

**INTERNATIONAL STANDARD
FOR
SUSTAINABLE WILD COLLECTION OF
MEDICINAL AND AROMATIC PLANTS
(ISSC-MAP)**

DRAFT 2

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STEERING GROUP
for the development of
Practice Standards & Performance Criteria
for the Sustainable Wild Collection
of Medicinal and Aromatic Plants



TRAFFIC

IUCN
The World Conservation Union



MEDICINAL
PLANT
SPECIALIST
GROUP

By themselves standards do not guarantee a particular performance threshold. Rather, the process through which they are developed, the technical rigor of the standards themselves, and the consistency and competency with which they are applied determine their value and impact.

(Pierce & Laird 2003)

This document has been prepared with support from the members of a Steering Group, consisting of the German Federal Agency for Nature Conservation / Bundesamt für Naturschutz (BfN), WWF/TRAFFIC, and IUCN – The World Conservation Union brought together by BfN Germany to develop a standard for the sustainable wild collection of medicinal and aromatic plants. This work is supported through linked projects jointly funded by BfN, WWF-Germany, and IUCN-Canada. The Medicinal Plant Specialist Group of the Species Survival Commission (SSC), IUCN, is contributing to the development of the standard through IUCN-Canada and as a member of the Steering Group. The introduction to this document incorporates parts of a Concept Paper prepared in February 2005 by Susanne Honnef and Britta Pätzold, WWF and TRAFFIC Germany.

This document, and other documents related to this project, are available on the Project download website: <http://www.floraweb.de/map-pro/>.

Comments on this 2nd draft *International Standard for Sustainable Wild Collection of Medicinal and Aromatic Plants* (ISSC-MAP) are welcome. We request that you use the file formats for general and specific comments provided on the project website. Please direct inquiries and comments to: MAP-Standards-Criteria@wwf.de.

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1. Introduction

1.1. Why is a sustainable wild collection standard needed for medicinal and aromatic plants?

Medicinal and aromatic plants (MAP) have been an important resource for human health care from prehistoric times to the present day.¹ According to the World Health Organization (WHO), the majority of the world's human population, especially in developing countries, depends on traditional medicine based on MAP (WHO 2002). Between 40,000 and 50,000 plant species are known to be used in traditional and modern medicinal systems throughout the world. Relatively few MAP species are cultivated. The great majority is still provided by collection from the wild (Lange & Schippmann 1997; Srivastava, Lambert and Vietmeyer 1996; Xiao Pen-gen 1991). This trend is likely to continue over the long term due to numerous factors: most medicinal plants are traded locally and regionally rather than internationally, the costs of domestication and cultivation are high, and land for cultivation of non-food crops is limited. Moreover, cultivation is not necessarily the most beneficial production system. Wild collection practices secure valuable income for many rural households, especially in developing countries, may provide incentives for conservation and sustainable use of forests and other important plant areas, and can be an important factor in the source countries' local economies (Schippmann, Leaman and Cunningham 2002).

However, over-harvesting, land conversion, and habitat loss increasingly threaten a considerable portion of the world's MAP species and populations (approx. 4,000 species). For these reasons, approaches to wild MAP collection that engage local, regional, and international collection enterprises and markets in the work of conservation and sustainable use of MAPs are urgently needed.

1.2. Context: existing frameworks for sustainable use

In recent years a number of initiatives have been launched to achieve a better framework for the sustainable use of biological diversity, particularly the Convention on Biological Diversity (CBD; UNEP 2001). Under the CBD, more specific guidance for the ecological, socio-economic, and equity basis for conservation and sustainable use of biodiversity has been articulated in the *Ecosystem Approach* (CBD V/6), the *Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising out of their Utilization* (CBD VI/24), the *Global Strategy for Plant Conservation* (CBD VI/9) and the *Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity* (CBD VII/12).

Existing guidelines for the sustainable collection of non-timber forest products (NTFP) provide useful models for MAP: models for NTFP that may be particularly useful for MAP include the certification system of the Forest Stewardship Council (FSC), the International

¹ "Medicinal and aromatic plants" and other terms used in this document are defined in the glossary (Annex I).

Federation of Organic Agricultural Movements (IFOAM), and Fairtrade Labelling Organizations International (FLO).² Other relevant models include natural resource co-management agreements with indigenous communities, and access and benefit sharing arrangements between genetic resource users and providers. (Many of these relevant guidelines and frameworks are listed in Annex II.)

More specifically focusing on medicinal plants, the 1993 WHO/IUCN/WWF *Guidelines on the Conservation of Medicinal Plants* (WHO, IUCN & WWF 1993) and the 2004 *WHO Guidelines on Good Agricultural and Collection Practices (GACP) for Medicinal Plants* (WHO 2003) provide general guidance and principles for the development of a global framework of practice standards for MAP. Of these documents, only the 1993 *Guidelines* directly address ecological and socio-economic/equity issues related to sustainable wild harvest, and these are now out of date. WHO, IUCN, WWF and TRAFFIC are currently working together to revise these *Guidelines* through an international consultation process, and with the intent to incorporate broader guidance and principles related to sustainable use of biological diversity, access and benefit sharing, and fair business practices. Publication of these revised and updated *Guidelines* is envisaged for 2006.

Existing principles and guidelines for conservation and sustainable use of medicinal plants address primarily the national and international political level, but only indirectly provide the medicinal plant industry and other stakeholders, including collectors, with specific guidance on sustainable sourcing practices. For example, the revised WHO/IUCN/WWF/TRAFFIC *Guidelines on the Conservation of Medicinal Plants* will provide general principles addressed primarily to governments and other political stakeholders, non-government organizations (NGOs), international government organizations (IGOs), and businesses worldwide. These guidelines call for the development of concrete practice standards and criteria for the conservation and sustainable use of medicinal plants as a practical interface between the general principles set out in the *Guidelines*, and management plans that must be developed for particular species and specific situations.

The development of this standard builds on existing relevant principles, guidelines, and standards. Links to other relevant standard frameworks are being explored and developed.

1.3. Process to develop the ISSC-MAP

Steering Group: The process to elaborate a standard for the sustainable wild collection of MAP is a joint initiative by the German Bundesamt für Naturschutz (BfN), WWF/TRAFFIC Germany, IUCN Canada and the IUCN Medicinal Plant Specialist Group (MPSG).

² For a summary and analysis of efforts to consider the relevance and application to NTFPs of various models aimed at certification of sustainable wild collection see: Shanley, Pierce, Laird, & Guillen 2002.

Advisory Group: An international, interdisciplinary advisory group has been formed to involve relevant stakeholders from ecological, socio-economic and fair trade sectors in the process of developing and testing a standard for sustainable wild collection of MAP.³ The members' specific expertise and advice on the content of the standard, the development of practical guidance, and the opportunities to harmonize the development of this standard with other relevant standard frameworks will support the eventual implementation of a MAP standard.

Drafts 1 and 2: A first draft of this standard was completed in November 2004 for discussion with members of the Advisory Group (Leaman 2004). The first draft consisted of four separate practice standards⁴ (I. Ecosystem and MAP resource management; II. Wild collection of MAP resources; III Domestication, cultivation, and enhanced in situ production of Map resources; and IV. Rights, responsibilities, and equitable relations of stakeholders). A first expert workshop on the Isle of Vilm (December 2004) provided a discussion forum for the members of the Advisory Group on this first draft standards document and other process related issues.⁵ This second draft is based on the outcomes of the first consultation round and the Vilm workshop. This second draft standard consists of ten principles (and related criteria and indicators), within a single standard for sustainable wild collection of MAP.

Comment and consultation: Members of the Advisory Group and other interested parties and stakeholders are encouraged to comment on this second draft of the ISSC-MAP. The Advisory Group and the Steering Group will seek additional, broader stakeholder venues through which to present and discuss the draft standard as it is developed and revised. For example, the first draft was presented during the World Conservation Forum of the 3rd IUCN World Conservation Congress in Bangkok in November 2004, and a third draft will be presented during the XVII International Botanical Congress in Vienna in July 2005. A second workshop on the Isle of Vilm in December 2005 will offer an opportunity to discuss the third draft standard, focusing on opportunities and challenges concerning its implementation.

Testing the standard: The relevance and practicality of the second draft standard will be tested from summer 2005 to summer 2006 in existing field projects. This testing phase will complement the process of drafting the standard. Selection of appropriate field projects is currently underway. Projects are being selected to reflect different cultural backgrounds, species requirements and types of project structure. Results and feedback from an evaluation of these field tests will be incorporated into the drafting and implementation process.

³ A current list of members of the Advisory Group is available on the project website: <http://www.floraweb.de/map-pro/>.

⁴ The first draft MAP standard was loosely modelled on the structure of the Marine Aquarium Council "Core Standards and Best Practice Guidance for the Marine Aquarium Trade", 2002, and on the Working Draft ABS Management Tool currently under development by the State Secretariat for Economic Affairs (SECO), Government of Switzerland: Practice Standards for Access and Benefit Sharing.

⁵ Summary minutes of this workshop are available on the project website: <http://www.floraweb.de/map-pro/>.

Time schedule and Funding: The current project is intended to produce a workable and tested standard by 2006. Funding for the process is secured through 2005 through support by the German Ministry of Environment, Nature Conservation and Nuclear Safety. Funding for the case studies to test the draft standard in selected harvesting situations is being sought.

1.4. Mission and objective of the ISSC-MAP

The **mission** of this standard is to ensure the long-term survival of MAP populations in their habitats, while respecting the traditions, cultures and livelihoods of all stakeholders.

