International Standard for Sustainable Wild Collection of Medicinal and Aromatic Plants (ISSC-MAP)

Version 1.0

Medicinal Plant Specialist Group
Species Survival Commission
IUCN – The World Conservation Union

Federal Agency for Nature Conservation

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This document has been prepared by the Medicinal Plant Specialist Group (MPSG) of the Species Survival Commission (SSC), the World Conservation Union (IUCN), on behalf of a Steering Group consisting of the Bundesamt für Naturschutz (BfN), MPSG/SSC/IUCN, WWF Germany, and TRAFFIC. This work is supported through linked projects jointly funded by BfN, WWF Germany, and IUCN-Canada.

STEERING GROUP
for the development of an
International Standard
for the Sustainable Wild Collection
of Medicinal and Aromatic Plants

BfN Bundesamt für Naturschutz
WWF
TRAFFIC the wildlife trade monitoring network
IUCN The World Conservation Union
MEDICINAL PLANT SPECIALIST GROUP

Cover picture:

Upper line (from left): Pätzold (1, 2), Cunningham (3, 4)
Bottom line (from left): Cole (1), Schippmann (2, 3)

Comments on the *International Standard for Sustainable Wild Collection of Medicinal and Aromatic Plants* (ISSC-MAP), Version 1.0 are welcome. Please direct inquiries and comments to: MAP-Standards-Criteria@wwf.de.

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

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1. Introduction

Version 1.0 of the International Standard for Sustainable Wild Collection of Medicinal and Aromatic Plants (ISSC-MAP) has been prepared by the Medicinal Plant Specialist Group (MPSG) of the Species Survival Commission (SSC), IUCN – The International Conservation Union, on behalf of a Steering Group consisting of the MPSG, Bundesamt für Naturschutz (BfN), WWF Germany, and TRAFFIC. An international Advisory Group of more than 150 experts from diverse backgrounds has provided guidance in drafting the ISSC-MAP.

The ISSC-MAP is designed to help those involved in the harvest, management, trade, manufacture, and sale of wild-collected medicinal and aromatic plant (MAP) resources to understand and comply with the conditions under which sustainable collection of these resources can take place. Version 1.0 of the Standard is currently being applied in field implementation projects to develop models that address a range of collection and management scenarios for wild-collected MAP resources.

The ISSC-MAP builds on recent efforts to define a framework for the sustainable use of biological diversity. The United Nations Convention on Biological Diversity (CBD) provides both global and national contexts for these efforts. Under the CBD, 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 2000), the *Global Strategy for Plant Conservation* (CBD 2002a), the *Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising out of their Utilization* (CBD 2002b), and the *Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity* (CBD 2004).

The ISSC-MAP responds to the need to use biodiversity resources to improve human well-being by contributing to the objectives and targets defined by the Millennium Development Goals (UN 2005), and to the Johannesburg Plan of Implementation adopted by the World Summit on Sustainable Development (CBD 2002c).

More specifically focusing on medicinal plants, the ISSC-MAP is designed to follow and, more importantly, to elaborate the recommendations of the 1993 WHO/IUCN/WWF *Guidelines on the Conservation of Medicinal Plants* (WHO, IUCN & WWF 1993) and the *WHO Guidelines on Good Agricultural and Collection Practices (GACP) for Medicinal Plants* (WHO 2003). These guidelines provide general recommendations 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 G*uidelines* is anticipated in 2007.

The ISSC-MAP bridges the gap between existing broad conservation guidelines and management plans developed for specific local conditions. Adopting the principles and applying the criteria that make up the ISSC-MAP will help private companies, government agencies, research centres, and communities to identify and follow good practices for the following six key elements of sustainable wild collection of MAP:

1. Maintaining wild MAP resources
2. Preventing negative environmental impacts
3. Complying with laws, regulations, and agreements
4. Respecting customary rights
5. Applying responsible management practices
6. Applying responsible business practices

The process to elaborate this Standard thus far has been funded by the German Federal Agency for Nature Conservation / Bundesamt für Naturschutz (BfN) in association with The World Conservation Union (IUCN), WWF Germany, and TRAFFIC, with substantial contributions of time and expertise from members of an international Advisory Group. Field consultations and implementation projects have been, and continue to be supported by numerous other agencies, organizations, and businesses.

The ISSC-MAP is an evolving document. Version 1.0 will be revised based on experience gained in field implementation projects, in partnership with interested organizations, during 2007 - 2008, as well as through continuing consultation with an Advisory Group broadly representative of potential users of the ISSC-MAP.

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

2. Background: Why is the ISSC-MAP needed?

Medicinal and aromatic plants (MAP)[1] have been an important resource for human health care from prehistoric times to the present day. 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 50,000 and 70,000 plant species are known to be used in traditional and modern medicinal systems throughout the world (SCHIPPMANN et al. 2006). About 3,000 MAP species are traded internationally (LANGE and SCHIPPMANN 1997), while an even larger number of MAP species are found in local, national, and regional trade.

Relatively few MAP species are cultivated, however. The great majority of MAP species in trade are wild-collected (LANGE and SCHIPPMANN 1997; SRIVASTAVA et al. 1996; XIAO PEN-GEN 1991). This trend is likely to continue over the long term due to numerous factors, including:

- Little is known about the growth and reproduction requirements of most MAP species, which are derived from many taxonomic groups for which there is little or no experience of cultivation.
- The time, research, and experience leading to domestication and cultivation are costly, and relatively few MAP species have the large and reliable markets required to support these inputs.
- In many communities where wild collection of MAP is an important source of income, land for cultivation of non-food crops is limited.

[1] Definitions of use of plant species often overlap. In this document, the term “medicinal and aromatic plants (MAP)” includes plants used to produce pharmaceuticals, dietary supplement products and natural health products, beauty aids, cosmetics, and personal care products, as well as some products marketed in the culinary/food sector.

Moreover, cultivation may provide fewer environmental, social, and economic benefits than wild collection of some MAP species. Wild collection of MAP secures valuable income for many rural households, especially in developing countries, and is an important factor in the source countries' local economies (SCHIPPMANN et al. 2006). Wild collection also can provide incentives for conservation and sustainable use of forests and other important plant areas.

However, over-harvesting, land conversion, and habitat loss increasingly threaten a considerable portion (approximately 15,000 species, or 21 per cent) of the world's MAP species and populations (SCHIPPMANN et al. 2006). For these reasons, approaches to wild MAP collection that engage local, regional, and international collection enterprises and markets, along with governments and healthcare providers, in the work of conservation and sustainable use of MAP resources are urgently needed.

There are many challenges to meet in developing and applying a standard set of principles and good practices leading to support of sustainable wild collection of MAP resources. These challenges include:

- Circumstances of ecology, habitat, and pressures on resources are unique for each species, requiring management plans that are specific to each MAP collection operation and area.
- The dependence of local communities on MAP resources for health and livelihood security is largely unassessed and unrecorded.
- Little research on harvesting techniques has been directed toward understanding how to collect wild MAP species sustainably.
- Maximum quotas for wild-collection of MAP species are often based on overly simple and untested assumptions about the relationship between available supply and regeneration of MAP resources.
- Products, uses, and markets based on MAP species are numerous and diverse, with similarly numerous and diverse entry points for practices supporting sustainable use.
- There is a wide proliferation of labels and claims, such as organic and fair trade, which imply but do not provide a means of verifying sustainable wild collection.
- Long and complex source-to-market supply chains make tracing a product back to its source extremely difficult.

