Annex

I. Workshop Agenda

2nd EXPERT WORKSHOP

International Standard for Sustainable Wild Collection of Medicinal and Aromatic plants (ISSC-MAP)
– Results of the Field Consultations –

02. - 06. December 2005, VILM GERMANY

AGENDA

02 December 2005 – day one

Arrival

20.00 Welcome by BfN INA and ISSC-MAP Steering Group

20:30 MAP-images (TONY CUNNINGHAM, OTHERS)

03 December 2005 – day two

Introductory session

09.00 Introduction to the agenda and introduction of participants (GERRY NEVILLE)

09.15 Introduction – Aim of the workshop, expected outcomes (DANNA LEAMAN, SUSANNE HONNEF)

Experiences from the field – Presentation and discussion

11.00 Sustainable Wild Collection of MAP - Company Anđelic, Bosnia and Herzegovina, (DAGMAR LANGE)

11.45 Medicina da Mata – Iracambi Forest Medicine (IMP), Brazil, (WOLFGANG KATHE, ELEANOR GALLIA)

13.30 Tour of the island (1.5 hours)

15.30 Association of Producers of Ecuadorian Dried Medicinal Plants (AAPPSME), Ecuador (MARIA ARGÜELLO, N.N.)

16.15 Sustainable Collection of Devil's Claw, CRIAA, Namibia (DAVID NEWTON, DAVE COLE)

17.00 MAP Wild Collection in Sichuan, China (TONY CUNNINGHAM, LUO PENG)

17.45 Discussion

19.30 Sustainable Harvesting of Devil's Claw (DAVE COLE)

04 December 2005 – day three

Analysis of field consultation outcomes

9.00 Outcomes of the field consultations and crucial points identified in the 2nd ISSC-MAP consultation round - Summary (STEFAN SALVADOR, DANNA LEAMAN)

Consequences for ISSC-MAP development and further steps

10.00 Plenum discussion: Lessons learnt and their consequences for the further development of the ISSC-MAP

11.00 Working groups: Discussion of specific ISSC-MAP components and issues identified as problematic

14.00 Continue

05 December 2005 – day four

09.00 Working groups

11.00 Presentation and discussion of results

14:00 Final discussion

15.30 Workshop conclusions

20.00 Farewell-Party

06 December 2005 – day five

Departure

II. List of participants

December 02-06, 2005, INA Vilm, Germany

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III. List of presentations

The following list shows all presentations of the workshop. To get a copy please contact WWF Germany at <MAP-Standards-Criteria@wwf.de>.

- Background of the project, role of BfN, IUCN, WWF/TRAFFIC (S. Honnef)
- Field consultation I: Sustainable Wild Collection of MAP Company Anđelić, BiH (D. Lange)
- Field consultation II: Results of ISSC-MAP Field Consultation: Medicina da Mata (MdaM), Iracambi, Minas Gerais, Brazil (E. Gallia / W. Kathe)
- Field consultations III: China Case Study – Field consultations to assess the ISSC-MAP (T. Cunningham / L. Peng)
- Field consultations IVa: The Agro-artesanal Association of Dried Medicinal Plants of Ecuador (AAPPSME) (M. Argüello)
- Field consultations IVb: ISSC-MAP lessons from the field, Ecuador (P. Hauselmann)
- Field consultations V: Report on ISSC Field Consultation, Omaheke Region, Namibia (D. Cole / D. Newton)
- The Sustainably Harvested Devil's Claw Project (SHDC), Namibia (D. Cole)
- Planning and Developing Methodology for Sustainable Management of Medicinal Plants in India and Nepal (G.A. Kinhal)
- Compilation of ISSC-MAP Field Test Results (S. Salvador)
- Opportunities for an Independent Auditing Structure for Medicinal Herb Growers and Farmers – Workshop in Bonn, Germany, 2nd December 2005 (U. Schippmann)

IV. Adapted ISSC-MAP according to recommendations of working groups

Principles	Criteria	Indicators
SECTION I: Legal And Ethical Requirements		
1. Legislation MAP collection and management activities are carried out under legitimate tenure arrangements, in compliance with relevant laws, agreements, and guidelines.	**1.1. Clarity of tenure, management authority, and use rights**	1.1.1 The area where wild collection is carried out is clearly defined and its boundaries well established.
		1.1.2 Ownership, tenure, and use rights to the land and MAP resources are clearly defined, documented and legally established and is long enough to fulfil the management objective.
	1.2. Compliance	1.2.1 Collection and management of MAPs complies with all international and local laws, regulations, and administrative requirements related to access to and protection of MAP resources collected from the collection area.
		1.2.2 MAP management areas are protected from illegal collection activities, settlement and other 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. Respect for traditional use rights and cultural heritage**	2.1.1 Local communities and indigenous peoples with customary tenure or use rights maintain control, to the extent necessary to protect their rights or resources, over MAP collection operations.
		2.1.2 Measures are taken to avoid loss or damage affecting the customary rights, property, resources, health security or livelihoods of local communities and indigenous peoples.
		2.1.3 Collection of MAP resources respects the cultural significance of MAPs and other species and their habitats.
		?.?.? Social / cultural and local economic issues relevant to target MAP resources and the collection are understood.
	2.2. Benefit sharing	*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.*
		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.
3. Transparency MAP collection and management activities are carried out in a transparent manner with respect to sharing information and consulting stakeholders.	**3.1. Stakeholder identification and communication**	3.1.1 Relevant stakeholders and interests in MAP collection and resource management are identified.
		3.1.2 Appropriate systems of communication, including access to resource management information, are established and maintained between and among the stakeholders.
	3.2. Participation and integration of local interests	3.2.1 Communities within or adjacent to the MAP collection area are actively involved in MAP resource and collection area planning, assessment, and management activities.
		3.2.2 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.
		3.2.3 Collection and processing of MAP products are conducted in a manner that supports local health needs, strengthens and diversifies the local economy.
	3.3. Regular consultation and conflict resolution	3.3.1 Consultations are maintained, in a regular and timely manner, with people and groups directly affected by MAP collection and resource management operations.
		3.3.2 Resource conflicts with adjoining landowners and managers, or other resource users, are addressed and resolved or addressed in a systematic and effective manner.