The **objective** of this standard is to provide a framework of principles and criteria that can be applied to the management of MAP species and their ecosystems. It provides guidance for sustainable wild collection of MAPs, and a basis for audit and certification.

1.5. Scope and application of the ISSC-MAP

This draft standard applies to medicinal and aromatic plants collected from forest and other non-cultivated habitats. It does not address product storage, product transport, processing issues or product quality issues, which are being addressed by other initiatives and guidelines, such as the WHO Guidelines on Good Agricultural and Collection Practices (GACP) for Medicinal Plants (WHO 2003).

It is the agreed aim of the Steering Group and the Advisory Group working to develop this standard that it should be applicable to the wide array of geographic, ecological, cultural, economic, and trade conditions in which non-cultivated MAP are found. It will address wild collection of medicinal and aromatic plant materials for commercial (rather than subsistence, or local use) purposes. The standard focuses on good ecological practices but also aims to support responsible social standards and business practices that affect collectors, collection operations, and the environments in which MAP resources are collected. Harmonization with appropriate ecosystem, fair trade, production, product quality, and other relevant standards is considered an important avenue for developing and implementing this standard.

The Steering Group and the Advisory Group also recognize that, to be successfully implemented, this standard must be relevant and practical to different scales of operation, from relatively autonomous groups of collectors to enterprises fully supported by large companies; from relatively low-volume collection to large-scale collection operations. In developing this standard, the costs associated with field assessment, monitoring, and evaluation must also be considered, as well as the requirements of existing or new institutions and resource management authorities.

It is clear that this standard cannot, on its own, define or implement policy, but that it can, and should, set thresholds or define good practice for management and collection of medicinal and aromatic plants in their natural environments.

There has been some discussion within the Steering Group and with members of the Advisory Group, concerning how this standard might most effectively be implemented. Alternatives include:

- voluntary, self-regulating efforts (first-party claims)
- codes of practice adopted by trade associations or through Industry policy (second-party claims)
- independent certification or labelling schemes backed by governments, NGOs, or certification bodies (third-party claims).

Discussion and advice are needed concerning the relevance and feasibility of these alternatives in different regions and at different scales of operation, whether voluntary approaches or local labelling schemes might develop into a more rigorous certification framework, and how these efforts might best be harmonized with existing relevant frameworks, such as sustainable forest practices, organic agriculture, and product quality standards.

1.6. Users and beneficiaries of the ISSC-MAP

To be useful and successful, any standard must have tangible, beneficial results for producers, resource managers, and consumers. The Advisory Group has begun to discuss and define the intended beneficiaries of this standard, and the form these benefits might take. For producers (collectors, manufacturers, retailers, and others involved in the chain of supply), it is clear that there must be a market advantage resulting from adherence to this standard, in the form of improved access to consumers, premium prices, and/or improved company image. Resource managers (who are in many cases also the producers) must have confidence in the reliability and rigor of the standard, as well as the capacity to monitor its application at the collection site. For consumers, there must be evidence that sustainably collected MAP products are better products, and therefore worthy of a higher price and or greater loyalty to a product, manufacturer, or retailer. Are consumers sufficiently interested in MAP resource sustainability (in addition to product quality, fair trade practices, etc.) as a responsible industry approach that deserves their support? These are major questions and challenges in the development of this standard.

1.7. Responsibility for the ISSC-MAP

As many members of the Advisory Group have pointed out, custodial responsibility for the standard must be defined and carried forward through the current and future stages of developing, testing, revising, implementing, and again revising this standard. Responsibility will depend to a large degree on the form in which the standard is implemented. At present, the institutional members of the Steering Group – BfN, WWF/TRAFFIC Germany, and the MPSG/IUCN – have taken up the task and the responsibility for drafting the standard, in consultation with an international Advisory Group and all interested stakeholders. It has become clear over the initial stage of this process that a substantial constituency of users and beneficiaries does indeed exist, but also that this constituency is very broad in its understanding of resource sustainability, cultural context, trade circumstances, and geography. It will be a continuing challenge to find a balance for these interests and sensibilities that strengthens, rather than weakens, the resulting standard.

2. Structure of the ISSC-MAP (Draft 2)

The first draft of this standard (Leaman 2004) was in fact divided into four separate “practice standards”, each of which contained several principles, and numerous related criteria. Ideas for verification and guidance were suggested in broad terms unrelated to specific criteria. Much of the criticism and advice from reviewers of the first draft focused on the need to simplify and refine the focus of the proposed elements to create a single standard, and to provide greater consistency in the hierarchy of its components.

2.1. Conceptual framework of standard components (Vertical structure)

In this second draft of the standard, we propose a clearer functional hierarchy of the components according to the division outlined in Table 1.

Table 1: Functional differentiation of standard components

Element	Description	Analogy	Example
Standard	Set of rules developed for conceptualisation, implementation, and/or evaluation of good management practices.	Science	<i>Sustainable Forest Management</i>
Principle	Normative, core commitment or management target which is required to meet the objectives of the standard.	Discipline	<i>Management of forests ensures that future generations are provided with an equivalent resource basis for economic use.</i>
Criterion	Performance aspect, which serves as object or category for verifying achievement of the corresponding management target (principle).	Measure	<i>Harvested timber volume</i>
Indicator	Concrete, verifiable management requirement, which constitutes the actual performance reference of a particular aspect (criterion).	Measurand Benchmark	<i>Harvested timber volumes are below the calculated mean annual timber increments.</i>
Verifier	Procedure, document, or numerical parameter that is suitable to check compliance with the management requirement (indicator).	Measuring instrument	<i>Inventory</i>

2.2. Content of the ISSC-MAP

An important result of the meeting of Advisory Group members on the Isle of Vilm in December 2004 was agreement on eight principles that together create the foundation of this standard. Much discussion focused on how these principles might be grouped to convey a clear sense of the order, or priority, in which they should be addressed in collection operations. There was eventual recognition that actual collection operations

might begin to address these principles in an order relevant to the status of development or implementation of the operation. For example, a proposed collection operation would likely begin with resource assessment and management planning, whereas an existing and mature operation would likely begin with assessing and monitoring of the impacts of collection. An abbreviated outline of the revised (Draft 2) ISSC-MAP is provided in Table 2. The entire structure of the standard, including proposed indicators, means and types of verification, relevant guidance required, and reference to other frameworks is provided in Annex III.

Table 2: Components of the ISSC-MAP (Draft 2)

Sections	Principles	Criteria
I. LEGAL AND ETHICAL REQUIREMENTS	1. Legitimacy MAP collection and management activities are carried out under legitimate tenure arrangements, in compliance with relevant laws, agreements, and guidelines.	1.1. Management authority, tenure, and use rights 1.2. Compliance 1.3. Prevention of illegal / unauthorized activities
	2. Customary Rights Local communities' and indigenous peoples' customary rights of use and management of collection areas and wild collected MAPs are recognized and respected.	2.1. Access, use, and tenure rights 2.2. Benefit sharing 2.3. Cultural heritage and traditional uses 2.4. Participation and integration of local interests
	3. Transparency MAP collection and management activities are carried out in a transparent manner with respect to sharing information and consulting stakeholders.	3.1. Information 3.2. Consultation
II. RESOURCE ASSESSMENT, MANAGEMENT PLANNING, AND MONITORING	4. Assessments Regular assessments of the target MAP resources and habitats, and of social / cultural / economic issues related to MAP collection, are performed, documented, and reflected in management planning, implementation, and monitoring.	4.1. Basis for assessment 4.2. Knowledge about target MAP species 4.3. Knowledge about MAP habitat / collection area 4.4. Social / cultural / economic issues
	5. Management Planning A management plan is written and revised as needed to direct / guide MAP wild collection operations.	5.1. Consistency and coordination of the management plan 5.2. Content of the management plan

Sections	Principles	Criteria
	<p>6. Monitoring</p> <p>The impacts of collection practices and conformity of management with planning are monitored at regular intervals.</p>	6.1. Basis for and application of monitoring
<p>III.</p> <p>RESPONSIBLE COLLECTION AND COLLECTION AREA PRACTICES</p>	<p>7. Collection Practices</p> <p>The collection of MAPs is conducted at a scale and rate and in a manner that: a) does not undermine the long-term availability, viability, and quality of MAP species and populations; and b) does not exceed the target species' ability to regenerate over the long term</p>	<p>7.1. Rationale for MAP collection</p> <p>7.2. Growth / regeneration</p> <p>7.3. Age / size class</p> <p>7.4. Quantity (collectable yield)</p> <p>7.5. Frequency</p> <p>7.6. Timing</p> <p>7.7. Density / abundance</p> <p>7.8. Good Collection Practices</p>
	<p>8. Environmental Impact and Conservation Measures</p> <p>Collection management maintains ecosystem structure, function and services with a focus on conservation measures essential to the long-term sustainability of MAP resources in the ecosystems in which they occur.</p>	<p>8.1. Sensitive taxa</p> <p>8.2. In situ / ex situ measures</p> <p>8.3. Prevention of negative impacts</p>
	<p>9. Market Requirements</p> <p>Wild collection of MAPs is undertaken according to quality requirements of the market without sacrificing sustainability of the resource</p>	<p>9.1. Financial sustainability</p> <p>9.2. Transparency and traceability</p>
<p>IV.</p> <p>RESPONSIBLE BUSINESS PRACTICES</p>	<p>10. Worker Relations</p> <p>Systems of management for wild collection of MAP resources ensure the capacity of collectors and other workers to comply with the requirements of this standard, and meet or exceed applicable policies, laws, and regulations with respect to health, safety, and compensation.</p>	<p>10.1. Training and capacity building</p> <p>10.2. Workplace requirements</p>

