted.

Criteria
Criteria on diversity of planting materials, seeds, and crops genotypes
Criteria for monitoring / preserving aquaculture density/ diversity
Criteria on wildlife - general principle
Specific criteria for wild catch fisheries: procedures regarding management and reduction of discards - non target species
Specific criteria for aquaculture: polyculture
Specific criteria for aquaculture: analysis of water quality
Specific criteria for aquaculture: prohibition of prophylactic use of antimicrobials
Criteria to prevent deforestation
Criteria on regeneration of tree cover after logging
Criteria to remediate deforestation
Criteria to enhance conservation of forests

1.3 Activities are aligned with national, regional, and/or local plans for sustainable management, conservation, and restoration of biodiversity, in coordination with the relevant authorities and actors involved.

Criteria
Criteria related to legally protected and internationally recognized areas for their biodiversity
Criteria on legal compliance: Harvest rights

## BioTrade Principle 2

2.1 The use of biodiversity is sustainable, based on adaptative management practices that advance the long-term viability of the biological resources used, and supported by training of workers and producers on good collection, harvesting, cultivation, breeding, or sustainable tourism practices.

Criteria
Criteria on soil quality, productivity, and biodiversity
Criteria on sustainable management and use of natural resources
Criteria for minimized impacts on wildlife populations
Criteria for monitoring / preserving aquaculture density/ diversity

Criteria
Specific criteria for wild catch fisheries: procedures regarding management and reduction of discards - non target species
Criteria on the monitoring harmful organisms by observations in the field or warning, forecasting and early diagnosis systems (e.g., traps)
Specific criteria for aquaculture: polyculture
Specific criteria for aquaculture: analysis of water quality
Criteria on workers awareness of procedures and best practices
Criteria on assessment of risks and impacts on water usage
Criteria on analysis and review of monitoring results
Criteria on staff training on sustainability issues (environment, social, economic, quality, culture, health, and safety...)
Criteria on soil contamination
Criteria on air quality / pollution monitoring
Criteria on soil erosion
Criteria on long term sustainability management plan / continuous improvement
Criteria on natural wetlands and/or watercourses affected by production
Criteria on sustainable timber harvesting
Criteria related to forest management plan (FMP) baseline objectives and assessment of current conditions (stockings, species, age classes of trees etc)
Criteria on chemical substances disposal/waste
Criteria on treatment of waste of chemical substances and related materials
Criteria on natural wetlands and/or watercourses affected by production
Criteria related to FMP results be incorporated in a consistent and replicable monitoring system
Criteria specifically defined in FMP as baseline indicators for monitoring of forests resources
Criteria on energy consumption monitoring / recording
Specific criteria for aquaculture: prohibition of prophylactic use of antimicrobials

**2.2** Measures are taken to prevent or mitigate negative environmental impacts of the activities, including in relation to flora and fauna; soil, air, and water quality; the global climate; use of agro-chemicals; pollution and waste disposal; and energy consumption.

Criteria
Criteria relating to identifying risks and impacts on ecosystem services
Criteria on protection of rare, endangered, or threatened species and their habitats
Specific criteria for wild catch fisheries: procedures regarding management and reduction of discards - non target species
Criteria on restricted use of other substances which have impact on human health and the environment
Criteria on the monitoring harmful organisms by observations in the field or warning, forecasting and early diagnosis systems (e.g., traps)
Criteria on training on chemicals handling and exposure
Criteria on chemical substances disposal/waste
Criteria on treatment of waste of chemical substances and related materials