Principles	Criteria	Indicators
SECTION II: Resource assessment, management planning, and monitoring		
4. Assessments Assessments of the target MAP resources and habitats, and of social/ cultural/economic issues related to MAP collection, are performed and documented.	**4.1. Basis for assessment**	4.1.1 MAP collection assessment is undertaken according to Annex 1.
5. Management Planning A species management plan is established and revised as needed to direct / guide MAP wild collection operations.	**5.1. Content of the management plan**	5.1.1 A species-oriented management plan is developed based on the assessment through a transparent process that is consistent with the requirements specified in Annex 2.
	5.2 Monitoring	5.2.1 The impacts of collection practices, and conformity of implementation with management planning, are monitored at regular intervals.
SECTION III: Responsible collection and collection area practices		
6. 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 and quality of MAP species and populations; and b) does not exceed the target species' ability to regenerate over the long term	**6.1 Rationale for MAP collection**	6.1.1 The rationale for MAP collection protocols and methods is supported by appropriate and adequate knowledge of the specific resource (see also 8.1.2).
		6.1.2 When appropriate and adequate knowledge is not available, a data collection programme is undertaken. If the resource populations are likely to be resilient to harvest, then collection takes an adaptive management approach. If populations are vulnerable to overharvest, then collection should not proceed.
		6.1.3 Where there is a choice between species or plant parts to produce a similar product, those species or plant parts with characteristics that best support sustainable wild harvest are preferred.
		?.?.? Information on collection protocols and practices, transport and storage is maintained
	6.2 Regeneration and population dynamics	6.2.1 Regeneration rates (by seed and/or sprouting) and population size class distribution are sufficient for long-term population.
	6.3 Age / size class harvested	6.3.1 Age / size class limits are set for harvest to minimize negative impacts on long-term vigour and production of harvested populations.
	6.4 Growth and sustainable yield	6.4.1 The quantity of material collected does not reduce the long-term vigour of harvested populations.
	6.5 Frequency and intensity of harvest	6.5.1 The frequency or intensity of collection of MAP material from a population minimizes negative impacts on long-term vigour and production.
	6.6 Timing	6.6.1 Timing of collection of MAP material aims to minimize stress during reproductive periods and minimize impacts on reproductive capacity.
	6.7 Density / abundance	6.7.1 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.
	6.8 Good Collection Practices	6.8.1 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.

Principles	Criteria	Indicators
7. 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 species and habitats.	**7.1 Sensitive taxa**	7.1.1 Rare, threatened, and endangered species or habitats that are likely to be affected / impacted by MAP collection are identified and protected. Landscape level management should not favour MAPs yet impact rare or threatened species or habitats.
		7.1.2 Particular care is taken when managing MAP species with life history strategies or otherwise dependent relationships with other species.
	7.2 In situ measures	7.2.1 In situ populations of MAPs are adequate to support long-term species survival.
	7.3 Ex situ measures	7.3.1 Ex situ conservation / production programmes draw genetic material / germplasm from diverse MAP populations to prevent depletion of genetic diversity and/or in situ population decline.
	7.4 In situ / ex situ measures	7.4.1 Enrichment planting of MAP species / populations does not adversely impact ecosystem diversity, processes and functions. • Enrichment planting uses native plants and local 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.
	7.5 Prevention of negative impacts	7.5.1 Negative impacts caused by MAP collection activities on the collection area and on neighbouring areas are minimized.
		7.5.2 Waste caused by poor collection practices is minimized.
		7.5.3 Synthetic chemicals are avoided. In exceptional cases where chemical are used, they comply with organic standards.
		7.5.4 Conversion of forest or other natural habitats to plantations of MAP (or other resources) is avoided in other cases, cultivation in agroforestry systems or plantations can play a crucial role in reducing harvesting pressure on wild stocks.
SECTION IV: Responsible business practices		
8. Market Requirements Wild collection of MAPs is undertaken according to quality requirements of the market without sacrificing sustainability of the resource.	**8.1 Financial sustainability**	8.1.1 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.
	8.2 Transparency and traceability	8.2.1 Buyers of MAP resources are encouraged to provide clear and unambiguous order instructions that comply with supply limitations.
		8.2.2 Storage and handling of collected plant material is managed to support traceability to collection area.
	8.3 Quality Specifications	8.3.1 Buyers of MAP resources provide quality specifications.
9. Buyer-collector 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 compensate adequately and provide for work-related health and safety of collectors and other workers.	**9.1 Training and capacity building**	9.1.1 Resource managers and collectors have adequate means (training, supervision, experience) to harvest the resource sustainably and/ or to implement the provisions of the management plan and to comply with legal and ethical requirements of this standard.
	9.2 Workplace requirements	9.2.1 MAP collection management provides for adequate work-related health and safety of collectors and other workers.
		9.2.2 Employed MAP collectors are adequately compensated.
		9.2.3 MAP collection management provides for the right of workers to organize and voluntarily negotiate with employers, where applicable.

Annex (1) to 4.1.1:

- Identification of collection area (general habitat characteristics)
- Who is collecting, volumes of collection, identification of species, biological characteristics (age classes, regeneration, size of population, mortality rates, impact of collection)
- Socio, cultural and economic issues [Relevant information includes]:
  - 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.

Annex (2) to 5.1.1:

- Description of collection area
- Maximal sustainable yield
- Good collection practices (see Principle 6)
- How to monitor (who, process)
- Training (needs)

V. Recommendations of working groups how to revise ISSC-MAP

Summary of the working groups' outcomes

a) Working Group / Section I: Legal and Ethical Requirements

- Added performance aspects to wording of criteria
- Merged indicators 1.1.2 & 1.1.3, 1.2.1 & 1.2.2
- Dropped indicators 1.2.3 and 1.2.4
- Considered 1.3.1 and 1.3.2 to be already covered by 1.2.1

= 2 criteria dropped (1.3 and 2.3)

b) Working Group / Section II: Resource Assessment, Management Planning, and Monitoring

Assumptions:

- Standard can only be applied in controlled areas (secure land tenure, access rights, etc.). Suggestion: Allow standard for informal verification.
- An area management plan is useful but no prerequisite.
- A species management plan is what is required.
- The standard will be applied in case of commercial flows.
- Standard will be adopted by trading actors.
- Standard will be translated through manuals etc. for collectors (by resource managers, companies, etc.)
- Field-testing, however, was mainly conducted on community level.

Changes:

- Principle 4 (assessment), 4 criteria ⇨ Principle 4 (assessment), 1 criterion
  – Pre-assessment was taken out
  –Reference added to an annex with content of assessment
- Principle 5 (management plan), 2 criteria ⇨ Principle 5 (management plan + monitoring), 2 criteria
  – Reference added to annex with content of management plan
- Principle 6 (monitoring), 1 criterion ⇨ included in Principle 5

= about 8 indicators dropped

Recommendation on other sections:

- Principle 7 should be included in Principle 5

c) Working Group / Section III: Responsible Collection and Collection Area Practices

- "Decision key": before starting….linked to key sections;
- Added reference to harvester knowledge;
- Added references to landscape & habitat level (& need additional indicator);
- Need to flag species with special life-histories & phylogenetic distinctiveness (added to 8.1.2)
- Deleted 7.2.1
- 7.8.1 GCP suggested shift to Management Plan;
- 8.2 Separated ex situ & in situ.

d) Working Group / Section IV: Responsible Business Practices

- Some of the language in the introductory sections are not consistent with the document itself; for example, Scope states that the document does not address quality, but in fact quality is addressed in P 9 (and P 7?); propose change to, "except insofar as it applies to sustainability".
- As one of the field studies commented on principles, their views were recorded and in one case a modification proposed to a principle.
- Did not consider input from the advisory group from last May;
- Did not consider verification steps; only criteria and indicators.