Annex 1. Glossary of acronyms, abbreviations, and terms used in the ISSC-MAP (Draft 2)

Acronyms and Abbreviations	
BfN	Bundesamt für Naturschutz / German Federal Agency for Nature Conservation
CBD	Convention on Biological Diversity
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
GACP	Good Agricultural and Collection Practices
GAP	Good Agricultural Practices
IGO	International Government Organization
ILO	International Labor Organization
NGO	Non-government Organization
MAP	Medicinal and aromatic plant
MPSG	Medicinal Plant Specialist Group of the IUCN-The World Conservation Union
WHO	World Health Organization
WWF	World Wild Fund for Nature

Term	Definition	Source
Agroforestry	Agroforestry is a collective name for land-use systems and practices where woody perennials are deliberately integrated with crops and/or animals on the same land management unit.	World Agroforestry Centre 1993
Benchmark	Where the line is drawn between what is acceptable and what is not acceptable practice.	ISEAL 2004
Biological diversity	The variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species and of ecosystems.	CBD 1992
Biological diversity values	The intrinsic, ecological, genetic, social, economic, scientific, educational, cultural, recreational and aesthetic values of biological diversity and its components.	CBD 1992
Botanicals	A subset of NTFPs that includes herbal medicines, personal care products, and functional foods.	Pierce and Laird 2003
Chain of custody	The channel through which products are distributed from their origin in the forest to their end-use.	FSC 2000
	A tracking system that enables certifiers to trace each forest product from its origin through harvesting, processing, storage and sale.	Shanley et al. 2002
Collectable yield / harvestable yield	Maximum available quantity for collection.	See Peters 1996
Consensus	General agreement, characterized by the absence of sustained opposition to substantial issues by any important part of the concerned interests and by a process seeking to take into account the views of interested parties, particularly those directly affected, and to reconcile any conflicting arguments. Need not imply unanimity.	ISEAL 2004

Term	Definition	Source
Criterion	A standard on which judgement or decision may be based; a characterizing mark or trait.	<i>Encyclopædia Britannica</i> 2002
	A means of judging whether or not a principle has been fulfilled. A criterion adds meaning and operationality to a principle without itself being a direct yardstick of performance.	Shanley et al. 2002.
	Indicates what a standard measures.	ISEAL 2004
	A means of judging whether or not a Principle (of forest stewardship) has been fulfilled.	FSC 2000
Customary rights	Rights that result from a long series of habitual or customary actions, constantly repeated, which have, by such repetition and by uninterrupted acquiescence, acquired the force of a law within a geographical or sociological unit.	FSC 2000
Ecosystem	A community of all plants and animals and their physical environment, functioning together as an interdependent unit.	FSC 2000
Endangered species	Any species that is in danger of extinction throughout all or a significant portion of its range.	FSC 2000
Ethical	Conforming to accepted professional standards of conduct.	<i>Encyclopaedia Britannica</i> 2002
Ex-situ conservation	The conservation of components of biological diversity outside their natural habitats.	CBD 1992
Guideline	An indication or outline of policy or conduct.	<i>Encyclopædia Britannica</i> 2002
Habitat	The place or type of site where an organism or population naturally occurs.	CBD 1992
Harmonization	Harmonization is the process by which the content of two or more standards is brought into increasing conformity. Activities that support harmonization include, but are not limited to the use of	ISEAL 2004

Term	Definition	Source
	common criteria and indicators, statements of common objectives, adoption of common structures for presentation of standards, and development and adoption of a single international standard.	
Indicator	Qualitative or quantitative parameter that can be assessed in relation to a criterion. It describes in an objectively verifiable way the features of the ecosystem or a related social system. Minimum or maximum allowable value of an indicator is known as threshold value (i.e., a way of quantifying or qualifying or measuring performance)... An indicator is assumed to include a performance value and is therefore called a performance indicator.	Shanley et al. 2002
	How criteria are measured.	ISEAL 2004
In-situ conservation	The conservation of ecosystems and natural habitats and the maintenance and recovery of viable populations of species in their natural surroundings and, in the case of domesticated or cultivated species, in the surroundings where they have developed their distinctive properties.	CBD 1992
Medicinal and aromatic plants	"Medicinal" and "aromatic" are terms describing properties of chemistry and use that can be ascribed to plants. Medicinal plants prevent, alleviating, or curing disease. This group can be defined narrowly, to include only those plants already known to be used in this way in some system of medicine, traditional or modern, or it can be defined broadly to include potential, as yet undiscovered uses of this nature. Aromatic plants contain fragrant, essential oils valued as perfumes, herbs, spices, and as medicines. Many "medicinal" plants are thus also "aromatic" (and vice versa), just as medicinal and aromatic uses overlap within particular taxa with other important categories of plant use, such as foods and beverages. The coincidence of highly desirable qualities within particular taxa makes these groups	Leaman et al, 1999

Term	Definition	Source
	all the more important as plant genetic resources. The degree of overlap between medicinal and aromatic properties and uses has supported the treatment of medicinal and aromatic plants as a single category, particularly from the point of view of commercial harvest, trade, and agriculture.	
Non-timber forest products	All forest products except timber, including other materials obtained from trees such as resins and leaves, as well as any other plant and animal products.	FSC 2004
	All biotic products other than timber that can be harvested for subsistence and/or for trade. NTFPs may come from primary and natural forests, secondary forests, and forest plantations, as defined by FSC regional Working Groups.	Brown et al., 2002
Organic agriculture = biological agriculture = ecological agriculture	A whole system approach based upon a set of processes resulting in a sustainable ecosystem, safe food, good nutrition, animal welfare and social justice. Organic production therefore is more than a system of production that includes or excludes certain inputs.	IFOAM 2004
Precautionary principle; precautionary approach	An approach to uncertainty that provides for action to avoid serious or irreversible environmental harm in advance of scientific certainty of such harm.	Cooney 2004
Principle	A comprehensive and fundamental law, doctrine, or assumption.	<i>Encyclopædia Britannica</i> 2002
	A fundamental truth or law as the basis of reasoning or action; an essential rule or element.	Shanley et al. 2002
	An essential rule or element.	FSC 2000
Protected area	A geographically defined area that is designated or regulated and managed to achieve specific conservation objectives.	CBD 1992
Standard	A definite rule, principle, or measure established by authority.	<i>Encyclopædia Britannica</i> 2002

Term	Definition	Source
	Principles + criteria = standard.	FSC 2000
	Practice standard = core commitment (fixed requirements / the outcome or condition to be achieved in all applicable circumstances, applicable to all) + guidance (flexible, to be respected in intent and are available to be adopted according to the specific circumstances, levels, and sectors), documentation and reporting (to bring transparency to the application of the commitments and guidance).	SECO 2005
	Document that provides, for common and repeated use, rules, guidelines or characteristics for products or related processes and production methods, with which compliance is not mandatory. It may also include or deal exclusively with terminology, symbols, packaging, marking or labelling requirements as they apply to a product, process or production method.	ISEAL 2004
Sustainable use	The use of components of biological diversity in such a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations.	CBD 1992
Sustainable yield	<i>Appropriate definition needed</i>	See Peters 1996
Tenure	Socially defined agreements held by individuals or groups, recognized by legal statutes or customary practice, regarding the "bundle of rights and duties" of ownership, holding, access and/or usage of a particular land unit or the associated resources there within (such as individual trees, plant species, water, minerals, etc).	FSC 2000
Threatened species	Any species that is likely to become endangered within the foreseeable future throughout all or a significant portion of its range.	FSC 2000
Traceability	<i>Appropriate definition needed</i>	

Term	Definition	Source
Traditional / local / indigenous	Appropriate definition needed	
Use rights	Rights for the use of forest resources that can be defined by local custom, mutual agreements, or prescribed by other entities holding access rights. These rights may restrict the use of particular resources to specific levels of consumption or particular harvesting techniques.	FSC 2000
Verifier	Describes the way an indicator is measured in the field (i.e., data points or information that enhance the specificity or the ease of assessment of an indicator). The intention in this process is not to prescribe a minimum set of verifiers, but to allow room for verifiers that are specific to region, product, class, operation size, etc. Verifiers add meaning, precision and usually also site-specificity to an indicator. Numerical parameters might be assigned to a verifier on a case-and-site-specific basis.	Shanley et al. 2002
Viable population	<i>Appropriate definition needed.</i> Viability of a species in a given geographic region is often expressed as its risk of extinction or decline, expected time to extinction, or chance of recovery.	See Akçakaya and Sjögren-Gulve 2000
Wild collection	<i>Appropriate definition needed.</i> Practice of gathering a non-cultivated native or naturalized resource from its natural habitat (which may be forest, meadow, pasture, agricultural field, desert, or any other environment in which non-cultivated species are present).	

Annex II. List of references and resources consulted / ISSC-MAP (Draft 2)

Project background documents

(available on the project website: <http://www.floraweb.de/map-pro/>).

- Honnef, S., B. Pätzold, D.J. Leaman, U. Schippmann, and F. Klingenstein. 2004. Practice Standard and Performance Criteria for Sustainable Wild Collection of Medicinal and Aromatic Plants. Draft Terms of Reference for the Advisory Group. December 2004.
- Leaman, D.J. 2004. Standards for Sustainable Wild Collection of Medicinal and Aromatic Plants. Discussion Draft 1, November 2004.
- Pätzold, B. and Honnef, S. 2004. Standards and Criteria for the Sustainable Wild Collection of Medicinal and Aromatic Plants. Minutes of the 1st Expert Workshop on the Isle of Vilm, December 04-09, 2004.