Criteria
Criteria on use and management of hazardous chemicals
Criteria on waste disposal (incl. solid waste, non-solid waste, excl. hazardous waste)
Criteria on principles and practices on avoidance of uncontrolled waste landfilling
Criteria related to treatment and use of solid waste
Criteria on disposal of hazardous waste
Criteria related to prevention of run-off of waste chemicals, mineral and organic substances
Criteria to reduce use of energy resources
Specific criteria for aquaculture: prohibition of prophylactic use of antimicrobials
Criteria on assessment of environmental risks and impacts
Criteria on assessment of risks and impacts on water usage
Criteria on assessment of risks and impacts on soil resources condition
Criteria on assessment of risks and impacts on biodiversity in (as well as outside) management or production unit
Criteria on respect list of prohibited chemicals as harmful or a risk to the environment
Criteria related to appropriated tests of "toxicity"
Criteria on chemicals : selective & targeted application
Criteria for no net loss in biodiversity
Criteria on impact assessment policy for new production
Criteria on impact mitigation prior to production / harvesting operations
Criteria on wastewater quality management and treatment
Criteria to prevent deforestation
Criteria on Protection of non-target areas from agro-chemical use
Criteria on the principle to use pesticides as last resort only
Criteria on pollution incidents mitigation: procedures for risks monitoring and records keeping
Criteria on soil conservation
Criteria on post-production practices
Criteria on use of organic fertilizer
Criteria on energy consumption monitoring / recording
Criteria on soil contamination

**2.3** Activities contribute to measures that strengthen resilience and the adaptive capacity of species and ecosystems to climate-related hazards and natural disasters.

Criteria
Criteria on specific climate adaptation activities
Criteria on emergency response plans or strategies to climate related hazards

### BioTrade Principle 3

- 3.1** Activities are agreed upon and undertaken based on transparency, dialogue, and long-term partnerships between all organizations involved in the supply chain.

Criteria
Criteria on transparency across types of information obtained during audit (discrepancies between the interviews and types of records)
Criteria on engagement & consultation with local communities
Criteria on stakeholder analysis and engagement planning in E&S management systems
Criteria on availability of resources and access to information to support correct operation and control
Communication within the organisation and upstream/downstream in the chain
Criteria on access to technology and innovation
Criteria on fair competition
Criteria on Community Engagement

- 3.2** Prices take into account the costs of value chain activities (e.g., production, investment, R&D, marketing, commercialization, etc.) according to these Principles and Criteria and allow for a profit margin.

Criteria
Criteria on principles and practices to secure a Minimum Wage based on sector or region specificities
Criteria on principles and practices to secure a Living Wage based on sector or region specificities
Criteria on minimum price guarantees
Criteria on guarantee of premium on sales of certified product
Criteria on business operations economic viability: general principle
Criteria on distribution networks and access to markets / buyers

- 3.3** Activities contribute to sustainable local development, as defined by producers and their local communities.

Criteria
Criteria on supporting local communities economic development
Criteria on purchasing local materials, goods, products, and services

- 3.4** Activities comply with applicable legal requirements and/or relevant contractual arrangements on access to biodiversity, including biological and genetic resources, their derivatives and associated traditional knowledge, and on the fair and equitable sharing of benefits derived from their utilization.

Criteria
Criteria on traditional and cultural production practices
Criteria on traditional knowledge used for conservation and sustainable use of biodiversity
Criteria on compensation for use of local communities facilities (traditional knowledge, infrastructure access and benefits sharing)
Criteria for setting-up contracts with traders

- 3.5** In cases where there are no applicable legal requirements, utilization of genetic resources and associated traditional knowledge takes place with prior informed consent and mutually agreed terms.

Criteria
Criteria on traditional knowledge used for conservation and sustainable use of biodiversity
Criteria on traditional and cultural production practices

#### BioTrade Principle 4

- 4.1** The organization demonstrates the integration of these Principles and Criteria in its business and supply chain management.

Criteria
Criteria for supply chain responsibility (beyond primary production)
Criteria on Quality Management System: waste management system established and monitored for manufacturing non-food products (volume, toxicity, discharge)

- 4.2** The organization has a quality management system in line with its market requirements.

Criteria
Quality policy: general requirements
Criteria on quality: compliance to national and international legislation
Criteria on quality: risk assessment and hazard control procedures
Criteria on quality: documentation and monitoring procedures
Criteria on quality: technical specifications
Criteria on testing quality of inputs to production
Criteria related to testing quality of final products
Criteria on Quality Management System: Procedures established and monitored
Criteria on Quality Management System: Customer focus performance indicators
Criteria on Quality Management System: Control process established and documented
Criteria on environmental management instruments like EMAS or ISO 14001
Criteria on Environment and Social (E&S) Management Systems: general principles
Criteria on Quality Management System: waste management system established and monitored for manufacturing non-food products (volume, toxicity, discharge)

- 4.3** A system is in place to allow for supply chain traceability up to the country of origin and/or the place of collection, harvesting and/or cultivation.