Recommended changes including rationale and deletions

Principles	Criteria	Indicators	Rationale
SECTION I: LEGAL AND ETHICAL REQUIREMENTS			
1. Legislation MAP collection and management activities are carried out under legitimate tenure arrangements, in compliance with relevant laws, agreements, and guidelines.	**1.1 Clarity of tenure, management authority, and use rights**	1.1.1 The area where wild collection is carried out is clearly defined and its boundaries well established.	
		1.1.2 Ownership, tenure, and use rights to the land and MAP resources are clearly defined, documented and legally established and **is long enough** to fulfil the management objective.	*Time scale aspect of 1.1.3 has been moved here.*
		~~**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.**~~	*This indicator is redundant with indicator 1.1.2 and the two could easily be combined.*
	1.2 Compliance	1.2.1 Collection and management of MAPs complies with all **international** and local laws, regulations, and **administrative requirements** related to access to and protection of MAP resources collected from the collection area.	*(1) "administrative requirements" added (2) "international" from former 1.2.2 moved here"*
		1.**2.2** MAP management areas are protected from illegal collection activities, settlement and other unauthorized activities.	*moved from 1.3.3*
		~~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).~~	*International aspect moved to 1.2.1*
		~~**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.**~~	
		~~1.2.4 Collection and management of MAPs demonstrates compliance with this standard and its principles.~~	*circular reference*
	~~**1.3 Prevention of illegal / unauthorized activities**~~	~~**1.3.1 Wild collection of MAPs undertaken in legally established protected areas complies with prohibitions and restrictions on collection.**~~	*already taken care of in 1.2.1*
		~~**1.3.2 Wild collection of legally protected MAP species complies with prohibitions and restrictions required to meet the objectives of relevant legislation / regulation.**~~	*already taken care of in 1.2.1*

Principles	Criteria	Indicators	Rationale
		1.**3.3** ⇨ 1.**2.2**	*moved: now 1.2.2 (new) Alternatively, add to existing 1.1.2*
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.	2.3. **Respect for traditional use rights and cultural heritage** ~~Access, use, and tenure rights~~	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.	*"legal" removed, dealt with under Principle #1*
		2.1.2 Measures are taken to avoid loss or damage affecting the ~~legal or~~ customary rights, property, resources, **health security** or livelihoods of local communities and indigenous peoples.	*"legal" removed, dealt with under Principle #1*
		2.**1.3** Collection of MAP resources respects the cultural ~~and religious~~ significance of MAPs and other species and their habitats.	*(1) Moved from 2.3.1 (2) "Religious" is understood to be included in "cultural"*
		?.?.? Social / cultural and local economic issues relevant to target MAP resources and the collection are understood.	*Move here from 4.4.1? [Recommendation from Working Group 2 to move to Principle 2]*
	2.4. Benefit sharing	**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.	*Needs to be phrased simpler*
		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.	*Needs to be phrased simpler*
	~~**2.5. Cultural heritage and traditional uses**~~	2.**3.1** ⇨ 2.**1.3**	*Moved to C 2.1 as 2.1.3(new)*
		~~**2.3.2** MAP collection and resource management are conducted in accordance with cultural traditions and norms, where possible and when sustainable.~~	*This has a resource management component (P7), local traditional collection practices need to be acknowledged where appropriate.*
	2.6. Participation and integration of local interests [move to 3.2 NEW]	**2.4.1 – 2.4.3 ⇨ 3.2**	
3. Transparency MAP collection and	**3.4. Stakeholder identification and**	3.1.**1** Relevant stakeholders and interests in MAP collection and resource management are identified.	*Moved from 3.1.2*

Principles	Criteria	Indicators	Rationale
management activities are carried out in a transparent manner with respect to sharing information and consulting stakeholders.	**communication** ~~Information~~	3.1.**2** **Appropriate** systems of communication, including access to resource management information, are established and maintained **between and among the stakeholders.**	*Moved from 3.1.1 Responsibility equally spread out among ALL stakeholders*
	3.5. Participation and integration of local interests [moved here from C 2.4]	3.2.1 Communities within or adjacent to the MAP collection area are actively involved in MAP resource and collection area planning, assessment, and management activities.	
		3.2.2 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.	
		3.2.3 Collection and processing of ~~wild-collected~~ MAP products are conducted in a manner that supports **local health needs,** strengthens and diversifies the local economy.	
	3.6. Regular consultation and conflict resolution [moved here from C 3.2]	3.3.**1** Consultations are maintained, in a regular and timely manner, with people and groups directly affected by MAP collection and resource management operations.	*Moved from 3.2.1*
		3.3.**2** Resource conflicts with adjoining landowners and managers, or other resource users, are are addressed and resolved or addressed in a systematic and effective manner.	*Moved from 3.2.2*

Principles	Criteria	Indicators	Rationale
SECTION II:	***RESOURCE ASSESSMENT, MANAGEMENT PLANNING, AND MONITORING***		
4. Assessments ~~Regular~~ **A**ssessments of the target MAP resources and habitats, and of social / cultural / economic issues related to MAP collection, are performed **and**~~,~~ documented~~, and reflected in management planning, implementation, and monitoring~~.	**4.2. Basis for assessment**	~~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.~~	*Just one assessment needs to be done. If a pre-assessment is done that's their own responsibility. Important issue is assessment which is done in 4.1.2.*
		4.1.**1** **MAP collection assessment is undertaken according to Annex 1**. ~~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.~~	*(1) New number: 4.1.1* *(2) ANNEX 1:* • *Identification of collection area (general habitat characteristics)* • *Who is collecting, volumes of collection, identification of species, biological characteristics (age classes, regeneration, size of population, mortality rates, impact of collection)* • *Socio, cultural and economic issues [Relevant information includes]:* – *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. (Make sure that this doesn't overlap with P2)*
	~~**4.3. Knowledge about target MAP species**~~	~~4.2.1 MAP species targeted for collection are accurately and adequately identified and geographic sources are identified.~~	*To be dealt with in Annex 1 (4.1.1)*
		~~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.~~	*To be dealt with in Annex 1 (4.1.1)*

Principles	Criteria	Indicators	Rationale
	~~4.4. Knowledge about MAP habitat / collection area~~	~~4.3.1 Collection area and habitat characteristics of targeted MAP species are known.~~	*To be dealt with in Annex 1 (4.1.1)*
	~~4.5. Social / cultural / economic issues~~	4.4.1 Social / cultural and local economic issues relevant to target MAP resources and the collection are understood.	*This is important but should be dealt with under in Principle #2.*
5. Management Planning A **species** management plan is **established** ~~written~~ and revised as needed to direct / guide MAP wild collection operations.	**5.2. Content ~~Consistency and coordination~~ of the management plan**	5.1.1 **A** ~~The~~ **species-oriented** management plan is developed **based on the assessment** ~~and revised~~ through a transparent process that is consistent with the requirements specified **in Annex 2** ~~within this standard~~.	*Add a guide (Annex 2) with minimum requirements of a management plan: ANNEX 2:* • *Description of collection area* • *Maximal sustainable yield* • *Good collection practices (see P7)* • *How to monitor (who, process)* • *Training (needs)*
		~~5.1.2 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~~	*Becomes part of Annex 2 (5.1.1 NEW)*
		~~5.1.3 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.~~ ~~• 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.~~ ~~• Overlapping / adjacent protected areas and areas with special management objectives are identified.~~	*Becomes part of Annex 2 (5.1.1 NEW)*
		~~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.~~	*Becomes part of Annex 2 (5.1.1 NEW)*