Methods and assessment documents

- Akçakaya, H.R. and P. Sjögren-Gulve. 2000. Population viability analysis in conservation planning: an overview. *Ecological Bulletins* 48:9-21.
- Cunningham, A.B. 2001. Applied Ethnobotany: People, Wild Plant Use, and Conservation. Earthscan, London, UK.
- Jain, P. 2004. Certifying certification: can certification secure a sustainable future for medicinal plants, harvesters and consumers in India? Traffic Online Report Series No. 9. Traffic International. (<http://www.blackwell-synergy.com/links/doi/10.1111/j.1365-2664.2004.00859.x/full/>)
- Lange, D. and U. Schippmann. 1997. *Trade Survey of Medicinal Plants in Germany: A Contribution to International Plant Species Conservation*. Bundesamt für Naturschutz, Bonn
- Leaman, D.J., H. Fassil, and I. Thormann. 1999. Conserving medicinal and aromatic plant species: identifying the contribution of the International Plant Genetic Resources Institute (IPGRI). IPGRI Project C13: Project Development, Linkages to Partners and Support to Human and Policy Aspects in Other IPGRI Projects
- Peters, C.M. 1996. The ecology and management of non-timber forest resources. World Bank Technical Paper No. 322. World Bank, Washington, D.C., USA.
- Shanley, P., A. Pierce, S. Laird and A. Guillén (eds.). 2002. *Tapping the Green Market: Certification and Management of Non-timber Forest Products*. Earthscan, London, UK.
- Schippmann, U., D.J. Leaman, and A.B. Cunningham. 2002. Impact of cultivation and gathering of medicinal plants on biodiversity: global trends and issues. In: *Biodiversity and the Ecosystem Approach in Agriculture, Forestry and Fisheries*. Food and Agriculture Organization (FAO). (<ftp://ftp.fao.org/docrep/fao/005/aa010e/AA010E00.pdf>)

Srivastava, J., J. Lambert, and N. Vietmeyer. 1996. *Medicinal Plants: An Expanding Role in Development*. World Bank Technical Paper 320. World Bank, Washington, D.C.

Ticktin, T. 2004. The ecological implications of harvesting non-timber forest products. *Journal of Applied Ecology* 41:11-21. (<http://www.blackwell-synergy.com/links/doi/10.1111/j.1365-2664.2004.00859.x/full/>)

Relevant guidelines, principles, and standards

These initiatives represent a broad range of approaches and applications of guidelines, principles, and standards related to the sustainable use of biodiversity resources. Several of these initiatives include specific criteria for assessing sustainable use of wild biodiversity resources that will be helpful in the development of criteria appropriate for assessing the sustainable wild harvest of medicinal and aromatic plants. General parameters of purpose, structure, status, and implementation have been summarized for a selection of these initiatives in Annex 3.

American Herbal Products Association. 2004. Code of Ethics and Business Conduct. AHPA. (<http://www.ahpa.org/guidelines.htm>)

Brown, L., D. Robinson, and M. Karmann. 2002. The Forest Stewardship Council and Non-timber Forest Product Certification: a Discussion Paper. Appendix A. Draft Principle 11. FSC NTFP Working Group, 1997

Brigham, T., M. Schroder, and W. Cocksedge. 2004. Good practices for plant identification for the herbal product industry. Produced by Agriculture and Agrifood Canada. for the Saskatchewan Herb and Spice Association / National Herb and Spice Coalition.

CBD. 2004. Sustainable Use of Biodiversity, Addis Ababa Principles and Guidelines. CBD COP7 Decision VII/12 (<http://www.biodiv.org/decisions/default.aspx?m=COP-07&id=7749&lg=0>)

CBD. 2002. Global Strategy for Plant Conservation. CBD COP6 Decision VI/9 (<http://www.biodiv.org/programmes/cross-cutting/plant>)

CBD COP5 Decision V/6 (<http://www.biodiv.org/decisions/default.aspx?m=COP-05&id=7148&lg=0>)

CBD COP6 Decision VI/24 (<http://www.biodiv.org/decisions/default.aspx?m=COP-06&id=7198&lg=0>)

CBD COP6 Decision VI/9 (<http://www.biodiv.org/decisions/default.aspx?m=COP-06&id=7183&lg=0>)

CBD COP7 Decision VII/12 (<http://www.biodiv.org/decisions/default.aspx?m=COP-07&id=7749&lg=0>)

Cooney, R. 2004. *The Precautionary Principle in Biodiversity Conservation and Natural Resource Management: An issues paper for policy-makers, researchers and practitioners*. IUCN, Gland, Switzerland and Cambridge, UK. Xi + 51 pp. (<http://www.pprinciple.net/publications/PrecautionaryPrincipleissuespaper.pdf>)

Dunjajæ, L. and D. Peæanac, eds. 2003. Medicinal Plants: Manual for collectors based on principles of organic production. (Manual for Bosnia and Herzegovina, 1st edition) GTZ/SIPPO.

- European Agency for the Evaluation of Medicinal Products. 2002. Points to consider on good agricultural and collection practice for starting materials of herbal origin. Working Party on Herbal Medicinal Products (HMPWP). EMEA/HMPWP/31/99 Rev. 3. London, 2 May 2002. EMEA. (<http://www.emea.eu.int>)
- Fairtrade Labelling Organisations International. 2003. Generic fair-trade standards for small farmer's organisations. Fairtrade Labelling Organisations International, Bonn, Germany. (<http://www.fairtrade.net/sites/standards/sp.html>)
- Forest Stewardship Council. 2000. Principles and criteria for forest management. Forest Stewardship Council, Oaxaca, Mexico (<http://www.fscus.org/documents/index.php>)
- International Federation of Organic Agricultural Movements. 2002. Basic Standards. IFOAM. (<http://www.ifoam.org/standard/>)
- International Social and Environmental Accreditation and Labelling (ISEAL) Alliance. 2004. ISEAL Code of Good Practice for Setting Social and Environmental Standards. P005 Final Public Draft, version 3, January 2004. (www.isealalliance.org)
- Marine Aquarium Council. 2002. Core Standards and Best Practice Guidance for the Marine Aquarium Trade. (www.aquariumcouncil.org)
- Müller, Silvia. 2004. Guidance Manual for Organic Collection of Wild Plants. Institute for Marketecology (IMO).
- NTFP Certification Project Team. 2002. Appendix 1. Generic guidelines for assessing the management of NTFPs. Pp. 366 – 385 in Shanley, P., A. R. Pierce, S. A. Laird, and A. Guillen, eds. *Tapping the Green Market: Certification and Management of Non-timber Forest Products*. People and Plants Conservation Series. Earthscan Publications Ltd.
- Pierce, A.R., and S.A. Laird. 2003. In search of comprehensive standards for non-timber forest products in the botanicals trade. *International Forestry Review* 5(2):138-147.
- Rosser, A.R. and Haywood, M.J. (Compilers). 2002. *Guidance for CITES Scientific Authorities: Checklist to assist in making non-detriment findings for Appendix II exports*. IUCN, Gland, Switzerland, and Cambridge, UK. (<http://www.iucn.org/themes/ssc/pubs/CITES/guidance.htm>)
- SECO (State Secretariat for Economic Affairs). 2005. A Guide to Using the Working Draft ABS Management Tool. Government of Switzerland. January 2005.
- SmartWood. 2001. Non-timber forest product addendum. SmartWood Program, Richmond, Vermont, USA.
- SmartWood. 2001. Non-timber forest product standards. SmartWood Program, Richmond, Vermont, USA.
- Soil Association. 2001. Organic wild crafting standards. Soil Association Organic Programme, Bristol, UK.
- Soil Association. 2001. Non-timber forest product standards (first draft). Soil Association Woodmark Programme, Bristol, UK.
- UNCTAD Biotrade Initiative, Sustainability Principles, Criteria, and Indicators
- UNEP - United Nations Environment Programme. 2001. *Convention on Biological Diversity: Text and Annexes*. UNEP/CBD/94/1 (<http://www.biodiv.org>)
- World Health Organization. 2002. *WHO Traditional Medicine Strategy 2002-2005*. WHO, Geneva, Switzerland.
- World Health Organization. 2003. *Good agricultural and collection practices for medicinal plants*. WHO, Geneva, Switzerland. (<http://www.who.int/medicines/library/trm/medicinalplants/agricultural.shtml>)

- WHO/IUCN/WWF. 1993. *Guidelines on the Conservation of Medicinal Plants*. Gland, Switzerland: IUCN. Copies of the original 1993 Guidelines are available under the following web-address:
<http://www.wwf.org.uk/researcher/programmethemes/plants/0000000180.asp>
- WHO/IUCN/WWF/TRAFFIC. In preparation. Revised Guidelines on the Conservation of Medicinal Plants.
- World Agroforestry Centre. 1993. Report of the First External Programme and Management Review of the International Centre for Research in Agroforestry (ICRAF) AGR/TAC:IAR/93/3. Consultative Group on International Agricultural Research (CGIAR). October 1993.
(<http://www.fao.org/Wairdocs/TAC/X5812E/X5812E00.htm#Contents>)
- Xiao Pen-gen. 1991. *The Chinese Approach to Medicinal Plants – Their Utilization and Conservation*. In: Akerele, O., Heywood, V. and Synge, H. (eds.), Conservation of Medicinal Plants. Cambridge University Press, Cambridge, UK.