Criteria
Criteria on traceability of inputs / varieties and records of materials used
Criteria on non-food production - Traceability system established and monitored
Criteria on non-food production - Traceability records maintained through entire chain of production
Criteria on traceability system established and monitored

Criteria
Criteria on recording relevant information related to received products and suppliers
Criteria on implementing an internal traceability system
Criteria on traceability of inputs / varieties and records of materials used

### BioTrade Principle 5

- 5.1.** The organization complies with applicable legal and administrative requirements at local, national, and regional levels. If measures required by local, national, or regional legislation are less strict than those required by these Principles and Criteria, the organization meets the stricter requirements.

Criteria
Criteria on verification of mandatory certificates and permits related to water use
Ethics: compliance to national, regional, and international legislation
Criteria on compliance to national and regional environmental laws and regulations
Criteria on quality: compliance to national and international legislation
Criteria on safety at work - legal compliance
Criteria on employment / hiring practices - legal compliance with national regulation
Criteria on child labour legal compliance policy
Criteria on workplace safety
Criteria on obligation to comply with relevant local, regional, and national laws and regulations (including legal land tenure, title, having legal rights to use the production or management unit)
Criteria on child labour legal compliance policy
Criteria relating to verification of business license and legality of activities / settlement

- 5.2.** Activities respect the principles and obligations of relevant international agreements and instruments, such as the CBD, the Nagoya Protocol, the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Bonn Convention on Migratory Species (CMS), the International Labour Organization (ILO) Conventions, the United Nations Declaration on the Rights of Indigenous Peoples, and the United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas.

Criteria
Criteria to ensure adherence to international and national conventions on biodiversity and best practices (CITES, CBD, CMS, CCD, among others)
Criteria related to worst forms of child labour (ILO 182)
Criteria on non-discrimination at work (ILO 111)
Criteria on freedom of association (ILO 87)
Criteria on collective Bargaining (ILO 98)
Criteria on occupational health and safety, as defined in ILO 155
Criteria relating to safety at work (ILO 184)
Criteria related to equal remuneration (ILO 100)

Criteria
Criteria relating to indigenous peoples as defined in ILO convention 169
Criteria on compliance to International Conventions
Criteria relating to establishment of a code of conduct for local and indigenous communities
Criteria related to child labour and minimum age (ILO 138)
Criteria on voluntary employment - No forced labour (ILO 29 & 105)

- 5.3. When dealing with marine and coastal biodiversity, activities respect the principles and obligations established under the United Nations Convention on Law of the Sea (UNCLOS), United Nations Fish Stocks Agreement (UNFSA), and any subsequent instrument on biodiversity in areas beyond national jurisdiction, as well as relevant conventions and instruments adopted under the United Nations Conference on Trade and Development (UNCTAD), Food and Agricultural Organization of the United Nations (FAO), UN Environment, International Maritime Organization (IMO) and International Labour Organization (ILO).

Criteria
Criteria to ensure adherence to international and national conventions on biodiversity and best practices (CITES, CBD, CMS, CCD, among others)

- 5.4. The organization gathers and maintains information and records required to ensure the legality of access to and use of biodiversity, such as the country of origin, geographical location of capture or introduction from the sea, existence of applicable laws or regulations, and relevant permits and certificates.

Criteria
Criteria on non-food production - Traceability system established and monitored
Criteria on non-food production - Traceability records maintained through entire chain of production
Criteria on procedure to store data and records safely (electronic or papers) related to traceability, monitoring, manufacturing, complaints, etc.
Criteria on correct identification, handling and use of rework related to safety, traceability, and legal requirements
Criteria on verification of mandatory certificates and permits related to water use
Criteria on traceability of inputs / varieties and records of materials used

## BioTrade Principle 6

- 6.1 The organization respects fundamental human rights, in keeping with the United Nations Guiding Principles on Business and Human Rights and relevant ILO Conventions.