Principles	Criteria	Indicators	Rationale
	~~**5.2 Content of the management plan**~~	~~5.2.1 All MAP collection areas and targeted MAP species are covered by a management plan which contains:~~ ~~• 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~~ ~~• 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.~~	*Becomes part of Annex 2 (5.1.1 NEW)*
	5.2 Monitoring [from 6.1]	**5.2.1 The impacts of collection practices, and conformity of implementation with management planning, are monitored at regular intervals.**	*NEW*
~~***6. Monitoring***~~ ~~The impacts of collection practices and conformity of management with planning are monitored at regular intervals.~~	~~**6.1. Basis for and application of monitoring**~~ [goes to 5.2]	~~6.1.1 Up-to-date collection and management information is maintained (e.g., volume, rates, impacts of collection) on the resources collected.~~	*cf. 5.2.1 NEW*
		~~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.~~	*cf. 5.2.1 NEW*
		~~6.1.3 The results of monitoring are incorporated into the implementation and revision of the management plan.~~	*cf. 5.2.1 NEW*

Principles	Criteria	Indicators	Rationale
SECTION III:	***RESPONSIBLE COLLECTION AND COLLECTION AREA PRACTICES***		
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	**7.1. Rationale for MAP collection**	7.1.1 The rationale for MAP collection protocols and methods is supported by appropriate and adequate knowledge of the specific resource **(see also 8.1.2)**.	
		7.1.2 When appropriate and adequate knowledge ~~/ information~~ is not available, a data collection programme is undertaken**. If the resource populations are likely to be resilient to harvest, then**~~,~~ ~~and any ongoing~~ collection takes an **adaptive management** ~~precautionary~~ approach. **If populations are vulnerable to overharvest, then collection should not proceed.**	
		7.1.3 Where there is a choice **between** ~~among~~ species **or**~~/~~ plant parts ~~available~~ to produce a similar product, those species **or**~~/~~ plant parts **with** ~~having~~ characteristics that best support sustainable wild **harvest** ~~collection~~ are preferred.	
		?.?.? Information on collection protocols and practices, transport and storage is maintained	*Move here from 9.2.3? [Recommendation from Working Group 4 to move to Principle 7]*
	7.2. ~~Growth /~~ Regeneration and population dynamics	~~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.~~	
		7.2.**1** ~~Growth rates and~~ **R**egeneration **rates (by seed and/or sprouting) and population size class distribution are sufficient for long-term population ~~viability~~** ~~are regularly monitored using a well-designed inventory system~~.	*formerly 7.2.2*

Principles	Criteria	Indicators	Rationale
	7.3. Age / size class harvested	7.3.1 ~~Minimum~~ **A**ge / size class **limits are set for harvest to** ~~for first and subsequent collection of material from MAP species aims to~~ minimize negative impacts on long-term vigour and production **of harvested populations**.	*Although the emphasis in this draft is on minimum size classes (ie: harvesting plants above a certain size), the crucial factor for most perennial plant populations is to harvest using a "slot size class limit" (above a minimum size and BELOW a certain size). The worst harvesting practice (followed by many foresters as well as commercial medicinal plant harvesters) is to harvest the largest, reproductively mature individuals. This has the highest impact on regeneration & population viability, as clearly shown by numerous matrix population models for plants from cycads to trees and perennial herbs.*
	7.4. ~~Quantity (collectable~~ Growth and sustainable yield~~)~~	7.4.1 The quantity of material collected **does not reduce the** ~~minimizes negative impacts on~~ long-term vigour **of harvested populations** ~~and production~~.	*In common with any collection practices, quantity collected as well as frequency and intensity of harvest are directly influenced by land & resource tenure, size of the market, MAP prices and whether the market price is stable or not.*
	7.5. Frequency and intensity of harvest	7.5.1 The frequency **or intensity** of collection of MAP material from **a** ~~an individual or~~ population minimizes negative impacts on long-term vigour and production.	*It is the population level that is relevant. How does one minimise impact on individual plants when the whole plant is collected? Individuals can be uprooted, as long as the population remains viable.* *Frequency and intensity of harvest are two different things and need to be defined (glossary)* *Vigour and production also need to be defined.*
	7.6. Timing	7.6.1 Timing of collection of MAP material aims to minimize stress during reproductive periods and minimize impacts on reproductive capacity.	

Principles	Criteria	Indicators	Rationale
	7.7. Density / abundance	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.	
	7.8. Good Collection Practices	7.8.1 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.	*possibly shift to management plan section*
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 **species and habitats** ~~MAP resources in the ecosystems in which they occur~~.	**8.1 Sensitive taxa**	8.1.1 Rare, threatened, and endangered species **or habitats** ~~of MAPs~~ that are likely to be affected / impacted by MAP collection **are identified and protected.** ~~and~~ **Landscape level** management **should not favour MAPs yet impact rare or threatened species or habitats** ~~are identified and protected~~.	*It is not just rare or threatened MAP's at stake here: the overall goal relates to maintenance of species & habitats, as well as livelihoods. The inherent contradiction between the need to conserve high conservation value habitats (and their component rare species, plant & animal) & disturbance events that favour weedy medicinal species (such as Harpagophytum (overgrazing), Helichrysum (fire) and Arctostaphylos uva-ursi (unmanaged logging of Siberian forests) needs to be recognised & dealt with – not only from a "perverse incentive" viewpoint, but also a market one (will there be a reaction against Siberian uva-ursi just as there has been against "blood diamonds" from conflict areas of Africa?*
		8.1.2 Particular care is taken when managing MAP species with **life history strategies** ~~symbiotic~~ or otherwise dependent relationships with other species.	
	8.2 In situ ~~/ ex situ~~ measures	8.2.1 In situ populations ~~and ex situ collections~~ of MAPs are adequate to support long-term species survival.	*Criterion 8.2 split into the 8.2 – 8.4 to deal with the various variants of in situ / ex situ measures.*
	8.3 Ex situ measures	8.**3.1** Ex situ conservation / production programmes draw genetic material / germplasm from diverse MAP populations to prevent depletion of genetic diversity and/or in situ population decline.	*formerly 8.2.2*

Principles	Criteria	Indicators	Rationale
	8.4 In situ / ex situ measures	8.**4.1** "Enrichment planting of MAP species / populations does not adversely impact ecosystem diversity, processes and functions. • Enrichment planting uses native plants and **local** ~~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."	*formerly 8.2.3*
	8.5 Prevention of negative impacts	8.**5**.1 Negative impacts caused by MAP collection activities on the collection area and on neighbouring areas are minimized.	*formerly 8.3*
		8.**5**.2 Waste caused by poor collection practices is minimized.	
		8.**5**.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.	
		8.**5**.4 Conversion of forest or other natural habitats to plantations of MAP (or other resources) is avoided **in other cases, cultivation in agroforestry systems or plantations can play a crucial role in reducing harvesting pressure on wild stocks**.	