Annex III. International Standard for Sustainable Wild Collection of Medicinal and Aromatic Plants (ISSC-MAP) Draft 2 (April 2005)

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Hierarchy	Number	Component / Requirement (Principles, Criteria and Indicators)	Means of Verification	Types of Verification				Guidance	Reference to other frameworks
				Field inspection	Documentation	Interview	Consultation		
Section	I	LEGAL AND ETHICAL REQUIREMENTS							
Principle	1	LEGITIMACY MAP collection and management activities are carried out under legitimate tenure arrangements, in compliance with relevant laws, agreements, and guidelines.							
Criterion	1.1	Management authority, tenure, and use rights							
Indicator	1.1.1	The area where wild collection is carried out is clearly defined and its boundaries well established.	<ul style="list-style-type: none"> • Site map • Survey 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Indicator	1.1.2	Ownership, tenure, or use rights to the land and MAP resources are clearly defined, documented and legally established.	Relevant documents that identify the responsible managers / collectors include: <ul style="list-style-type: none"> • Land title / deed • Lease agreement • Resource management agreement • Collection permit • Letter from a solicitor / lawyer • Land registry records 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Alternative verifiers of ownership, entitlement, and resource management responsibility (e.g., traditional, community, collective) may need to be considered.	FSC 2.1; WHO GACP 3.1
Indicator	1.1.3	The term of ownership / tenure / access rights is long enough to fulfil MAP resource management objectives related to assessment, planning, implementation, and monitoring.	<ul style="list-style-type: none"> • Land title / deed • Lease agreement • Resource management agreement • Collection permit • Letter from a solicitor / lawyer 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		FSC 1.6

Hierarchy	Number	Component / Requirement (Principles, Criteria and Indicators)	Means of Verification	Types of Verification				Guidance	Reference to other frameworks
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			<ul style="list-style-type: none"> Land registry records 						
Criterion	1.2	Compliance							
Indicator	1.2.1	Collection and management of MAPs complies with all national and local laws and regulations related to access to and protection of MAP resources collected from the collection area.	<ul style="list-style-type: none"> No evidence of non-compliance. Legal requirements and responsibilities are understood by operation managers and employees. Documentation includes management plans, procedures, work instructions and contracts meet legal requirements. No issues / concerns of legal non-compliance are raised by relevant regulatory authorities or other interested parties. 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> National / regional guidance may be needed concerning relevant national and local laws and regulations affecting MAP collection (including prohibited or restricted collection of MAP species in protected or regulated areas) Training may be needed to ensure and promote capacity, awareness, and voluntary compliance A system to support awareness and implementation of [new] legislation / regulations may be useful. 	FSC 1.1; WHO GACP 5.3
Indicator	1.2.2	Collection and management of MAPs complies with / respects the relevant provisions of all binding international agreements to which the country or countries in which collection occurs is a party (has signed / ratified).	<ul style="list-style-type: none"> No evidence of non-compliance. Legal requirements and responsibilities are understood by operation managers and employees. Documentation includes management plans, procedures, work instructions and contracts meet legal requirements. No issues / concerns of legal non- 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>Guidance may be needed on compliance with relevant provisions of international agreements / conventions signed [ratified?] by the country, including:</p> <ul style="list-style-type: none"> CBD CITES (restrictions on 	FSC 1.3; WHO GACP 5.1

Hierarchy	Number	Component / Requirement (Principles, Criteria and Indicators)	Means of Verification	Types of Verification				Guidance	Reference to other frameworks
				Field inspection	Documentation	Interview	Consultation		
			compliance are raised by relevant regulatory authorities or other interested parties.					collection of Appendix I species; non-detriment findings for Appendix II species) <ul style="list-style-type: none"> • ILO • Others? 	
Indicator	1.2.3	Collection and management of MAPs may demonstrate compliance with the spirit of any relevant voluntary codes of practice, guidelines, or agreements, insofar as these support or strengthen, rather than weaken, the requirements of this standard.	<ul style="list-style-type: none"> • Evidence that the collector / resource manager is aiming to achieve the principles set out in relevant codes of practice, guidelines, or agreements. 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Relevant codes of practice, guidelines, and agreements can be listed in an annex to the standard.	
Indicator	1.2.4	Collection and management of MAPs demonstrates compliance with this standard and its principles.	<ul style="list-style-type: none"> • Declaration of intent (small operations) • Statement of policy (larger operations / companies) • Commercial agreements with collectors, wholesalers, and other levels of the MAP industry. 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> • A label or certification scheme would require a formal (signed) declaration or public statement of policy • The need for such a provision would be largely dependent on how compliance with this standard shall be achieved – e.g. in case of independent certification the indicator would be covered by the signing of a certification contract. • Guidance will be helpful on the conditions that lead 	

Hierarchy	Number	Component / Requirement (Principles, Criteria and Indicators)	Means of Verification	Types of Verification				Guidance	Reference to other frameworks
				Field inspection	Documentation	Interview	Consultation		
								to effective implementation of certification schemes, and alternatives that are more effective under different conditions.	
Criterion	1.3	Prevention of illegal / unauthorized activities							
Indicator	1.3.1	Wild collection of MAPs undertaken in legally established protected areas complies with prohibitions and restrictions on collection.	<ul style="list-style-type: none"> • Maps indicating location of any protected areas within or adjacent to collection area • Collection permit • Communication with protected areas management authorities / local conservation organizations • Awareness of limitations / regulations affecting MAP collection activities and locations (e.g., in management plan). 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Any management plans that exist for relevant protected areas.	FSC 6.2
Indicator	1.3.2	Wild collection of legally protected MAP species complies with prohibitions and restrictions required to meet the objectives of relevant legislation / regulation.	<ul style="list-style-type: none"> • Lists indicating protected species found in, or likely to be found in, the collection area • Communication with species conservation / management authorities / local conservation organizations • Awareness of presence / absence of protected MAP species in collection area • Collection permits • Export permits (CITES Appendix 2 species) 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> • National, regional, and local laws and restrictions on wild collection of MAP species. • Any management plans that exist for relevant species. 	FSC 6.2; WHO GACP 3.1, 5.1.2

Hierarchy	Number	Component / Requirement (Principles, Criteria and Indicators)	Means of Verification	Types of Verification				Guidance	Reference to other frameworks
				Field inspection	Documentation	Interview	Consultation		
Indicator	1.3.3	MAP management areas are protected from illegal collection activities, settlement and other unauthorized activities.	<ul style="list-style-type: none"> Resource managers / collectors are aware of potential and actual problems Evidence of response to existing problems 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		FSC 1.5
Principle	2	<i>CUSTOMARY RIGHTS</i> Local communities' and indigenous peoples' customary rights of use and management of collection areas and wild collected MAPs are recognized and respected.							
Criterion	2.1	Access, use and tenure rights							
Indicator	2.1.1	Local communities and indigenous peoples with legal or customary tenure or use rights maintain control, to the extent necessary to protect their rights or resources, over MAP collection operations.	<ul style="list-style-type: none"> Evidence and records of consultation with local communities and indigenous peoples on planned activities Evidence of prior informed consent (PIC) and mutually agreed terms (MAT) with respect to resource access, management responsibility, and delegation of control to other agencies. Evidence that any agreements comply with national legislation or regulations. 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ethnobotanical / participatory research methods for mapping, identification, and determination of quantity and quality of resources accessed.	FSC 2.2; CBD Article 15
Indicator	2.1.2	Measures are taken to avoid loss or damage affecting the legal or customary rights, property, resources or livelihoods of local communities and indigenous peoples.	<ul style="list-style-type: none"> No evidence of loss or damage to rights, property, or resources. Availability, accessibility, and quality of medicinal plant resources for local and traditional use are not undermined or diminished by commercial collection. Detrimental social, cultural, and economic changes resulting from the influx of workers to collect MAP 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		FSC 2.3, 4.5

Hierarchy	Number	Component / Requirement (Principles, Criteria and Indicators)	Means of Verification	Types of Verification				Guidance	Reference to other frameworks
				Field inspection	Documentation	Interview	Consultation		
			<ul style="list-style-type: none"> resources are minimized. Appropriate and effective mechanisms are used to resolve grievances. Fair compensation is provided in the case of such loss or damage. 						
Criterion	2.2	Benefit sharing							
Indicator	2.2.1	Resource access and benefit sharing agreements with local communities and indigenous peoples are based on appropriate and adequate knowledge of MAP resource tenure, management requirements, and resource value.	<ul style="list-style-type: none"> Agreements reflect available scientific, local, industry, and other relevant sources of knowledge / information. Mechanisms for sharing benefits are perceived as fair by beneficiaries. Agreements allow for new information and changing local conditions affecting these communities. 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		FSC 11.7; WHO GACP 5.1.1; CBD Article 8(j)
Indicator	2.2.2	If traditional knowledge, or the name / image of a local community or indigenous people is used to develop or promote a product, informed consent is given by the source community prior to the marketing of any product, and mutually agreed terms are reached for access to this knowledge and the equitable distribution of benefits arising from its use.	<p>Contracts and access agreements include:</p> <ul style="list-style-type: none"> Evidence of prior informed consent (PIC) Statement of mutually agreed terms (MAT) 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		FSC 3.4; WHO GACP 5.1.1; CBD Article 8(j), Article 15
Criterion	2.3	Cultural heritage and traditional uses							
Indicator	2.3.1	Collection of MAP resources respects the cultural and religious significance	<ul style="list-style-type: none"> Maps indicating locations and boundaries of sites of cultural, ecological, 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		FSC 3.3; IFOAM