Existing principles and guidelines for conservation and sustainable use of medicinal plants address primarily the national and international political level, but only indirectly provide governments, the medicinal plant industry and other stakeholders, including collectors, with specific guidance on sustainable sourcing practices. For example, the revised *Guidelines on the Conservation of Medicinal Plants* (WHO/IUCN/WWF/TRAFFIC forthcoming) and the *WHO Guidelines on Good Agricultural and Collection Practices (GACP) for Medicinal Plants* (WHO 2003) provide general recommendations addressed primarily to governments and other political stakeholders, NGOs, IGOs and businesses world-wide. These guidelines call for, but do not provide, concrete principles and criteria for the conservation and sustainable use of medicinal plants. The ISSC-MAP provides a practical interface between the general recommendations set out in these *Guidelines*, and management plans that must be developed for particular species and specific situations.

Other existing or proposed standards for the sustainable collection of non-timber forest products (NTFP) provide useful models for MAP. Models for sustainable harvest of NTFP that may be particularly useful for MAP include the certification systems of the Forest Stewardship Council (FSC), the International Federation of Organic Agricultural Movements (IFOAM), and Fairtrade Labelling Organizations International (FLO).[2] Other important models include natural resource co-management agreements with indigenous communities, and access and benefit sharing arrangements between genetic resource users and providers.

The ISSC-MAP builds on existing principles, guidelines, and standards, but expands and extends these to provide principles and criteria more relevant to the sustainable wild collection of MAP resources. Implementing the ISSC-MAP will benefit ecological resources or area managers, industry, and local collectors by providing a reputable standard of good practice for sustainable wild collection against which local performance can be designed and monitored with criteria and verified with indicators relevant to MAP resources. Harmonization with appropriate ecosystem, fair trade, production, product quality, and other relevant standards is considered an important avenue for developing and implementing the ISSC-MAP.

The ISSC-MAP is designed to be applicable to the wide array of geographic, ecological, cultural, economic, and trade conditions in which wild-collection of MAP resources occurs. It primarily addresses wild collection of medicinal and aromatic plant materials for commercial purposes, rather than for subsistence or local use. The Standard focuses on best ecological practices but also aims to support responsible social standards and business practices that affect collectors and collection operations, because these elements in turn affect the management of collected species and collection areas.

3. Process: How is the ISSC-MAP being developed and implemented?

The process to elaborate this International Standard for the Sustainable Wild Collection of Medicinal and Aromatic plants (ISSC-MAP) is a joint initiative of the German Bundesamt für Naturschutz (BfN), WWF Germany, TRAFFIC, IUCN Canada, and the IUCN/SSC Medicinal Plant Specialist Group (MPSG). Together, these organizations formed a steering group to oversee the development of the Standard. An international, interdisciplinary Advisory Group was formed to involve relevant stakeholders from ecologically sustainable production, organic production, ethical business, and fair-trade sectors in the process of developing and testing the ISSC-MAP.[3] The Advisory Group brings together the medicinal plant / herbal products industry, small-scale collection enterprises, non-government organizations, conservation and certification organizations. 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 frameworks supports both the design and the implementation of the ISSC-MAP.

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 standards[4]: I. Ecosystem and MAP resource management; II. Wild

[2] For a summary and analysis of efforts that have been made in the past to consider the relevance and application of various models aimed at certification of sustainable wild collection see: Shanley, Pierce, Laird, & Guillen 2002.

[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 (MAC) "Core Standards and Best Practice Guidance for the Marine Aquarium Trade" (Muldoon & Scott 2004), and on the Work-

collection of MAP resources; III Domestication, cultivation, and enhanced in situ production of MAP resources; and IV. Rights, responsibilities, and equitable relations of stakeholders. The first draft was presented to the World Conservation Forum of the 3rd IUCN World Conservation Congress in Bangkok in November 2004. A first expert workshop, convened on the Isle of Vilm in December 2004, provided a discussion forum for the members of the Advisory Group on the first draft document and other process related issues.

A second draft, distributed to the Advisory Group in April 2005, condensed the original four practice standards into a single standard with ten principles, related criteria, and proposed indicators (LEAMAN and SALVADOR 2005). The relevance and practicality of the second draft Standard was tested August – October 2005 in five existing MAP field projects. The projects were selected from different geographical regions, and offering a range of socio-economic and resource management circumstances:

- A private company, *Anđelic d.o.o*. in Bosnia-Herzegovina (financed by BfN/ INA, and SIPPO)
- A non-profit initiative, *Iracambi Medicinal Plants Project* in Brazil (financed by Manfred-Hermsen-Stiftung)
- A state-owned and managed protected area of *Wanglang National Nature Reserve & Baima State Forest* in China (financed by WWF Germany)
- A community-based *agro-artesanal producers' association (AAPPSME)* in Ecuador (financed by UNCTAD, with additional support from Manfred-Hermsen-Stiftung)
- A non-profit *Sustainably Harvested Devil's Claw* project in Namibia (financed by Salus Haus, Germany)

Results from the field consultations were summarized by SALVADOR (2005), and evaluated during a second expert workshop on the Isle of Vilm in December 2005[5]. Version 1.0 of the ISSC-MAP incorporates comments from the Advisory Group, results of the field consultation phase, and discussions during the 2nd Vilm workshop.

Participants in the 2nd Vilm workshop identified a range of potential implementation scenarios for the ISSC-MAP. A study of implementation scenarios and opportunities for the ISSC-MAP was commissioned by WWF Germany early in 2006 (KATHE and GALLIA 2006). Principal scenarios examined include:

- Integration with existing standards and mechanisms (e.g., CITES non-detriment findings for species listed on Appendix II).
- Partnership / harmonization with existing or developing standards and mechanisms (e.g., organic and fair-trade certification schemes, BioTrade principles and criteria).
- Stand-alone mechanism (e.g., verification / certification by one or more members of the ISSC-MAP Steering Group).

The ISSC-MAP has been presented and discussed in a variety of other venues, including: the inaugural meeting of the Global Partnership for Plant Conservation (Dublin, October 2005), the National Conference of the Canadian Herb, Spice, and Natural Health Product Coalition (St John, Newfoundland, Canada, November 2005),

ing Draft ABS Management Tool currently under development by the State Secretariat for Economic Affairs (SECO), Government of Switzerland (SECO 2005).

[5] Descriptions and summaries of the field consultation projects and the testing methodology are available at www.floraweb.de/map-pro, as are the minutes of the Vilm workshops.

a workshop on development of a participatory adaptive management methodology for sustainable harvest of medicinal plants (Bangalore, January 2006), Biofach (Nuremberg, February 2006), the NIMH Conference – National Institute of Medicinal Herbalists (Durham, UK, April 2006), the Supply Side East (New Jersey USA, May 2006), the Latin American Botanical Congress (Santo Domingo, Dominican Republic, June 2006), the 16th meeting of the CITES Plants Committee and a linked BioTrade Workshop (Lima, Peru, July 2006), German Tropentag (Bonn, October 2006) and the 12th International Conference and Exhibition of the Egyptian Society for Producers, Manufacturers & Exporters of MAP (Cairo, November 2006).