Principles	Criteria	Indicators	Rationale
SECTION IV: RESPONSIBLE BUSINESS PRACTICES			
9. Market Requirements Wild collection of MAPs is undertaken according to quality requirements of the market without sacrificing sustainability of the resource	**9.1. Financial sustainability**	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.	*Acceptable on area management and species management levels; not on individual collector level*
		~~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.~~	*Quite confusing; appeared to imply that, if commercial support, the commercial player needs to force themselves out; if non-commercial, at least two field studies (BiH and Namibia) recorded that continuing support is necessary. Also noted that if 9.1.1 is successful, this 9.1.2 becomes irrelevant.*
	9.2. Transparency and traceability [*Brazil field-test suggests: move the whole thing to Principle 3*]	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 understood by both parties~~.	*All field studies opposed; suggestion to shorten the indicator.*
		9.2.2 Storage and handling of **collected plant material** ~~post-collection MAP resources~~ is managed to support traceability ~~/ chain of custody~~ **to collection area**.	*Modified for simpler language.*
		~~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~~.	*Modify to : "Information on collection protocols and practices, transport and storage is maintained;" and **move to Principle 7**.*
	9.3. Quality Specifications	**9.3.1 Buyers of MAP resources provide quality specifications.**	*Also add to guidance: rationale as to why this is a sustainability issue; e.g., prevents overharvest (if collectors harvest goods that cannot be sold)*
10. Buyer-collector ~~Worker~~ Relations Systems of management for wild collection of MAP resources ensure the capacity of collectors	**10.1. Training and capacity building**	10.1.1 Resource managers and collectors have adequate means (training, supervision, experience) **to harvest the resource sustainably and/ or** to implement the provisions of the management plan and to comply with legal and ethical requirements of this standard.	*Noted some consistency in input from field studies that expressed support for the indicator but observed that there is no formal, written management plan. Agreed to add language.*

Principles	Criteria	Indicators	Rationale
and other workers to comply with the requirements of this standard, **and compensate adequately and provide for work-related health and safety of collectors and other workers** ~~and meet or exceed applicable policies, laws, and regulations with respect to health, safely, and compensation~~.	**10.2. Workplace requirements**	10.2.1 MAP collection management **provides for adequate work-related** ~~meets or exceeds applicable laws and / or regulations covering~~ health and safety of **collectors and other workers** ~~employees and their families~~.	*Comments ranged from relevant and applicable to "naïve" to unrelated to sustainability; and even with some concern that enforcing this indicator would drive collection away from poorer harvesters; clearly disconnected to those areas without laws (or in which goods are illegally harvested)*
		10.2.2 **Employed** MAP collectors ~~and other employees~~ are **adequately** ~~fairly~~ compensated ~~through wages and benefits~~.	*This indicator is considered as not applicable unless collectors are directly employed by companies. In most cases, no wages but per-weight prices are paid.*
		10.2.3 MAP collection management provides for the right of workers to organize and voluntarily negotiate with employers**, where applicable**.	*Agreement from three field studies that this is applicable. The other two stated that this should be dropped. We suggest therefore to add: 'where applicable'*

VI. Compilation of Results from Field Consultations

Introductory remarks

This compilation is based on the general evaluation of ISSC-MAP provided as documents "R2". The extensive and detailed analysis on indicator level of form "R1" has only partly been considered where general conclusions had been taken or recommendations given.

The objective of this document is to provide an overview of the general perception and potential for implementation by practitioners. By this, common views and recommendations on the standard as a whole, the process of its development, and the next steps to its applicability on the ground, shall be made visible and understandable.

Choices had to been made what statements to include, whether to characterize them as 'findings', 'assumptions', or 'recommendations', and which parts of them to highlight and possibly summarize in the small overview sections. These are provided only for those issues where detailed information or common findings and recommendations have been listed on the project/site level.

In order to reflect the number of more or less similar statements made on the project/site levels, a numbers of asterisks (= ★) has been assigned to the items in the overview sections. Where an asterisk is put into brackets, the view was seen to be implicit in one of the projects' statements, though not explicitly stated.

Finally, comments of Advisory Group member that had been provided during the consultation earlier this year have been included where appropriate. These comments are marked by a preceding pen symbol (✎), an italic font (*Times*), and are shown below the project/site specific evaluation.

Part I: Information on projects or sites and field testing methodology

	Bosnia-Herzegovina	Brazil	China	Ecuador	Namibia
A Project context					
1. *Site description*					
a) Project / site name	**Anđelić** d.o.o.	**Medicina da Mata** (MdaM) – 'Iracambi Forest Medicine', previously called the Iracambi Medicinal Plants project (IMP)	**Wanglang** National Nature Reserve & **Baima** State Forest	Asociación Agro-artesanal de Productores de Plantas Secas Medicinales del Ecuador (**AAPPSME**) – Agro-artesanal Association of Producers of Dried Medicinal Plants of Ecuador	Sustainably Harvested Devil's Claw (**SHDC**) Project
b) Location	*Town*: Trebinje *Collection area*: surroundings of Trebinje	*Community*: Rosário da Limeira *State*: Minas Gerais *Country*: Brazil	*Township*: Baima *County*: Pingwu *Province*: Sichuan *Country*: China	Chuquiribamba *Province*: Loja *Country*: Ecuador	*Region*: Omaheke *Country*: Namibia
c) Ownership	**Findings:**	• **Most of the collection activities take place on <u>public</u> ground**			= ★★★★
	• The company Anđelić d.o.o. is privately owned by Mr Radovan Anđelić. • The collection area is mostly <u>state</u>-owned.	• The project is coordinated by *Amigos de Iracambi*, a non-profit organisation, forming one of 3 organisational units of Iracambi. • Almost all land is <u>privately</u> owned	<u>State</u>-owned	• The project covers 4 communities with 14 hamlets. • Ownership of collection sites not stated	The land on which the SHDC project operates is owned by the Namibian <u>government</u>
d) Protection status	**Findings:**	**Issues involved are** • **a national <u>nature reserve</u>** • **a protected plant species**			= ★ = ★
	–	–	Nature reserve (one of 32 nature reserves set aside to protect the habitat of the Giant Panda)	–	Devil's claw in Namibia was listed in 1977 as a protected species. It is also protected through similar legislation in both Botswana and South Africa.
e) Vegetation	**Findings:**	• **Prevailing (natural) vegetation is <u>forest</u>** • **<u>Over-exploitation</u> of MAP target species and degradation of habitats in the collection area**			= ★★★★… = ★★★
	Current: Non-cultivated land covered by a bushy	Atlantic rain forest	Forest	[Forest] – not stated	Partially degraded Kalahari woodland and shrubland