Hierarchy	Number	Component / Requirement (Principles, Criteria and Indicators)	Means of Verification	Types of Verification				Guidance	Reference to other frameworks
				Field inspection	Documentation	Interview	Consultation		
		of MAPs and other species and their habitats.	<p>economic, religious significance to local communities and indigenous peoples</p> <ul style="list-style-type: none"> Evidence of local agreement with location and boundaries of these sites Evidence of permission from local stakeholders to collect MAPs in these areas 						13.5.4
Indicator	2.3.2	MAP collection and resource management are conducted in accordance with cultural traditions and norms, where possible and when sustainable	<ul style="list-style-type: none"> Documentation of traditional MAP use, collection and management approaches Assessment of strengths and weaknesses with respect to MAP collection and resource management requirements of this standard. Local traditional practices are incorporated into Good Collection Practices. 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Criterion	2.4	Participation and integration of local interests							
Indicator	2.4.1	Communities within or adjacent to the MAP collection area are actively involved in MAP resource and collection area planning, assessment, and management activities.	<ul style="list-style-type: none"> Evidence of ongoing and effective communication with affected communities at all stages of the MAP collection operation. 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Indicator	2.4.2	Landholders and local communities perceive that benefits from MAP collection and management are a positive incentive for long-term management of MAP resources and their habitat.	<p>No evidence of outstanding / unresolved concerns about MAP resource and / or habitat management arising from MAP collection activities, indicated by:</p> <ul style="list-style-type: none"> Affected local communities Relevant resource management authorities 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		

Hierarchy	Number	Component / Requirement (Principles, Criteria and Indicators)	Means of Verification	Types of Verification				Guidance	Reference to other frameworks
				Field inspection	Documentation	Interview	Consultation		
			<ul style="list-style-type: none"> Conservation organizations 						
Indicator	2.4.3	Collection and processing of wild-collected MAP products are conducted in a manner that strengthens and diversifies the local economy.	Evidence of: <ul style="list-style-type: none"> Reasonable provision for local employment Promotion of local market and enterprise development opportunities (including local ownership of and investment in MAP wild collection operations) 	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Integration of MAP collection activities to support local economies may include: <ul style="list-style-type: none"> First rights to employment Training Location of processing close to collection locations (when feasible and locally desired) Payments for products or other rents paid to local landholders for wild collected MAP resources or products at or above the norm (i.e. average) 	FSC 5.4
Principle	3	TRANSPARENCY MAP collection and management activities are carried out in a transparent manner with respect to sharing information and consulting stakeholders.							
Criterion	3.1	Information							
Indicator	3.1.1	Systems of communication, including access to resource management information, are established and maintained with the involvement of local communities and other stakeholders.	<ul style="list-style-type: none"> Summaries of the main elements of the management plan, related annual operating plans, and assessment reports are available to stakeholders. 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Criteria for information confidentiality will need to be determined (e.g., intellectual property).	FSC 7.4, 8.5; WHO GACP 5.2

Hierarchy	Number	Component / Requirement (Principles, Criteria and Indicators)	Means of Verification	Types of Verification				Guidance	Reference to other frameworks
				Field inspection	Documentation	Interview	Consultation		
Indicator	3.1.2	Relevant stakeholders and interests in MAP collection and resource management are identified.	<ul style="list-style-type: none"> Groups, organizations, enterprises, individuals, agencies, etc., having an interest in the targeted MAP resources, the collection area, or the potential impacts, are identified in the management plan. Evidence that the identification of “stakeholders” has extended to those who currently are not included, but have a legitimate right to be included. 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Relevant stakeholders should include: <ul style="list-style-type: none"> Collectors Local communities Resource owners / managers Resource and collection area management authorities Protected areas / protected resource managers Enterprises involved in the chain of supply Consumers / the public 	
Criterion	3.2	Consultation							
Indicator	3.2.1	Consultations are maintained, in a regular and timely manner, with people and groups directly affected by MAP collection and resource management operations.	Records, plans, schedules of meetings with contracting parties and other stakeholders during all phases / stages of operations: <ul style="list-style-type: none"> Assessment and planning Implementation Monitoring 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		FSC 4.4
Indicator	3.2.2	Resource conflicts with adjoining landowners / managers, or other resource users, are resolved or addressed in a systematic and effective manner.	<ul style="list-style-type: none"> Records of meetings, consultation, decisions taken. No evidence that outstanding conflicts are not being addressed. 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		FSC 2.3

Hierarchy	Number	Component / Requirement (Principles, Criteria and Indicators)	Means of Verification	Types of Verification				Guidance	Reference to other frameworks
				Field inspection	Documentation	Interview	Consultation		
Section II	RESOURCE ASSESSMENT, MANAGEMENT PLANNING, AND MONITORING								
Principle	4	ASSESSMENTS Regular assessments of the target MAP resources and habitats, and of social / cultural / economic issues related to MAP collection, are performed, documented, and reflected in management planning, implementation, and monitoring of MAP collection.							
Criterion	4.1	Basis for assessment							
Indicator	4.1.1	Assessment prior to MAP collection is conducted, where possible, to identify at an early stage whether MAP resources / collection operations are likely or unlikely to meet the requirements of this standard.	<ul style="list-style-type: none"> Assessment reports of scoping visits, information gathering, and analysis of results 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Applicable in situations where new or expanded collection operations are being considered.	WHO GACP 2.1.2, 2.1.3
Indicator	4.1.2	Assessment / re-assessment of existing MAP collection operations is undertaken with the aim of improving the management plan and collection practices and, when necessary, curtailing operations that cannot meet the requirements of this standard.	<ul style="list-style-type: none"> Assessment / re-assessment and monitoring reports, analysis of results. 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Applicable in situations where collections operations are already underway.	
Criterion	4.2	Knowledge about target MAP species							
Indicator	4.2.1	MAP species targeted for collection are accurately and adequately identified and geographic sources are identified.	<ul style="list-style-type: none"> Site-specific voucher specimens with accurate taxonomic names, as well as local and trade names Handbooks, manuals, and other aids to field identification 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Similar species found in the collection area that may be confused with targeted MAP species should also be identified.	WHO GACP 2.1.2

Hierarchy	Number	Component / Requirement (Principles, Criteria and Indicators)	Means of Verification	Types of Verification				Guidance	Reference to other frameworks
				Field inspection	Documentation	Interview	Consultation		
			<ul style="list-style-type: none"> Maps of collection sites identifying target populations 						
Indicator	4.2.2	Biological characteristics relevant to understanding the likelihood of sustainable wild collection, determination of sustainable collection practices, and monitoring collection impacts are known for targeted MAP species.	Evidence of collection / documentation of relevant baseline biological information in the collection area, including: <ul style="list-style-type: none"> Species-specific monographs for collectors / resource managers Published studies Field surveys / observations Research projects 	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Guidance is needed to define initial (rapid?) assessment measures, minimum / baseline data, and ongoing monitoring requirements.	WHO GACP 3.2
Criterion	4.3	Knowledge about MAP habitat / collection area							
Indicator	4.3.1	Collection area and habitat characteristics of targeted MAP species are known.	<ul style="list-style-type: none"> Maps Site descriptions Field surveys 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Relevant information includes: <ul style="list-style-type: none"> Range and distribution of targeted MAP species Physical characteristics of the collection area (climate, topography, geology, soils, watersheds, etc.) Vegetation associations of target MAP species Symbiotic and dependent relationships with other species (e.g., hosts, pollinators) Descriptions of environment limitations 	WHO GACP 3.2

Hierarchy	Number	Component / Requirement (Principles, Criteria and Indicators)	Means of Verification	Types of Verification				Guidance	Reference to other frameworks
				Field inspection	Documentation	Interview	Consultation		
Criterion	4.4	Social / cultural / economic issues							
Indicator	4.4.1	Social / cultural and local economic issues relevant to target MAP resources and the collection are understood.	Evidence of: <ul style="list-style-type: none"> Inventories and surveys Consultation with local communities Consultation with relevant resource management authorities 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Relevant information includes: <ul style="list-style-type: none"> Local / traditional uses of MAP resources Local economic and cultural value of MAP resources Local trade relationships relevant to MAP resources Cultural sites and other land / access uses affected by MAP collection operation. 	WHO GACP 3.2
Principle	5	MANAGEMENT PLANNING A management plan is written and revised as needed to direct / guide MAP wild collection operations.							
Criterion	5.1	Consistency and coordination of the management plan							
Indicator	5.1.1	The management plan is developed and revised through a transparent process that is consistent with the requirements specified within this standard.	<ul style="list-style-type: none"> Evidence of regular assessment and monitoring Evidence of consultation with relevant stakeholders Summaries of management plan revision and rationale 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Indicator	5.1.2	The documentation and level of detail associated with the management plan		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Large-scale collection operations and operations working	FSC 6.1, 7, 8.1, 9.1

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				Field inspection	Documentation	Interview	Consultation		
		<p>and the planning process is appropriate to:</p> <ul style="list-style-type: none"> the size and complexity of ownership / tenure of the collection area and MAP resources the scale and intensity of the collection operation the likely impact of the collection activities on the MAP resources and habitat 						<p>in complex situations (sensitive habitats and taxa, overlapping tenure and access arrangements, etc.) will require more rigorous attention to management planning detail and documentation than smaller and relatively simple collection operations. It has been pointed out that this requirement is likely to place a higher burden of management on owners / managers of areas with high conservation value (e.g., many areas owned / managed by indigenous peoples). This is a dilemma that requires a solution.</p>	
Indicator	5.1.3	<p>The management plan takes into consideration any management plans that refer to the collection area and that are produced by the appropriate resource management authority.</p> <ul style="list-style-type: none"> Maps and workplans are available to indicate locations of extraction trails or roads, conservation areas and main infrastructure at a scale that is useful for supervision of management activities and to facilitate on-site monitoring. 	<ul style="list-style-type: none"> Site maps indicating other activities in the collection area Information (interviews, consultations) with relevant resource and area management authorities 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>MAP collection management plans should be integrated into the broader National Biodiversity Strategic Action Plans (NBSAPs) where these exist.</p> <p>A process may be required to resolve conflicting objectives in other management plans, or to coordinate management measures in a manner that meets the objectives of this</p>	