Criteria
Criteria on assessment of risks related to human rights
Criteria on prevention and mitigation of adverse human rights impacts
Criteria on remediation of identified human rights violations
Criteria on human rights: general principle
Criteria on policies and procedures addressing human rights
Criteria relating to the protection of indigenous rights
Criteria relating to women's rights at work

Criteria
Criteria on employment / hiring practices - legal compliance with national regulation
Criteria on ongoing processes for human rights due diligence
Criteria related specifically to non-discrimination based on gender
Criteria on voluntary employment - No forced labour (ILO 29 & 105)

**6.2** The organization respects worker rights, provide adequate working conditions, and prevent any negative impacts on the health and safety of workers, in accordance with national legislation.

Criteria
Criteria on setting up procedures to manage basic labour rights in the workplace
Criteria on conditions of employment: general principle
Criteria on voluntary employment - No forced labour (ILO 29 & 105)
Criteria on non-discrimination at work (ILO 111)
Criteria related specifically to non-discrimination based on gender
Criteria on non-discrimination regarding unions
Criteria on discrimination at recruitment stage
Criteria on freedom of association (ILO 87)
Criteria on collective Bargaining (ILO 98)
Criteria on occupational health and safety, as defined in ILO 155
Criteria relating to safety at work (ILO 184)
Criteria on safety at work - legal compliance
Criteria on workplace safety
Criteria on respect list of prohibited chemicals as harmful or a risk to human health
Criteria relating to women's rights at work
Criteria relating to indigenous peoples as defined in ILO convention 169
Criteria on working conditions overarching principles
Criteria on existence of publicly available policy defining workers' rights
Criteria related to equal remuneration (ILO 100)
Criteria on maintenance of safety of machinery, equipment, and materials
Criteria on safety at work - legal compliance

**6.3** The organization respects the rights of indigenous peoples and local communities, women, children, and other vulnerable groups involved in BioTrade activities, in accordance with national legislation and the United Nations Declaration on the Rights of Indigenous Peoples.

Criteria
Criteria relating to the protection of indigenous rights
Criteria on the protection of minority rights and marginalized groups
Criteria on gender policies at work - general principles

Criteria
Criteria relating to women's rights at work
Criteria relating to sexual exploitation / harassment
Criteria on child labour legal compliance policy
Criteria on policies that prohibit the use of physical or psychological violence
Criteria related to child labour and minimum age (ILO 138)
Criteria relating to maintaining age records of workers
Criteria related specifically to non-discrimination of persons with disabilities
Criteria related specifically to non-discrimination based on gender

### BioTrade Principle 7

**7.1.** The organization uses natural resources in compliance with all relevant laws and regulations and preventing any negative impacts on the health, safety, and wellbeing of surrounding populations.

Criteria
Criteria on assessment of impacts of local activities on local human rights such as health, safety, and security
Criteria on impact assessment for local communities' access to basic services such as electricity, water, sanitation, etc.
Criteria on activities not adversely affecting local communities access to livelihoods
Criteria on Free, Prior and Informed Consent (FPIC) of local communities
Criteria for regulated and sustainable access to resources and use of wildlife species
Criteria on customary rights of tenure
Criteria on land title and legal use rights
Criteria for regulated and sustainable access to resources and use of wildlife species
Criteria on impact assessment policy for new production
Criteria on activities not adversely affecting local communities access to livelihoods
Criteria on women's land ownership
Criteria on obligation to comply with relevant local, regional, and national laws and regulations (including legal land tenure, title, having legal rights to use the production or management unit)
Criteria relating to verification of business license and legality of activities / settlement

**7.2.** In cases where required by international, national, local, or customary law, as well as Criteria 3.5, the organization accesses natural resources and associated traditional knowledge with prior informed consent of, and subject to mutually agreed terms with, the party that provides them.

Criteria
Criteria on Free, Prior and Informed Consent (FPIC) of local communities
Criteria on traditional and cultural production practices
Criteria on traditional knowledge used for conservation and sustainable use of biodiversity
Criteria on compensation for use of local communities facilities (traditional knowledge, infrastructure access and benefits sharing)

**7.3.** The organization respects the rights of indigenous peoples and local communities over land, natural resources, and associated traditional knowledge in accordance with national legislation and the United Nations Declaration on the Rights of Indigenous Peoples.

**Criteria****Criteria on land title and legal use rights****Criteria relating to the protection of indigenous rights**

**7.4.** The organization does not threaten the food diversity or food security of producers and their local communities.

**Criteria****Criteria on assessing production practices possible impacts on food security**