Opportunities for implementation of the ISSC-MAP in South-eastern Europe were discussed during an international workshop convened in Bosnia and Herzegovina in May 2006. A preliminary implementation trial, focusing on community-managed collection areas for medicinal plants in India, will be undertaken early in 2007 by the Foundation for Revitalization of Local Health Traditions (FRLHT) with support from Plantlife International. An initial implementation phase is planned for 2007-2008, focussing on four priority strategies that will provide a broad range of models and practical experience in applying the ISSC-MAP: certification (by an independent body or industry association), resource management, legal adoption and policy, and voluntary codes of practice (Figure 1).

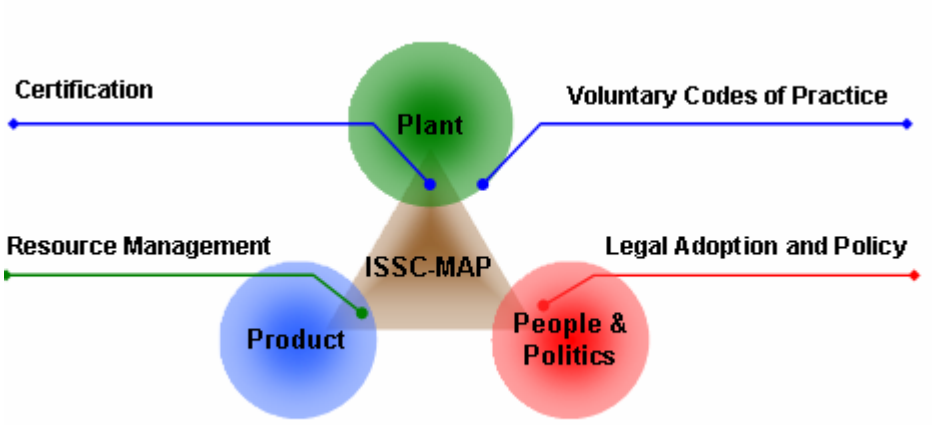

Figure 1. Priority implementation scenarios for the ISSC-MAP

During this phase, implementation of the ISSC-MAP will seek to address a number of additional challenges, including:

- Increasing awareness by potential ISSC-MAP users of the impacts of wild collection on MAP resources, and recognition of the need for a standard;
- Encouraging participation of potential ISSC-MAP users in the process of further developing and implementing the Standard;
- Ensuring the credibility of the overseers of the Standard;
- establishing mechanisms to ensure the accountability of the users of the Standard; and
- Assessing the willingness of industry and consumers to support additional costs associated with applying the Standard.

During the implementation phase, additional definition and guidance will be developed for some elements of the ISSC-MAP. For example, tools and processes for assessing sustainable yield are essential to the effective implementation of the ISSC-

MAP. In September 2006, a workshop hosted by BfN and the University of Koblenz-Landau on the Isle of Vilm, brought together approximately 40 individuals working on field assessment of sustainable yield of medicinal and aromatic plants, or of other wild-harvested non-timber resources, to discuss tools and processes available, and their relevance to medicinal and aromatic plants. Results from this workshop will be incorporated in future guidance materials for applying the ISSC-MAP.

4. Governance and management of the ISSC-MAP

As the ISSC-MAP moves from development to implementation, new structures are required for governance and management of both the Standard and the process of its implementation. The Steering Group and several members of the Advisory Group met on 18-19 September 2006 to plan this transition. This workshop was hosted by Manfred-Hermsen-Stiftung in Bremen, Germany.

The original Steering Group and Advisory Group will be expanded and differentiated into four new structures:

- a secretariat, housed within the offices of WWF and Traffic in Germany;
- a more formal decision-making body, adding to the original Steering Group individuals with certification and business expertise, and expanding regional expertise;
- a technical committee, draw from members of the Advisory Group, which will advise the decision-making body on specific issues related to implementation and further development of the Standard; and
- ad hoc task groups to provide expertise on specific issues, such as those related to particular species of MAP.

Further consideration of the most appropriate governance structures for the ISSC-MAP is an important component of the initial implementation phase.

5. Structure and content of the ISSC-MAP

The **purpose** of the ISSC-MAP is to ensure the continued use and long-term survival of MAP species and populations in their habitats, while respecting the traditions, cultures and livelihoods of all stakeholders.

The **objectives** of this Standard are:

- To provide a framework of principles and criteria that can be applied to the management of MAP species and their ecosystems;
- To provide guidance for management planning;
- To serve as a basis for monitoring and reporting; and
- To recommend requirements for certification of sustainable wild collection of MAP resources.

Version 1.0 of the ISSC-MAP follows a functional hierarchy of components according to the division outlined in Table 1. These definitions are based on a general framework recommended for the formulation of sustainable forest management standards (LAMMERTS VAN BUEREN and BLOM 1997).

Table 1. Functional differentiation of standard components

Element	Description
Standard	Set of rules developed for conceptualisation, implementation, and/ or evaluation of good management practices.
Principle	A fundamental law or rule, serving as a basis for reasoning and action. Principles are explicit elements of a goal.
Criterion	A state or aspect of a process or system, which should be in place as a result of adherence to a principle. The way criteria are formulated should give rise to a verdict on the degree of compliance in an actual situation.
Indicator	A quantitative or qualitative parameter that can be assessed in relation to a criterion. It describes in an objectively verifiable and unambiguous way features of the system, or elements of prevailing policy and management conditions and human driven processes indicative of the state of the eco- and social system.
Method of control (verifier)	The source of information for the indicator or for the reference value for the indicator.

Adapted from LAMMERTS VAN BUEREN and BLOM (1997)

The ISSC-MAP has six principles and 18 criteria, addressing ecological, social, and economic requirements for sustainable wild collection of MAP. These are listed in Table 2. The proposed indicators are elaborated in Annex 1.

Table 2. ISSC-MAP Principles and Criteria

SECTION 1: WILD COLLECTION AND CONSERVATION REQUIREMENTS
Principle 1. Maintaining Wild MAP Resources Wild collection of MAP resources shall be conducted at a scale and rate and in a manner that maintains populations and species over the long term.
1.1 Conservation status of target MAP species The conservation status of target MAP species and populations is assessed and regularly reviewed.
1.2 Knowledge-based collection practices MAP collection and management practices are based on adequate identification, inventory, assessment, and monitoring of the target species and collection impacts.
1.3 Collection intensity and species regeneration The rate (intensity and frequency) of MAP collection does not exceed the target species' ability to regenerate over the long term.
Principle 2. Preventing Negative Environmental Impacts Negative impacts caused by MAP collection activities on other wild species, the collection area, and neighbouring areas shall be prevented.
2.1 Sensitive taxa and habitats Rare, threatened, and endangered species and habitats that are likely to be affected by MAP collection and management are identified and protected.
2.2 Habitat (landscape level) management Management activities supporting wild MAP collection do not adversely affect ecosystem diversity, processes, and functions.
SECTION II: LEGAL AND ETHICAL REQUIREMENTS
Principle 3. Complying with Laws, Regulations, and Agreements MAP collection and management activities shall be carried out under legitimate tenure arrangements, and comply with relevant laws, regulations, and agreements.
3.1 Tenure, management authority, and use rights Collectors and managers have a clear and recognized right and authority to use and manage the target MAP resources.
3.2 Laws, regulations, and administrative requirements Collection and management of MAP resources complies with all international agreements and with national, and local laws, regulations, and administrative requirements, including those related to protected species and areas.
Principle 4. Respecting Customary Rights Local communities' and indigenous peoples' customary rights to use and manage collection areas and wild collected MAP resources shall be recognized and respected.
4.1 Traditional use, access rights, and cultural heritage Local communities and indigenous people with legal or customary tenure or use rights maintain control, to the extent necessary to protect their rights or resources, over MAP collection operations.