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		<ul style="list-style-type: none"> Overlapping / adjacent protected areas and areas with special management objectives are identified. 						standard.	
Indicator	5.1.4	<p>The management plan is reviewed at regular intervals on a timeframe specified in the plan to ensure its continuing suitability, adequacy, and effectiveness in meeting the objectives of this standard.</p>	<ul style="list-style-type: none"> Management plan and revisions Evidence that assessments, re-assessments, monitoring reports, stakeholder consultations, and other relevant information have been considered in revision of the management plan. 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>For example, every 5 years, incorporation in a revised management plan of new results of field monitoring, new scientific or technical information, changing social, environmental, cultural, and economic conditions.</p> <p>Guidance/training in adaptive resource management may be helpful.</p>	FSC 7.2
Criterion	5.2	Content of the management plan							
Indicator	5.2.1	<p>All MAP collection areas and targeted MAP species are covered by a management plan which contains:</p> <ul style="list-style-type: none"> Clear statement of management objectives and priorities with respect to collection of MAPs Process and schedules for assessment / re-assessment / monitoring of relevant aspects of the MAP resources and collection area. Strategy for consultation with relevant stakeholders 	<ul style="list-style-type: none"> Site and species specific management planning documents Appropriate manuals, guides, and training Appropriate maps indicating geographical and management boundaries, collection sites and sites requiring special management. 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		FSC 4.4, 7.1

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				Field inspection	Documentation	Interview	Consultation		
		<ul style="list-style-type: none"> • Identification of specific and special characteristics of the target species / collection area and appropriate management strategies • Rationale for collection of target MAP resources • Strategy for implementing appropriate collection practices. 							
Principle	6	MONITORING The impacts of collection practices, and conformity of implementation with management planning, are monitored at regular intervals.							
Criterion	6.1	Basis for and application of monitoring							
Indicator	6.1.1	Up-to-date collection and management information is maintained (e.g., volume, rates, impacts of collection) on the resources collected.	<ul style="list-style-type: none"> • Documented monitoring records, in a form available over the long-term • Field notes / documented observations and visual appraisal • Information from relevant studies • Analysis of information collected 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	FSC 8.2, 11.4	
Indicator	6.1.2	Impacts of other activities in the collection area on targeted MAP species / populations are known and considered in revising and implanting the management plan.	<ul style="list-style-type: none"> • Records of routine surveys and inspections of activities in collection area • Field notes / documented observations and visual appraisal • Consultation with other operations / management authorities working in or adjacent to the collection area 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Relevant observations include: <ul style="list-style-type: none"> • other uses of targeted MAP species / populations • collection volumes and impacts of other operations on targeted MAP species / populations 	FSC 8.2

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								<ul style="list-style-type: none"> activities affecting habitat availability and quality (e.g., forestry operations, land conversion) Degree / reliability of management / regulation of other activities affecting targeted MAP species / populations and their habitat 	
Indicator	6.1.3	The results of monitoring are incorporated into the implementation and revision of the management plan.	Monitoring reports / summaries, including: <ul style="list-style-type: none"> operational challenges problems successful and unsuccessful interventions 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Management responses / adjustments might include: <ul style="list-style-type: none"> limiting the total area from which the resource can be collected; regulating the number or size of the plants being collected reducing the volumes of material collected Enrichment planting of collected species. 	FSC 8.4

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				Field inspection	Documentation	Interview	Consultation		
Section	III	RESPONSIBLE COLLECTION AND COLLECTION AREA PRACTICES							
Principle	7	COLLECTION PRACTICES The collection of MAPs is conducted at a scale and rate and in a manner that: a) does not undermine the long-term availability, viability, and quality of MAP species and populations; and b) does not exceed the target species' ability to regenerate over the long term							
Criterion	7.1	Rationale for MAP collection							
Indicator	7.1.1	The rationale for MAP collection protocols and methods is supported by appropriate and adequate knowledge of the specific resource.	<p>Accurate and accessible collection data, including:</p> <ul style="list-style-type: none"> regional or site specific field data, including resource inventories and long-term observations local knowledge of management of MAP resources published research quotas / requirements established and overseen by relevant / appropriate authorities (e.g., forestry departments) 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		FSC 11.5; WHO GACP 3.4
Indicator	7.1.2	When appropriate and adequate knowledge / information is not available, a data collection programme is undertaken, and any ongoing collection takes a precautionary approach.	<ul style="list-style-type: none"> Allowable collection has been based on conservative and documented estimates of growth Evidence of an active research effort likely to provide the species and site-specific information required 	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A precautionary approach, in this instance, would consist in measures taken beforehand to prevent harm (e.g., maintaining collection volumes at a lower level than potentially sustainable pending more complete assessment and	

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								monitoring information).	
Indicator	7.1.3	Where there is a choice among species / plant parts available to produce a similar product, those species / plant parts having characteristics that best support sustainable wild collection are preferred.	<ul style="list-style-type: none"> Published information or site-specific research on sources of target products in different plant parts or species. 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		WHO GACP 3.2
Criterion	7.2	Growth / regeneration							
Indicator	7.2.1	Rates of growth and regeneration of MAP species provides the basis for determining collection protocols and practices, taking into account the factors most likely to influence both growth / tissue regeneration and recovery, including: age / size class, quantity collected, frequency of collection, timing of collection, density / abundance.	<ul style="list-style-type: none"> The rate of growth and tissue regeneration of the target MAP species has been determined, including the rate of recruitment and replacement of individuals in populations. Species and site-specific measures are recorded for different age classes and at different times during the collection season. 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Excellent sources of guidance on methods include: <ul style="list-style-type: none"> Cunningham (2001) Peters (1996) 	FSC 5.6
Indicator	7.2.2	Growth rates and regeneration are regularly monitored using a well-designed inventory system.	<ul style="list-style-type: none"> Frequency of monitoring is specified. Periodic regeneration surveys are conducted as specified. 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Criterion	7.3	Age / size class							
Indicator	7.3.1	Minimum age / size class for first and subsequent collection of material from MAP species aims to minimize negative impacts on long-term vigour and production.	<ul style="list-style-type: none"> Age / size class distribution includes seedlings to large adults. Minimum age / size class for collection (first and subsequent) is specified Age / size class is determined using reliable and practical characters (e.g., 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

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			plant diameter / DBH, height / fruiting and flowering) <ul style="list-style-type: none"> • Minimum age / size class for collection is established on a species- and site-specific basis. • Individuals are collected at or above the minimum age / size class. 						
Criterion	7.4	Quantity (collectable yield)							
Indicator	7.4.1	The quantity of material collected minimizes negative impacts on long-term vigour and production.	<ul style="list-style-type: none"> • Quantity of material collected is documented. • Quantity is defined using reliable and practical measurements (e.g., volume, weight, number) • Maximum allowable quantities for collection (collectable yield) do not exceed, and should be less than, the productive capacity. • Data (or visual appraisal) on the relationships between volume collected and plant health are recorded and available. 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Visual appraisal methods can include useful qualitative observations (e.g., loss of vigour, disease, aborted fruit, aborted leaves, stunted growth).	
Criterion	7.5	Frequency							
Indicator	7.5.1	The frequency of collection of MAP material from an individual or population minimizes negative impacts on long-term vigour and production.	<ul style="list-style-type: none"> • Records of collection frequency are maintained and consulted. • Maximum allowable frequency of collection does not exceed the rate of replacement of adult individuals or of tissues collected. • Allowable collection frequency is 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

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			<p>adjusted according to the age / size class of the individual plants.</p> <ul style="list-style-type: none"> Information on rate of replacement / recruitment is based on observations of several individuals / populations. 						
Criterion	7.6	Timing							
Indicator	7.6.1	Timing of collection of MAP material aims to minimize stress during reproductive periods and minimize impacts on reproductive capacity.	<ul style="list-style-type: none"> Collection times are recorded. Allowable collection times are defined using reliable and practical indicators (e.g., seasonality, precipitation cycles, flowering and fruiting times) and are based on information about the reproductive cycles of target MAP species. Written instructions on periods to avoid and concentrate collection activities exist. There is clear evidence that collectors are avoiding collection during reproductive periods. 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Criterion	7.7	Density / abundance							
Indicator	7.7.1	The percentage of individuals targeted for collection from the entire population of a MAP species allows for the retention of mature, reproducing individuals, and retains natural diversity in population composition and structure.	<ul style="list-style-type: none"> The percentages of individuals and age classes collected are recorded. Baseline information on population size, distribution, and structure (age classes) in collection area exists. The proportion of the species range affected by the collection operation is 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

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			<p>known.</p> <ul style="list-style-type: none"> The percentage of mature, reproducing individuals to retain is determined to maintain a natural (baseline) population density and a natural (baseline) structural and genetic diversity. Seedling or sapling densities as recorded in a vegetation or regeneration survey remain equal to or above baseline values 						
Criterion	7.8	Good Collection Practices							
Indicator	7.8.1	<p>MAP materials are collected from wild populations following Good Collection Practices developed for each MAP species collected, that take into consideration the particular collection area, and that aim for long-term sustainability of the resource.</p>	<ul style="list-style-type: none"> Good Collection Practices are based on available sources of information, including: published research, on-site research and observations, local knowledge and collectors' experience. Good Collection Practices are revised and updated according to current species and site-specific information and observations. Good Collection Practices are understood and accepted by collectors and others within the MAP collection operation. There is clear evidence that collectors and others involved in the MAP collection operation are striving to follow Good Collection Practices. 	☒	☒	☒	☒	<p>Guidance is needed to develop Good Collection Practice guidelines that are derived from a broad base of knowledge and experience.</p> <p>Good Collection Practice guidance might address the following components:</p> <ul style="list-style-type: none"> Generic, widely accepted good practices based on plant part (exudates, apical buds, bark, leaves, roots, reproductive propagules – seeds, fruits) Visual appraisal methods Local and traditional knowledge and collection / management practices 	<p>FSC 11.1; IFOAM 13.5.5; WHO GACP 3.4</p>