	Bosnia-Herzegovina	Brazil	China	Ecuador	Namibia
	vegetation of different density, coverage and height depending on exposition and use, ranging from very open vegetation with herbs and only small shrubs, to coppice like forests Climax: Submediterranean deciduous mixed forest				Semi-arid environment Extensive grazing with symptoms of overgrazing
f) Special features	**Findings:**	• **<u>Cultivation</u> is involved (performed or planned) in a number of cases** = ★★★ • **<u>Organic certification</u> is obtained or strived for** = ★★★			
	• The company is planning to cultivate MAP species, in particular *Helichrysum italicum* • Organic certification is obtained for target MAP	• Project includes the mechanism of enrichment planting (growing plants in a nursery and replanting them into their natural environment), and is not purely using wild stock • Largely based on volunteers	–	• Only two of the 28 species are collected primarily from the wild, the others are cultivated in small home gardens. (Attempts are being made to bring into cultivation also the two remaining species, *cucharillo* and cola de *caballo*.) • 21 of the 28 species used for Horchata are non-native	• The devil's claw is certified "Organic" by the Soil Association (UK)
2. *Activities*					
a) Major objectives	**Findings:**	• **Facilitate and increase <u>production and trade</u> of selected MAP species or derived products** = ★★★ • **<u>Capacity building</u>, training and benefit sharing** = ★★ • **<u>Research</u> on sustainable harvesting practices** = ★			
	• To increase quality of product (essential oil of *Helichrysum italicum*) • To ensure long term availability of resource	• Make conservation and sustainable use of the rainforest more attractive than its destruction • Generate forest-based benefits and/or income for local farmers and thus contribute to the conservation of the forest and preventing its	• Field test was carried out by projecting key issues on the settings of a national nature reserve and state forest area. No stand-alone major objectives can be stated nor an overall approach to the sourcing of MAP. The consultation team, however, seemed to	• Facilitate the production of and trade in the so-called ´Horchata de Loja´, a traditional beverage mostly prepared as tea • Currently, one of the main aims of AAPPSME is to increase its volume of production,	• To enable more marginalised rural communities to improve their household food security through earning a reasonable income from the sale of sustainably harvested devil's claw. • To equip harvester

	Bosnia-Herzegovina	Brazil	China	Ecuador	Namibia
		progressing destruction. • Research on the sustainable development of indigenous medicinal plant species • *Medicina da Mata* aims at becoming a pilot project for the sustainable use of MAP in the region and strives, at a second stage, for replication of this model throughout the region.	favour the idea of identifying MAP priority or 'flagship' species (e.g. by the TOP 50 approach) and involving policy measures for the purpose of conservation and sustainable use.	standardise it in order to improve product quality, and strengthen its presence on the Horchata market. • AAPPSME plans to increase the volume of trade on the international market by entering the European market. For this purpose, organic certification will have to be achieved.	groups to manage and utilise their resource independently on a sustainable basis and to facilitate their direct involvement in the trade by establishing a reliable market for their production. • To build their own capacity to manage their harvesting and trade, both in the form of organisational support and with such simple physical things such as scales, record books, knives', drying frames and bags. • To further demonstrate, on a scale large enough to be significant in the overall market, the viability of a fair trade in sustainably harvested devil's claw.
b) Involved parties	• 1 collecting manager, working on commission basis • 3 employees • 40 families are involved in the collecting activities.	• Project manager • Nursery assistant • Several consultants • Farmers • Volunteers			
c) MAP use	**Findings:**	• **Focus on one or two main species** = ★★★ • **Variety of other target species collected** = ★★★ • **Endemic species or monotypic families and genera involved** = ★★			
	• 41 different herbs and 14 essential oils depending on demand. • The main products are Helichrysum italicum oil, Juniperus oil, Sage oil,	[Annex L, not available] • 60% endemic species [according to presentation at Vilm, 2004]	Protected area staff estimated that c. 1 ton of medicinal plants were illegally harvested annually, with up to 5-6 tons in some years. Amongst these are	• Focus on the production of *Horchata* and the sourcing of all 28 different medicinal plant species required for production	• Devil's claw is a plant that grows mainly in the Kalahari sands of Namibia, Botswana, South Africa and Angola, and, to a lesser extent,

	Bosnia-Herzegovina	Brazil	China	Ecuador	Namibia
	Laurel leaves, Montane Savory leaves and oil, and Chaste tree oil		the high value species: • *Fritillaria cirrhosa* • *Heracleum* species • *Rheum* species • *Notopterygium incisum* • *Saussurea* species • *Cordyceps sinensis* (caterpillar fungus)	• Collected from the wild are only the two species 'cucharillo' and 'cola de caballo'.	in Zambia, Zimbabwe and Mozambique. • It is widely accepted that the indigenous inhabitants of southern Africa, mainly the San, discovered the medicinal properties of devil's claw
3. *Socio-economic situation*	**Findings:**	• **<u>Poverty</u> amongst the local population and collectors** = ★★★… • **Rely of collectors on wild collection as a primary (sole) or additional cash income** = ★★★…			
	• Currently the Trebinje region as well as BiH as a whole is facing immense problems due to – the recent war, – the many refugees, – mine fields, – high rate of unemployment; and – poverty of a great part of the population. • MAP collection is additional income	–	• The current trade is part of an informal trade sector with a very long history, but one which is not formalised or certified in any form. • A number of key factors is proposed to be taken into account in planning for medicinal plant conservation in China over the next 8-12 years: <u>Demand</u> factors – Continued importance of Traditional Chinese Medicine (TCM) to Chinese consumers worldwide – China's aging population – Rapid increase in buying power – Strong government support for modernization of TCM – Large and growing export market for TCM <u>Supply</u> factors – Declining species populations	–	• The first major commercial exports of devil's claw began in the 1960s, although export figures are only available from 1977 when the resource began to be regulated. • Since the early 1990s, the international market demand has steadily increased, with total exports from Namibia, Botswana, and South Africa reaching a peak of nearly 1100 tonnes in 2002. • Namibia is responsible for 95% of the supply of devil's claw. • Thousands of harvesters and their families from Namibia, Botswana, and South Africa rely on wild collection as a primary or sole cash income, the exact number of harvesters is not known but estimates have put this figure in the region

	Bosnia-Herzegovina	Brazil	China	Ecuador	Namibia
			– Habitat loss		of 10 000. • Harvesters often represent the very poorest sections of society, who eke out a living under the most marginal of agricultural and socio-economic conditions. • Despite mounting evidence to suggest that improved benefit sharing for harvesters makes a significant contribution to improved resource management and hence conservation at a local level, harvesters receive only 1% to 2% of the value of the trade.