4.2 Benefit sharing

Agreements with local communities and indigenous people are based on appropriate and adequate knowledge of MAP resource tenure, management requirements, and resource value.

SECTION III: MANAGEMENT AND BUSINESS REQUIREMENTS

Principle 5. Applying Responsible Management Practices

Wild collection of MAP species shall be based on adaptive, practical, participatory, and transparent management practices.

5.1 Species / area management plan

A species / area management plan defines adaptive, practical management processes and good collection practices.

5.2 Inventory, assessment, and monitoring

Management of MAP wild collection is supported by adequate and practical resource inventory, assessment, and monitoring of collection impacts.

5.3 Transparency and participation

MAP collection activities are carried out in a transparent manner with respect to management planning and implementation, recording and sharing information, and involving stakeholders.

5.4 Documentation

Procedures for collecting, managing, and sharing information required for effective collection management are established and carried out.

Principle 6. Applying Responsible Business Practices

Wild collection of wild MAP resources shall be undertaken to support quality, financial, and labour requirements of the market without sacrificing sustainability of the resource.

6.1 Market / buyer specifications

The sustainable collection and handling of MAP resources is managed and planned according to market requirements in order to prevent or minimise the collection of products unlikely to be sold.

6.2 Traceability

Storage and handling of MAP resources is managed to support traceability to collection area.

6.3 Financial viability

Mechanisms are encouraged to ensure the financial viability of systems of sustainable wild collection of MAP resources.

6.4 Training and capacity building

Resource managers and collectors have adequate skills (training, supervision, experience) to implement the provisions of the management plan, and to comply with the requirements of this standard.

6.5 Worker safety and compensation

MAP collection management provides adequate work-related health, safety, and financial compensation to collectors and other workers

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Annex 1. ISSC-MAP Proposed Indicators

Criterion		Number	Indicator	Form of Indicator / Method of control	Competence			Category[6]
					Collection manager	Consultant	Certifier	
Section I	**WILD COLLECTION AND CONSERVATION REQUIREMENTS**							
Principle 1	**Maintaining Wild MAP Resources** Wild collection of MAP resources shall be conducted at a scale and rate and in a manner that maintains populations and species over the long term.							
Criterion 1.1	**Conservation status of target MAP species** The conservation status of target MAP species and populations is assessed and regularly reviewed.	1.1.1	Current conservation status of target MAP species is assessed according to the IUCN Red List categories and criteria (version 3.1, 2001) and regularly reviewed.	• IUCN Red List programme, Red List database, and/or Red List Authority for medicinal plants + • Conservation status assessments	x x	 x		1
		1.1.2	For species determined to be Data deficient (DD) or not evaluated (NE) according to the IUCN Red List categories and criteria, sufficient information is gathered to complete and / or review a previous conservation status assess-ment (according to 1.1.1).	• Documents of gathered information • Written field verification report on the species population • Resource assessment • Red List data required - checklist	x x x x	 x x x		2
Criterion 1.2	**Knowledge-based collection practices** MAP collection and management prac-tices are based on adequate identi-fication, inventory, assessment, and monitoring of the target species and collection impacts.	1.2.1	Endangered or critically endangered species (according to the IUCN Red List) are not wild collected for commercial purposes.	• List of collected plants	x			1
		1.2.2	Management strategies are defined and implemented to reduce identified threats to species considered "vulnerable" according to the IUCN Red List.	• List of collected plants • Management plan	x x			1
		1.2.3	MAP species targeted for collection and their geographic sources are accurately and adequately identified with voucher specimens from the collection site.	• Handbooks, manuals, and other aids to species identification • Voucher specimens with taxonomic names, as well as local and trade names • Map showing collection location or GPS coordinates included on voucher + • Quality standards Documented instructions of the buyer	x x x x x	 x 		2→1
		1.2.4	Maps of collection sites identify target populations.	• Maps of each collection area	x			1

Criterion	Number	Indicator	Form of Indicator / Method of control	Competence			Category[6]
				Collection manager	Consultant	Certifier	
	1.2.5	Internal collection instructions define collection methods for each target MAP species / part of plant based on appropriate sources of information and knowledge of biological characteristics of the species.	• Collection instructions/ Internal Collection Rules • Species- and site-specific monographs for collectors + • Information gathering documents • Published research, on-site research and observations, local knowledge and collectors' experience. • Consultation with relevant specialist/ resource management authorities	x x x x	 x		1
	1.2.6	Collection instructions are regularly surveyed and adjusted on the basis of observation of its impacts on targeted MAP species.	• Written monitoring reports • Analysis of information collected	x x	x x		1
	1.2.7	Waste of target MAP resources caused by poor collection practices is minimized.	• Collection instructions/ Internal Collection Rules • Visual / physical verification of area by inspector	x		 x	2→1
Criterion 1.3 Collection intensity and species regeneration The rate (intensity and frequency) of MAP collection does not exceed the target species' ability to regenerate over the long term.	1.3.1	Baseline information is available on target species' population size, distribution, and structure (age classes) in the collection area.	• Assessment and monitoring reports, scoping inventories, information gathering documents. • Information from relevant studies • Consultation with relevant specialist/ resource management authorities	x x x	x x		2→1
	1.3.2	Maximum allowed collection quantities are defined in the internal collection instructions for each species/ part of plant and for each collection area.	• Resource assessment • (including regeneration rate assessment) • Confirmation of sustainability of a certain harvest quantity issued by an independent expert / relevant authority • Collection permit issued by resource management authority listing all plants with respective maximum quantities • Historical data registers or monitoring reports on stable production with present collection activities + • Collection instructions / Internal Collection Rules • Species- and site-specific monographs for collectors	 x x x x	x x		1
	1.3.3	Collection quantities are defined using reliable and practical measurements (e.g., volume, weight, number).	• Collection instructions / Internal Collection Rules • Species- and site-specific monographs for collectors	x x	 x		1