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								<ul style="list-style-type: none"> Ecosystem or habitat specific guidance (largely aimed at avoiding negative impacts) Destructive collection practices (particular to the species and/or collection area) and how these can be improved or avoided. 	
Principle	8	ENVIRONMENTAL IMPACT AND CONSERVATION MEASURES Collection management maintains ecosystem structure, function and services with a focus on conservation measures essential to the long-term sustainability of MAP resources in the ecosystems in which they occur.							
Criterion	8.1	Sensitive taxa							
Indicator	8.1.1	Rare, threatened, and endangered species of MAPs that are likely to be affected / impacted by MAP collection and management are identified and protected.	<ul style="list-style-type: none"> Conservation status of MAP species included in or affected by the collection activities is assessed according to the IUCN Red List categories and criteria (version 3.1, 2001). Local knowledge relevant to conservation status is included in conservation status assessment. Conservation strategies are included in the management plan. 	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>Information on MAP species and habitat, if adequate for resource assessment, collection management, and monitoring according to the requirements of this standard, will also be sufficient for assessment of conservation status using the IUCN Red List categories and criteria (version 3.1, 2001).</p> <p>Guidance may be needed for resource managers to estima-</p>	FSC 6.2; IFOAM 13.2.2

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								te of extent of occurrence and area of occupancy of MAP species (Rationale: used in IUCN Red List assessment and other conservation status assessment methods)	
Indicator	8.1.2	Particular care is taken when managing MAP species with symbiotic or otherwise dependent relationships with other species.	<ul style="list-style-type: none"> Knowledge of symbiotic / dependent relationships between target MAP and other species is documented and incorporated into management and monitoring (e.g., within the area of collection, populations of animals that disperse fruits of collected MAP species remain stable). 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		FSC 11.2; IFOAM 13.5.2
Criterion	8.2	In situ / ex situ measures							
Indicator	8.2.1	In situ populations and ex situ collections of MAPs are adequate to support long-term species survival.	<ul style="list-style-type: none"> Any activities involving collection of MAP germplasm from the collection area for use in ex situ conservation or production activities (research, gene-banking, propagation, domestication, cultivation, etc) are documented. Activities to support ex situ conservation and production are undertaken together with efforts to support sustainable wild collection and / or in situ conservation. 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Indicator	8.2.2	Ex situ conservation / production programmes draw genetic material / germplasm from diverse MAP	<ul style="list-style-type: none"> Impacts of these activities on production / collectable yield are incorporated into resource assessment, 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

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		populations to prevent depletion of genetic diversity and/or in situ population decline.	management, and monitoring.						
Indicator	8.2.3	<p>Enrichment planting of MAP species / populations does not adversely impact ecosystem diversity, processes and functions.</p> <ul style="list-style-type: none"> • Enrichment planting uses native plants and native seed stock. • Enrichment planting strives to maintain baseline genetic diversity of MAP populations/species. • Artificially enhanced densities of MAP species do not result in diseases, pest outbreaks or disruptions to ecological processes or services. 	<ul style="list-style-type: none"> • Impacts of these activities on production / collectable yield are incorporated into resource assessment, management, and monitoring. 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		FSC 6.9
Criterion	8.3	Prevention of negative impacts							
Indicator	8.3.1	Negative impacts caused by MAP collection activities on the collection area and on neighbouring areas are minimized.	<ul style="list-style-type: none"> • Good Collection Practice guidelines, the management plan, and training include measures to minimize / avoid negative impacts. • Destructive collection practices, when detected, are stopped and /or reported to the appropriate resource management authorities. 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		FSC 6.1, 11.2; IFOAM 13.5.2
Indicator	8.3.2	Waste caused by poor collection practices is minimized.	<ul style="list-style-type: none"> • Good Collection Practice guidelines, the management plan, and training include measures to reduce or avoid wasted 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		FSC 5.3

Hierarchy	Number	Component / Requirement (Principles, Criteria and Indicators)	Means of Verification	Types of Verification				Guidance	Reference to other frameworks
				Field inspection	Documentation	Interview	Consultation		
			material during collection.						
Indicator	8.3.3	Synthetic chemicals and biological control agents are avoided. In exceptional cases where chemical and biological control agents are used, they comply with organic standards.	<ul style="list-style-type: none"> Good Collection Practice guidelines and the management plan address measures to control pests, disease, invasive species, etc. 	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Guidance is needed to define "exceptional cases"	FSC: 6.6
Indicator	8.3.4	Conversion of forest or other natural habitats to plantations of MAP (or other resources) is avoided.	<ul style="list-style-type: none"> MAP management planning, monitoring, and Good Collection Practices address measures intended to maintain the nature and functions of the collection area at the ecosystem / landscape level. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		FSC: 6.10

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Section	IV	RESPONSIBLE BUSINESS PRACTICES							
Principle	9	MARKET REQUIREMENTS Wild collection of MAPs is undertaken according to quality requirements of the market without sacrificing sustainability of the resource							
Criterion	9.1	Financial sustainability							
Indicator	9.1.1	The revenue received from wild collection of MAP resources is sufficient to cover the costs of resource management activities in the long term, including conservation investments required to meet this standard.	<ul style="list-style-type: none"> Financial analysis of the MAP collection operation include resource management and conservation as internal costs. 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Considerable thought and discussion is required to provide guidance to MAP collection enterprises / operations on how to work with the broader MAP industry and relevant government agencies to support this criterion.	FSC 5.1; CBD Article 11
Indicator	9.1.2	In the case of externally supported MAP wild collection activities, a plan exists to reduce the level of dependency on external support (technical, financial) to maximize level of self-sufficiency and control.		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		FSC 5.4
Criterion	9.2	Transparency and traceability							
Indicator	9.2.1	Buyers of MAP resources are encouraged to provide clear and unambiguous order instructions that comply with supply limitations indicated in the resource management plan and are	<ul style="list-style-type: none"> Collectors have a system for identifying and implementing market needs (e.g., through buyer order instructions / specification sheets). Collection managers review the order instructions, with respect to the 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

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		understood by both parties.	resource management plan, before taking action on the order.						
Indicator	9.2.2	Storage and handling of post-collection MAP resources is managed to support traceability / chain of custody.	<ul style="list-style-type: none"> Proper field collection and post-collection identification, labelling, and record keeping procedures are followed. Invoices, bills of lading, certificates of origin and other applicable documentation related to shipping or transport specify the management status of the products. 	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		WHO GACP Section 4
Indicator	9.2.3	Information on collection protocols and practices, transport and storage is maintained, and is available and adequate to support traceability along the chain of supply.	<ul style="list-style-type: none"> Collection rates are documented in writing. Analysis of implications of different collection rates is available 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		WHO GACP 4.6

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				Field inspection	Documentation	Interview	Consultation		
Principle	10	WORKER RELATIONS Systems of management for wild collection of MAP resources ensure the capacity of collectors and other workers to comply with the requirements of this standard, and meet or exceed applicable policies, laws, and regulations with respect to health, safety, and compensation.							
Criterion	10.1	Training and capacity building							
Indicator	10.1.1	Resource managers and collectors have adequate means (training, supervision, experience) to implement the provisions of the management plan and to comply with legal and ethical requirements of this standard.	<ul style="list-style-type: none"> No evidence of personnel without relevant training, experience, or qualifications working in the MAP collection operation Evidence of promotion and provision of adequate training 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Relevant modes of training: <ul style="list-style-type: none"> Orientation programmes Courses (including field / community mentoring) Written manuals Policies that promote awareness and compliance with the requirements of this standard 	FSC 7.3; WHO GACP 3.5
Criterion	10.2	Workplace requirements							
Indicator	10.2.1	MAP collection management meets or exceeds applicable laws and / or regulations covering health and safety of employees and their families.	<ul style="list-style-type: none"> Evidence of implementation of health and safety legislation / codes of practice Staff and contractors are aware of relevant requirements Relevant training / certification is available and implemented Contracts specify health and safety requirements Relevant records are maintained and 	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Guidance should include any international, national or industry health and safety laws / regulations / policy relevant to wild collection of MAPs.	FSC 4.2; WHO GACP 3.5

Hierarchy	Number	Component / Requirement (Principles, Criteria and Indicators)	Means of Verification	Types of Verification				Guidance	Reference to other frameworks
				Field inspection	Documentation	Interview	Consultation		
			up to date (e.g., accident records, site risk assessments)						
Indicator	10.2.2	MAP collectors and other employees are fairly compensated through wages and benefits.	Payment is at least equivalent to: <ul style="list-style-type: none"> the sector average union negotiated rate legal minimum wage Payment is equitable for men and women (equal pay for equal work) Benefits for staff and contractors are consistent with (not lower than) prevailing standards for: <ul style="list-style-type: none"> health retirement worker's compensation food and housing 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Impacts of these activities on production / collectable yield are incorporated into resource assessment, management, and monitoring.	
Indicator	10.2.3	MAP collection management provides for the right of workers to organize and voluntarily negotiate with employers.	<ul style="list-style-type: none"> No evidence that workers have been discouraged from joining a union, association, or from collective negotiation 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	FSC 4.3; ILO Conventions 87, 98	