	Bosnia-Herzegovina	Brazil	China	Ecuador	Namibia
B Methodology					
1. *Consultation methods and sources of information*	• Interviews with the relevant stakeholders [see below] • one-day-lasting workshop • compilation of BiH laws and regulations	• Both formal and informal interviews were carried out with all relevant stakeholders [see below] • Interviews did not follow a strict methodology, owing to the different mentalities, living spaces, experiences and environments of the interview partners.	The overall structure of the fieldwork was to follow a supply chain from regional markets back to 1st and 2nd order traders. • Interviews with individuals • Discussions with small groups • Information from maps, published sources and original analysis from secondary data	• Visits to collection sites, trade centres, main collection point and company facilities at Chuquiribamba. • Meetings with outside organisations that have worked with the project or are involved in MAP collection. • Interviews did not follow a strict methodology, owing to the different mentalities, living spaces, experiences and environments of the interview partners.	• This survey was conducted on two of the seventeen resettlement farms that comprise the SHDC project.
2. *Consulted stakeholders*	• Radovan Andjelic, the manager of the enterprise • collectors in the collecting area • collectors at their homes • collecting manager • Head of Forestry Administration in Trebinje	• Local communities • Iracambi project managers • Co-ordinators and directors • Volunteers • Company representatives	• Herbalists • MAP harvesters • Traders (1st and 2nd order middlemen) • Nature reserve and forestry staff • Governor of Baima Township	• Interviews were carried out with representatives from – AAPPSME (collectors, managers, scientists, and office workers) – CORPEI – EcoCiencia and – FundaTierra,	• The following individuals and groups were interviewed: – Harvester and community representatives – Key individual respondents
3. *Experienced difficulties*	• Most people interviewed had no knowledge of ISSC-MAP • Only few people interviewed could speak sufficient English → made translation necessary • Necessity of preparing an appropriate questionnaire (checklist) • Question of compliance (percentage, musts, etc.)	•	•	•	•

	Bosnia-Herzegovina	Brazil	China	Ecuador	Namibia
4. *Reliability of information*	**Findings:**	• **Information obtained was perceived as mostly reliable with variations at the interview level**			= ★★★★★
	• In general, the talks, respectively interviews, had been very open, fair-minded and happened in a friendly, benevolently atmosphere.	• Most information provided during the interviews can be considered as reliable, as all interview partners were openly talking about topics addressed. • Limits to information reliability were set by – the project structure – a tendency for group opinions.	• [Differing at the interview level]	• Most information obtained during these interviews is considered as reliable.	• All SHDC project stakeholders interviewed provided informed inputs.

Part II: Evaluation of ISSC-MAP approach, structure, and components

	Bosnia-Herzegovina	Brazil	China	Ecuador	Namibia
A General approach					
1. *Overall concept*	**Findings:** • **Species-specific approach and the focus on population biology seen as is too complex, demanding, and costly to result in a usable standard** = ★ ***Recommendations*:** • ***Develop a standard and guidance document for the development of a Management Plan for the sustainable wild collection of MAP*** = ★ • ***Standard needs to be simple to be implemented and linked to benefits*** = ★				
	–	Findings • ISSC-MAP provides a 'certification checklist' rather than a guidance on how to establish adequate management structures appropriately in order to develop and run a sustainable MAP sourcing and trade operation. Recommendations • It is suggested not to develop an international MAP sustainability standard, but a standard and guidance document for the development of a Management Plan for the sustainable wild collection of MAP • This could be achieved by developing a substantial annex, in which real-life examples of agreements, development, establishment and/or documentation of procedures are given.	Findings • The species-specific approach and the focus on population biology is too complex and not consistent with the high diversity of life forms that comprise medicinal plants → in its current form, ISSC-MAP is unusable.	–	Findings • In general it appears that the proposed ISSC-MAP is relevant and could have a positive impact on sustainability. • However, it appears that standards need to be simple to be implemented and linked to benefits, as they are unlikely to be meaningful if this is not the case.

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2. *Scope*	***Recommendations:***	• ***Expand scope to include sourcing MAP material from cultivation (of native species) as this would increase its relevance for agro-forestry ecosystems*** = ★ • ***Link or include others in the supply chain (e.g., importers, manufacturers and distributors) as this is critical to facilitate and allow benefit sharing to take place*** = ★			
		Recommendations • The question was brought up, if the ISSC-MAP could not expand its scope and also address cultivation (of native species) as this would increase its relevance for agro-forestry ecosystems which are found throughout Brazil, and the MAPs produced in such systems. • To avoid misunderstandings, it would be helpful if a statement could be added at some point (beginning of the document ?) clarifying that the ISSC-MAP does not only refer to forest ecosystems and not only to primary ecosystems, but covers all natural and semi-natural ecosystems [*Remark: such a statement already exists under "1.5 Scope and application"*]	–	Findings • Plant material from cultivation and wild collection are mixed and used and integrated into ONE product (Horchata). • The majority of the medicinal plant material used by AAPPSME is sourced from cultivation and efforts are being made to bring the remaining two species into cultivation as well. • The distinction between cultivated goods and wild collection is not consequently applied. Recommendations • It is therefore suggested by the operation to widen the scope of the ISSC-MAP to include sourcing MAP material both from wild collection as well as from cultivation. • The standard, or its supportive documents, should make it clear what it applies to, and offer a definition of "wild" and "cultivated".	Findings • Does not link or include others in the supply chain (e.g., importers, manufacturers and distributors). This is critical to facilitate and allow benefit sharing to take place. Recommendations • Poverty and sustainability are inextricably linked and unless the issues of poverty are addressed, through, for example, the realisation of "real" benefits or options to primary producers, sustainability will always remain problematic.
	✎ *Two respondents recommended alternate wording of the objective to emphasize local and community stakeholders, and the role of government policy, law, and regulations in implementing the standard. Numerous comments on other aspects of the standard,*				

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	particularly those concerning scope and application, propose a shift or narrowing of the focus of the standard, which, if accepted, should be reflected in the statement of mission and objective. ✎ *Reviewers who commented on the scope of the standard were satisfied with the inclusion of socio-economic and cultural principles and criteria (e.g., fair trade, equity), in addition to biological principles and criteria.* ✎ *One respondent suggested that addressing sustainability, fair-trade, and product quality in a single standard makes the ISSC-MAP "more realistic from an industry perspective".* ✎ *One respondent proposed that cultivated habitats should not be excluded as important for sustainable wild collection of MAP species.* ✎ *Other respondents indicated specific components of the standard that they consider beyond the scope of the ISSC-MAP (e.g., criterion 8.3.4, limiting conversion of forest to MAP plantations).*				