Criterion	Number	Indicator	Form of Indicator / Method of control	Competence			Category[6]
				Collection manager	Consultant	Certifier	
	1.3.4	When appropriate and adequate knowledge / information is not available, a data collection programme is undertaken and any ongoing collection takes a precautionary approach (collected quantities below potential production).	• Data collection programme • Information gathering documents. • Documented observation and visual appraisal • Overall risk assessment	x x		 x x	1
	1.3.5	The proportion of mature, reproducing individuals to retain in the target populations for collection is determined to maintain a baseline population density and a baseline structural and genetic diversity.	• Assessment and monitoring reports • Information from relevant studies • Consultation with relevant specialist/ resource management authorities	x x x	x x x		2
	1.3.6	Minimum and maximum age / size class allowed for collection is defined for the target species and collection site in the internal collection instructions.	• Assessment and monitoring reports • Consultation with relevant specialist/ resource management authorities + • Collection instructions / Internal Collection Rules • Species- and site-specific monographs for collectors	x x x x	x x x		2
	1.3.7	The age / size-classes are defined using reliable and practical characters (e.g., plant diameter / DBH, height, fruiting and flowering, local collectors' knowledge).	• Assessment and monitoring reports • Species- and site-specific monographs for collectors	 x	x x		2→1
	1.3.8	Maximum allowed frequency of collection of the target species, defined in the collection instructions, does not exceed the rate of replacement of adult individuals or plant part collected in the collection region.	• Assessment and monitoring reports / Declaration of relevant specialist/ resource management authorities • Collection instructions / Internal Collection Rules • Species- and site-specific monographs for collectors	x x x	x x		
	1.3.9	Periods allowed for collection are determined 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.	• Assessment and monitoring reports / Declaration of relevant specialist/ resource management authorities • Species- and site-specific monographs for collectors	x x	x x		2→1
	1.3.10	Consolidated data on collected quantities are available (species/area/year) and confirm compliance with collection instructions.	• Collection/ purchase records	x			2

Criterion		Number	Indicator	Form of Indicator / Method of control	Competence			Category[6]
					Collection manager	Consultant	Certifier	
		1.3. 11	Collection quantities, periods and frequency of collection are recorded and confirm compliance with collection instructions.	• Collection/ purchase records	x			1
Principle 2	**Preventing Negative Environmental Impacts** Negative impacts caused by MAP collection activities on other wild species, the collection area, and neighbouring areas shall be prevented.							
Criterion 2.1	**Sensitive taxa and habitats** Rare, threatened, and endangered species and habitats that are likely to be affected by MAP collection and management are identified and protected.	2.1.1	Existing species and habitat conservation strategies relevant to the collection area are recognized and included in the management plan (according to 5.1.5, 5.1.6).	• Management plan	x			2→1
		2.1.2	Knowledge of special functions in the ecosystem / dependent relationships between target MAP and other species is documented and incorporated into management and monitoring (according to Criterion 5.1 and 5.2).	• Management plan	x	x		3
Criterion 2.2	**Habitat (landscape level) management** Management activities supporting wild MAP collection do not adversely affect ecosystem diversity, processes, and functions.	2.2.1	The habitat management practices applied in the collection area are described.	• Information from the owner/ responsible manager	x			2→1
		2.2.2	Negative impacts of MAP collection practices and management activities on the collection area are identified in the management plan (according to Criterion 5.1).	• Management plan	x	x		2→1
		2.2.3	Implemented collection methods & tools are appropriate: damage to the plant/plant population is minimised.	• Consultation with relevant specialist/ resource management authorities • Visual / physical verification of area by inspector	x	x	x x	1
		2.2.4	The management plan (acc. Criterion 5.1) includes strategies to prevent or reduce negative impacts on other species and the collection area (according to 2.2.1).	• Management plan • Agreements with other companies in the area • Visual / physical verification of area by inspector	x x			2→1
		2.2.5	Changes in ecosystem structure, function, and services are monitored and reported (according to Criterion 5.2).	• Written monitoring reports	x			1

Criterion		Number	Indicator	Form of Indicator / Method of control	Competence			Category[6]
					Collection manager	Consultant	Certifier	
		2.2.6	No prohibited inputs (e.g., according to organic standards) are used in the collection area.	• Official confirmation from regional forest office or similar (land owner, responsible manger) • Visual / physical verification of area by inspector • Overall risk assessment of the area	x		 x x	1
		2.2.7	Landscape-level and intensive management practices promoting MAP resources (e.g. overstory reduction, enrichment planting) do not negatively affect sensitive species or the ecosystem structure, diversity processes and functions in the collection area.	• Written monitoring reports • Field notes / documented observations and visual appraisal • Consultation with relevant specialist/ resource management authorities	x		x	2
Section II	**LEGAL AND ETHICAL REQUIREMENTS**							
Principle 3	**Complying with Laws, Regulations, and Agreements**							
	MAP collection and management activities shall be carried out under legitimate tenure arrangements, and comply with relevant laws, regulations, and agreements.							
Criterion 3.1	**Tenure, management authority, and use rights** Collectors and managers have a clear and recognized right and authority to use and manage the target MAP resources.	3.1.1	The area where wild collection is carried out is clearly defined and its boundaries established.	• Current versions of maps at an adequate scale for all the collection areas (also community/ collector-generated maps and surveys)	x			1
		3.1.2	The ownership, tenure, or use rights of the collection area are known over a time-scale that is long enough to fulfil the stated MAP resource management objectives.	• Relevant documents that identify the responsible managers /ownership include: Land title / deed, lease agreement, resource management agreement, collection permit, letter from a solicitor / lawyer, land registry records	x			2
		3.1.3	There is a regulatory system in place protecting the MAP management area from illegal collection activities, settlement, and other unauthorized activities.	• Documented Regulatory system/ Policy from the responsible manager or authority / owner	x			2
		3.1.4	Mechanisms of control effectively insure the functioning of the regulatory system (e.g., laws and regulations are being enforced, with the intended effect).	• Regulatory system • Interview with collectors • Information from the responsible manager or authority / owner • Monitoring reports	x x x		x	2
		3.1.5	The collectors / collection managers have a clear right to use and manage the MAP resources.	• Collection permits • Contracts or agreements	x x			2

Criterion		Number	Indicator	Form of Indicator / Method of control	Competence			Category[6]
					Collection manager	Consultant	Certifier	
Criterion 3.2	**Laws, regulations, and administrative requirements** Collection and management of MAP resources complies with all international agreements and with national and local laws, regulations, and administrative requirements, including those related to protected species and areas.	3.2.1	Relevant legal, regulatory, and administrative requirements and responsibilities are known and understood by resource managers.	• Relevant legal, regulatory, and administrative documents (including contracts, collection permits, export permits, etc.) + • National / local lists of protected species found in or likely to be found in the collection area • National / local lists or maps of protected areas within or overlapping with the collection area • Communication with relevant authorities / local conservation organizations • Authorization of a certain quantity of collection by the relevant authorities	x x x x			1
		3.2.2	Management plans, procedures, work instructions and contracts meet relevant legal, regulatory, and administrative requirements.	• Contracts + • Management plans, procedures, work instructions + • Collection permits + • Maps indicating location of any protected areas within or adjacent to collection area + • Export permits (e.g. CITES Appendix II species)	x x x x x			1
Principle 4	**Respecting Customary Rights** Local communities' and indigenous peoples' customary rights to use and manage collection areas and wild collected MAP resources shall be recognized and respected.							
Criterion 4.1	**Traditional use, access rights, and cultural heritage** Local communities and indigenous people with legal or customary tenure or use rights maintain control, to the extent necessary to protect their rights or resources, over MAP collection operations.	4.1.1	Knowledge of legal or customary rights, traditional uses and cultural and religious significance of MAP and other species and their habitats is available	• Documentation on traditional MAP and collection area uses so as on cultural and religious significance • Information gathering documents • Information from local groups/ indigenous peoples • Consultation with relevant authorities and specialists	x x x			2
		4.1.2	Traditional uses / access rights are included in the resource / collection area management plan (according to criterion 5.1)	• Management plan	x	x		2→1
		4.1.3	Collection of MAP resources respects the cultural and religious significance of MAP and other species and their habitats (according to 4.1.1).	• Agreements with local groups / indigenous peoples • Maps indicating location and boundaries of these areas	x x			1

Criterion		Number	Indicator	Form of Indicator / Method of control	Competence			Category[6]
					Collection manager	Consultant	Certifier	
		4.1.4	Potential impacts of MAP collection activities on traditional use, access rights, and cultural heritage in the collection area (on the basis of indicator 4.1.1) are defined (including the influx of collectors).	• Risk analysis of potential impacts	x			2→1
		4.1.5	Measures are taken to avoid loss or damage affecting the legal or customary rights, resources, health security or livelihoods of local communities and indigenous peoples (on the basis of indicator 4.1.1).	• Management plan	x			2→1
		4.1.6	Fair compensation is provided in the case of such loss or damage.	• Evidence (e.g. document records) of consultation / conflict resolution	x			2→1
		4.1.7	Availability, accessibility, and quality of medicinal plant resources for local and traditional use (on the basis of indicator 4.1.1) are not undermined or diminished by commercial collection.	• Records on consultations with local communities and indigenous people concerning availability, accessibility and quality of medicinal plant resources • Exclusive collection areas • Stakeholder interviews	x			2→1
		4.1.8	Appropriate and effective mechanisms are used to resolve grievances.	• Evidence (e.g. document records) of consultation / conflict resolution with local communities and indigenous peoples concerning MAP collection activities	x			2→1
Criterion 4.2	**Benefit sharing** Agreements with local communities and indigenous people are based on appropriate and adequate knowledge of MAP resource tenure, management requirements, and resource value.	4.2.1	Agreements with local communities and indigenous people on the use of the resources exist.	• Agreement record / document	x			2
		4.2.2	Agreements are in compliance with relevant national laws and regulations concerning access and benefit sharing.	• National legislation / regulations	x			1
		4.2.3	Concerning the use of traditional knowledge: Informed consent is given by the source community, and mutually agreed terms are reached for access to this knowledge and the equitable distribution of benefits arising from its use.	• Agreement documents • Stakeholder interviews	x			2→1

Criterion		Number	Indicator	Form of Indicator / Method of control	Competence			Category[6]
					Collection manager	Consultant	Certifier	
		4.2.4	Evidence exists of prior informed consent (PIC) and mutually agreed terms (MAT) with respect to genetic resource access, management responsibility, and delegation of control to other agencies.	• Contracts and agreements include evidence of prior informed consent (PIC); statement of mutually agreed terms (MAT)	x			2→1
		4.2.5	Resource access and benefit sharing agreements reflect available scientific, local, industry, and other relevant sources of knowledge / information concerning the current and anticipated value of the resource.	• Agreement document • Records, reports or other evidence reflecting the resource value • Overall assessment	x x			2→1
		4.2.6	Mechanisms for sharing benefits are perceived as fair by beneficiaries.	• Declaration of the beneficiaries	x			2→1
		4.2.7	Agreements allow for new information and changing local conditions affecting these communities.	• Agreement document • Overall assessment	x			2→1
		4.2.8	Collection and processing of wild-collected MAP products are conducted in a manner that strengthens and diversifies the local economy.	• Evidence of reasonable provision for local employment • Local ownership of and investment in MAP wild collection operations • Overall assessment	x x			1
Section III	**MANAGEMENT AND BUSINESS REQUIREMENTS**							
Principle 5	**Applying Responsible Management Practices**							
	Wild collection of MAP species shall be based on adaptive, practical, participatory, and transparent management practices.							
Criterion 5.1	**Species / area management plan** A species / area management plan defines adaptive, practical management processes and good collection practices.	5.1.1	A management plan for sustainable collection exists.	• Management plan	x			1
		5.1.2	The management plan includes: a) Plant and habitat conservation strategies b) Internal quality standard according to indicator 6.1.2 c) Documented procedures required by this Standard (e.g. monitoring, measurements and analysis of impacts of collection practices) d) Documents needed by the wild collection company / organization to ensure the effective planning, operation and	• Management plan	x			1

Criterion	Number	Indicator	Form of Indicator / Method of control	Competence			Category[6]
				Collection manager	Consultant	Certifier	
		control of its processes e) Records and documents required by this Standard.					
	5.1.3	The management plan is specific to the collection area (site) and to the MAP species collected.	• Management plan	x			1
	5.1.4	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.	• Update of management plan • Records of management plan reviews	x			1
	5.1.5	The management plan takes into consideration any management plan that refers to the collection area and that is produced by the appropriate resource management authority.	• Management plan • Consultation with other operations / management authorities working in or adjacent to the collection area	x x			1
	5.1.6	Overlapping and adjacent protected areas and areas with special management objectives are identified.	• Management plan • Consultation with other operations / management authorities working in or adjacent to the collection area • Maps	x x x			1
	5.1.7	Other activities in the area representing potential threats on sustainability of species and habitat are identified (e.g. other collectors in the same area).	• Reports on other activities in the area • Reports on other companies / groups collecting in the same area • Consultation with other operations/ management authorities working in or adjacent to the collection area	x x x			1
	5.1.8	Maps 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.	• Maps	x			1
	5.1.9	All major sources of potential contamination are clearly indicated on the map and excluded from collection.	• Maps • Internal Collection Rules / good collection practices • Visual / physical verification of area by inspector	x x		 x	1
	5.1.10	The management plan includes strategies to prevent or reduce identified threats (according to 5.1.8)	• Management plan • Agreements with other companies operating in the collection area	x x			1

Criterion		Number	Indicator	Form of Indicator / Method of control	Competence			Category[6]
					Collection manager	Consultant	Certifier	
		5.1.11	The collection area is free of major sources of contamination	• Declaration of the owner / responsible manager • Written monitoring reports • Field notes / documented observations and visual appraisal	x x x		x	1
		5.1.12	Written internal instructions exist for each collection area on: a) collection sites, b) collection methods, c) maximum collection quantities, d) maximum allowed collection frequency and e) periods to avoid and concentrate collection activities.	• Internal collection instructions/ good collection practices • Species- and site-specific monographs for collectors	x x			1
		5.1.13	Collection instructions/ good collection practices and management plan are in compliance with criterion 1.3 of this Standard.	• Internal collection instruction/ good collection practices • Species- and site-specific monographs for collectors	x x			1
		5.1.14	Collectors only collect according to the rules of the Standard.	• Collectors' contracts • Interviews with collectors	x		x	1
		5.1.15	Collection instructions are revised and updated according to new species and site-specific information and observations.	• Updated collection instructions / Species- and site-specific monographs for collectors	x			1
Criterion 5.2	**Inventory, assessment, and monitoring** Management of MAP wild collection is supported by adequate and practical resource inventory, assessment, and monitoring of collection impacts.	5.2.1	Assessment and regular monitoring of the target MAP resources and habitats, and of social / cultural and economic issues related to MAP collection are performed, documented, and incorporated into the management plan (according to criterion 5.1).	• Assessment reports, scoping inventories, information gathering, written monitoring reports and analysis of results • Management plan	x x	x		1
		5.2.2	Collection instructions specify observations required to monitor collection impacts.	• Internal collection instruction/ good collection practices • Monitoring reports	x x			2→1
		5.2.3	Periodic regeneration surveys are conducted within the management area using repeatable, comparable survey methods.	• Document on survey method + • Written monitoring reports	x x			2

Criterion		Number	Indicator	Form of Indicator / Method of control	Competence			Category[6]
					Collection manager	Consultant	Certifier	
		5.2.4	Population size, distribution, and structure (age/size-class distribution) as recorded in the regeneration survey remain equal to or above baseline values and reflect a healthy population.	• Assessment reports, scoping inventories, information gathering, written monitoring reports and analysis of results • Documented observations and visual / physical verification of area	x x		 x	1
		5.2.5	Periodic monitoring within the management area confirms that availability, viability and quality of the target resource / part of plant remain stable or increase.	• Written monitoring reports, scoping inventories, information gathering, and analysis of results + • Visual / physical verification of area by inspector	x		 x	1
		5.2.6	Inventory, assessment, and monitoring are conducted using tools and procedures within the reasonable (existing or achievable) skills and capacity of the collectors / field managers.	• Assessment reports, scoping inventories, information gathering, written monitoring reports and analysis of results • Field notes / documented observations and visual appraisal	x		 x	2→1
Criterion 5.3	**Transparency and participation** MAP collection activities are carried out in a transparent manner with respect to management planning and implementation, recording and sharing information, and involving stakeholders.	5.3.1	Groups, organizations, enterprises, individuals, agencies, etc. having an interest in the targeted MAP resources, collection area or the potential impacts, are identified in the management plan (according to criterion 5.1).	• Management plan	x			2
		5.3.2	Regular consultations are maintained with people and groups directly affected by MAP collection and resource management operations.	Evidence of ongoing and effective communication with and participation of affected communities, e.g.: • Early notification / opportunity for involvement • Definition of roles and responsibilities • Facilitation of participation • Records, plans, schedules of meetings with contracting parties and other stakeholders • Records of decisions taken as a result of such consultations. • Stakeholder interview • Overall assessment	x			1
		5.3.3	Collectors' organizations and communities affected by MAP collection activities are actively involved in the development and implementation of MAP resource management.					1
		5.3.4	Resource conflicts with adjoining landowners / managers, or other resource users, are resolved or addressed in a systematic and effective manner.					2
Criterion 5.4	**Documentation** Procedures for collecting, managing, and sharing information required for effective collection management are established and carried out.	5.4.1	Information on collection protocols and practices, transport and storage is maintained.	• Internal collection rules / GCP • Internal Handling Rules • Plant Monographs • Summaries of management plan revisions.	x x x x			1
		5.4.2	Records are established and maintained to provide evidence of conformity to requirements and of the	• Records of collection purchase and monitoring • Storage, handling, processing and transport records	x x			1

Criterion		Number	Indicator	Form of Indicator / Method of control	Competence			Category[6]
					Collection manager	Consultant	Certifier	
			effective operation of the management plan.					
		5.4.3	Systems of communication are established and maintained with the involvement of local communities and other stakeholders.	• Records, plans, schedules of meetings with contracting parties and other stakeholders • Stakeholder interview • Overall assessment	x			2
		5.4.4	Summaries of the main elements of the management plan, related annual operating plans and assessment reports are available to stakeholders.	• Documents showing main elements of the management plan • Stakeholder interviews • Overall assessment	x x x			1
		5.4.5	The documentation and level of detail associated with the management plan and the planning process is appropriate to: • 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.	• Management plan • Risk assessment of inspector	x		x	2→1
Principle 6	**Applying Responsible Business Practices** Wild collection of wild MAP resources shall be undertaken to support quality, financial, and labour requirements of the market without sacrificing sustainability of the resource.							
Criterion 6.1	**Market / buyer specifications** The sustainable collection and handling of MAP resources is managed and planned according to market requirements in order to prevent or minimise the collection of products unlikely to be sold.	6.1.1	Collection managers identify and implement market needs (e.g., through buyer order instructions / specification sheets).	• Buyer instructions • Market survey • Specifications sheets • Information gathering documents	x x x x			2
		6.1.2	Internal documentation which defines minimum product quality and hygiene requirements is based on the respective market requirements.	• Collection instructions/ Internal Collection Rules • Internal quality standard	x x			2
		6.1.3	Only plants which fulfil the quality requirements are collected.	• Collection instructions/ Internal Collection Rules	x			1
		6.1.4	The buyer of MAP resources agrees with the collection manager on quantities (e.g., how much of which plant / plant part) before the collection season starts.	• Documented agreements with buyers	x			3

Criterion		Number	Indicator	Form of Indicator / Method of control	Competence			Category[6]
					Collection manager	Consultant	Certifier	
		6.1.5	Collection managers review the buyer instructions with respect to the resource management plan before taking action on the order.	• Documented agreement with buyers • Management plan	x x			2
		6.1.6	Internal handling instructions describe the procedures for correct post-collection handling by the collectors, after purchase from the collectors, and during transport in order to minimise contamination / quality loss.	• Internal Handling Instructions	x			1
Criterion 6.2	**Traceability** Storage and handling of MAP resources is managed to support traceability to the collection area.	6.2.1	Proper collection and post-collection identification, labelling, and record keeping procedures are followed.	• Collection / Purchase records and receipts • Purchase Summary • Processing records • Stock records • Labels/identification • Sales records	x x x x x x			1
		6.2.2	Records and proper identification allow each batch of goods to be traced back to the area where it was collected.	• Collection / Purchase records and receipts indicate collection area and date • Purchase Summary • Processing records • Stock records • Labels/identification • Sales records + • Verification of traceability by inspector	x x x x x x		x	1
		6.2.3	Invoices, bills of lading, certificates of origin and other applicable documentation related to shipping or transport specify the management status of the products.	• Invoices • Bills of lading • Certification of origin • Shipping/transport documents	x x x x			2
Criterion 6.3	**Financial viability** Mechanisms are encouraged to ensure the financial viability of systems of sustainable wild collection of MAP resources.	6.3.1	There is a financial plan for the MAP collection operation which includes resource management and conservation as internal costs.	• Financial plan	x			2
		6.3.2	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.	• Financial analysis	x			2

Criterion		Number	Indicator	Form of Indicator / Method of control	Competence			Category[6]
					Collection manager	Consultant	Certifier	
Criterion 6.4	**Training and capacity building** Resource managers and collectors have adequate skills (training, super-vision, experience) to implement the provisions of the management plan, and to comply with the requirements of this Standard.	6.4.1	Appropriate courses, manuals, and other training materials are incorporated into the management operation.	• Internal documents describing the content of collectors training	x			2
		6.4.2	All collectors, purchasing and resource management staff are trained in sustainability issues and know the internal rules.	• Training records	x			1
		6.4.3	Collectors' registers are available in order to make sure that all collectors are well trained and know the rules for collection.	• Collectors list with dates of training	x			1
		6.4.4	Only registered and trained collectors are allowed to collect.	• Collectors list • Purchase records and receipts	x x			1
		6.4.5	Training is regularly repeated and its effect surveyed.	• Training records • Monitoring of collectors/purchase managers	x x			2
		6.4.6	For all new plants the collectors are informed and trained again in detail.	• Training records	x			1
		6.4.7	Training follows the principles laid down in the internal collection and handling rules.	• Internal documents describing the content of collectors training	x			1
Criterion 6.5	**Worker safety and compensation** MAP collection management provides adequate work-related health, safety, and financial compensation to collectors and other workers.	6.5.1	Benefits for staff and contractors are consistent with (not lower than) prevailing standards for benefits such as health, retirement, worker's compensation, food and housing.	• Evidence of implementation of health and safety legislation / codes of practice • Relevant records are maintained and up to date (e.g., accident records, site risk assessments) • Overall assessment	x x		x	1
		6.5.2	Payment is at least equivalent to the prevailing standard (e.g., sector average, union negotiated rate, legal minimum wage).	• Interview with collectors • Purchase records and receipts	x		x	1
		6.5.3	Payment is equitable for men and women (equal pay for equal work).	• Purchase records • Purchase receipts	x x			1
		6.5.4	Workers have the right to organize and voluntarily negotiate with employers.	• Interviews: Staff and contractors are aware of relevant requirements	x		x	2

Annex 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
FLO	Fairtrade Labelling Organizations International
FRLHT	Foundation for Revitalization of Local Health Traditions
FSC	Forest Stewardship Council
GACP	Good Agricultural and Collection Practices
GAP	Good Agricultural Practices
GMP	Good Manufacturing Practices
IGO	International Government Organization
IFOAM	International Federation of Organic Agricultural Movements
IMO	Institute for Marketecology
ISSC-MAP	International Standard for Sustainable Wild Collection of Medicinal and Aromatic Plants
IUCN	The World Conservation Union
MAC	Marine Aquarium Council
MAT	Mutually Agreed Terms
MAP	Medicinal and aromatic plant
MPSG	Medicinal Plant Specialist Group of the IUCN-The World Conservation Union
NGO	Non-government Organization
NTFP	Non-timber Forest Product
PIC	Prior Informed Consent
SECO	State Secretariat for Economic Affairs (Switzerland)
UN	United Nations
UNEP	United Nations Environment Programme
WHO	World Health Organization
WWF	World Wild Fund for Nature

Annex 3. Glossary

Term	Definition	Source
Adaptive management	An integrated, multidisciplinary approach for confronting uncertainty in natural resources issues. It is adaptive because it acknowledges that managed resources will always change as a result of human intervention, surprises are inevitable, and that new uncertainties will emerge. Active learning is the way in which the uncertainty is winnowed. Adaptive management acknowledges that policies must satisfy social objectives, but also must be continually modified and flexible for adaptation to these surprises. Adaptive management therefore views policy as hypotheses- that is, most policies are really questions masquerading as answers…and management actions become treatments in an experimental sense.	HOLLING 1978; WALTERS 1986
Benefit sharing	Participation in the economic, environmental, scientific, social or cultural benefits resulting or arising from access to genetic resources and associated traditional knowledge under mutually-agreed terms.	SECO 2005
Bill of lading	A document that establishes the terms of a contract between a shipper and a transportation company. It serves as a document of title, a contract of carriage, and a receipt for goods.	J. BRINCKMANN (personal communication)
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.	UNEP 2001
Botanicals	A subset of NTFPs that includes herbal medicines, personal care products, and functional foods.	PIERCE and LAIRD 2003
Chain of custody	The path taken by raw materials and products, from the forest to the consumer, including all successive stages of processing, transformation, manufacturing, and distribution.	FSC 2006
	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

Term	Definition	Source
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
Criterion	A state or aspect … which should be in place as a result of adherence to a principle. The way criteria are formulated should give rise to a verdict on the degree of compliance in an actual situation.	LAMMERTS VAN BUEREN and BLOM 1997.
	A standard on which judgement or decision may be based; a characterizing mark or trait.	ENCYCLOPÆDIA BRITANNICA 2006
	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.	ENCYCLOPAEDIA BRITANNICA 2006
Ex-situ conservation	The conservation of components of biological diversity outside their natural habitats.	UNEP 2001
Extent of collection	Extent: the range over which something extends: scope. Scope: extent of treatment, activity, or influence: range of operation Scale: a distinctive relative size, extent, or degree < projects done on a large scale. Rate: a fixed ratio between two things; a reckoned value; a quantity, amount, or degree of something measured per unit of something else Intensity: the magnitude of a quantity (as force or energy) per unit (as of area, charge, mass, or time).	ENCYCLOPOEDIA BRITANNICA 2006

Term	Definition	Source
	Frequency: the number of repetitions of a periodic process in a unit of time Volume: the amount of space occupied by a three-dimensional object as measured in cubic units; the amount of a substance occupying a particular volume. Quantity: a determinate or estimated amount Level: the magnitude of a quantity considered in relation to an arbitrary reference value; broadly = magnitude, intensity. Yield (sustainable annual): to bear or bring forth as a natural product, esp. as a result of cultivation; product, esp. the amount or quantity produced or returned.	
Guideline	An indication or outline of policy or conduct.	ENCYCLOPÆDIA BRITANNICA 2006
Habitat	The place or type of site where an organism or population naturally occurs.	UNEP 2001
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 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.	ISEAL 2004
Indicator	A quantitative or qualitative parameter which can be assessed in relation to a criterion.	LAMMERTS VAN BUEREN and BLOM 1997.
	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 in 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.	UNEP 2001
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	LEAMAN et al, 1999

Term	Definition	Source
	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 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.	
Mutually-agreed terms	Conditions and provisions of access and benefit sharing, among others, negotiated between the user and the provider and involving other relevant stakeholders.	SECO 2005
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 2000
	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.	FSC 2000
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 fundamental law or rule, serving as a basis for reasoning and action. Principles are explicit elements of a goal.	LAMMERTS VAN BUEREN and BLOM 1997.
	A comprehensive and fundamental law, doctrine, or assumption.	ENCYCLOPÆDIA BRITANNICA 2006
	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.	BROWN *et al*. 2000

Term	Definition	Source
Prior informed consent	Consent obtained by the user from the State and other providers, as the case may be, after fully disclosing all the required information, that allows access to their genetic resources and associated traditional knowledge under mutually-agreed terms.	SECO 2005
Protected area	A geographically defined area that is designated or regulated and managed to achieve specific conservation objectives.	UNEP 2001
Standard	A definite rule, principle, or measure established by authority.	ENCYCLOPÆDIA BRITANNICA 2006
	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.	UNEP 2001
Sustainable yield	Harvest at a rate equal to the annual growth rate.	ZABEL et al. 2003
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	The completeness of the information about every step in a process chain.	WIKIPEDIA 2006

Term	Definition	Source
Traditional knowledge, innovations and practices	Knowledge and practices of an individual or collective nature, of indigenous peoples and local communities associated with genetic resources and related to the conservation and sustainable use of biological resources.	SECO 2005
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 in 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	A population that is capable of maintaining itself over a given period of time.	
Wild collection	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.	