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3. *Target audience*	**Findings:**	• **It has been perceived as problematical that the target audience of the ISSC-MAP is not defined. Therefore, statements on appropriate language and related issues are difficult.**			= ★★★
	***Recommendations*:**	• ***As a minimum, the document should be designed in a way so that it is understandable and accessible for project managers.***			= ★
	Findings • Essential question in the context of target group for standard use/implementation	Findings • As the target audience of the ISSC-MAP is not yet clear, statements on language and related issues are difficult. Recommendations • The document should be understandable and accessible for project managers. • The project manager stated that the collectors / producers should be the target audience.	–	Findings • It was felt to be a weak point of the ISSC-MAP that there was no decision made on how the standard should be implemented in the end and which target audience it consequently would address	
	✎ *Several respondents proposed that the most important application of a standard for sustainable wild collection of MAP is to small-scale collectors' organizations and community-based enterprises.* ✎ *These respondents feel that the current draft standard will not promote involvement of collectors / local communities, but instead will give an advantage to large-scale commercial enterprises.* ✎ *At least two respondents suggest that an adaptive management approach and a precautionary approach are contradictory, and that recommending a precautionary approach will be unfair to smaller collectors' groups and enterprises who can least afford the delays and costs of gathering sufficient documentation and field-based information in advance of collection activities.* ✎ *Two respondents suggest that the formation of or support for collectors' organizations is central to the successful implementation of the ISSC-MAP.* ✎ *One respondent suggests that the information requirements in the current draft standard will favour its application to species that are already well known in the marketplace over those that are little known, and that as a result, species from the Old World (Asia, Africa) will be favoured over New World (esp. Latin American) species of MAP, which are less well studied.* ✎ *Other unintended (perverse impacts/outcomes were identified: e.g., under Principle 2, customary rights may be interpreted to exclude local access for commercial production where only subsistence use has previously existed.* ✎ *Several respondents pointed out confusion about whether the standard will be applied to individual collectors, to organizations and enterprises, to the agency/entity with resource management responsibility, or to the area under resource management.* ✎ *Application of the ISSC-MAP in different regions of the world will require different implementation strategies (see 3.4 below). For example:* *– In South Asia, working through government forest management units and coordinating with existing management plans;* *– In Latin America, working through country participation (e.g., national strategies, legislation, regulation) in international conventions, such as the CBD and CITES.*				

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4. *Process and participation*	**Findings:**	• **ISSC-MAP process and participation is perceived as rather selective and lacks participation of local communities.** = ★★★ • **A process for local adaptation of the ISSC-MAP is needed. This process should maintain the integrity of the international standard.** = ★★			
		Findings • ISSC-MAP process and its design is perceived as rather selective and seems to be based on a relatively small inter-national group without strong participation of local communities. Recommendations • ISSC-MAP implementa-tion should be an **adap-tive process** taking local realities into account • Include local communities in the process from the very beginning • Indicators may be deve-loped by the communities themselves, who carry out the MAP collection..	Findings • Local communities and villagers often lack the capacity, financial resources and local institutions to be actively involved in the implementation of the ISSC-MAP process, so are unlikely to share in the benefits.	Findings • The participants are confused and sceptical about the various visitors they have in regards to ISSC-MAP, they are worried that their objectives are not taken into account. • One of the many challenges standards for "sustainable" production face is the need to have an international dimension and a local adaptation. Recommendations • The ISSC-MAP initiative should consider the development of a governance system that creates buy-in from the different stakeholders (current and future) of the initiative. • A process for local adaptation of the ISSC-MAP is needed. This process should maintain the integrity of the international standard.	

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B Structure and format					
	Ten respondents commented generally on the structure, format, and language of the 2nd draft standard. Four respondents found the current draft well organized, logical, and comprehensive. However, six respondents felt that the current draft is difficult to read, the structure too complicated, the language too technical for intended users ("intimidating", not "field-friendly"), some of the content impractical for implementation, and the format too long. Two respondents in particular advocated a "more generic, less bureaucratic" document, or a "minimum required / maximum desired" set of standards". These general comments were supported by specific comments on the standard components.				
1. *Structure*	***Recommendations:*** • ***Various re-organisations were proposed in detail to increase the user-friendliness of the document, either by*** ***– a stronger graphic presentation*** = ★ ***– division into thematic areas*** = ★				
	–	Findings • Some found the structure mostly clear and convincing, others more confusing and difficult to understand • Grouping of principles in sections helpful and should be kept. Recommendations • Add a book-marking system (e.g. a set of take-out adhesive book-marks or a thumb-index) • Re-develop the graphic representation (including colours), which had been initially set up at Vilm • Repeat the respective headlines (principles, criteria, possibly indicator) on every new page, to provide an immediate orientation • Introduce a page break between the principles • Table 2 should be used as a table of content,	Findings • Good to have a well structured form … Recommendations • …but better if it were shorter with simpler indicators and verifiers	Findings • The overall structure is problematic. Recommendations • Some comprehensiveness can be sacrificed to achieve more efficiency by **eliminating or combining** certain indicators. • The indicators should cover general areas that can be applied to specific context, instead of trying to anticipate every possible deviation. • The overall structure can be improved by dividing the document up into **thematic areas** such as: 1. Legality (P 1 & 10) 2. Social issues (P 2&3)	–

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		completed by a page index. Display the whole set of levels covered in the document (section, principle, criterion, indicator)			
	✎ *Reduce the introductory sections to 1-2 pages; treat the standard itself (currently annex III) as the main text.* ✎ *Provide current introductory text as a separate background document.* ✎ *Reformat text of the standard (annex 3) in vertical pages, including only the principles and criteria.* ✎ *Place remaining components (indicators, verifiers / types of verification, and other guidance) in a supplementary text or explanatory guide.* ✎ *Reduce length and overlap between components by combining or eliminating components (many specific proposals).*				

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2. *Language*	**Findings:**	• **Language <u>too complicated</u>**			= ★★★★★
	***Recommendations*:**	• ***<u>Translate</u> into local languages before application in the field***			= ★★★★
		• ***Simplify the language by making shorter sentences and allowing multi-sentence provisions at the indicator level***			= ★★
	<u>Findings</u> • Language too complicated	<u>Findings</u> • Concern about the length, level of complexity and the highly technical nature of the language used in the document. • Perceived as too technical and too difficult and laborious to read by all who are no specific experts in certification or formal language. • It would have been a good idea to have the text translated into the local language (Portuguese),, beforehand, in order to go more profoundly into the wording. <u>Recommendations</u> • Alternatively, it may be possible to keep the technical level of language, if the graphic representation of the document was improved (clear and transparent table of content in beginning, framework and colours for identification used throughout the document)	<u>Findings</u> • Many phrases would be difficult for people to understand including almost all aspects of the issues (wild collection, resource management, social and cultural context, legal and ethical aspects.	<u>Findings</u> • All interview partners expressed the opinion that the language of many provisions (especially at the indicator and verifier levels) is too complicated, wordy and repetitive, too technical and overly cumbersome to use in an effective manner. • The language of ISSC-MAP makes the standard neither easy to use directly for certification nor for legislation. • It was considered important to have the document available in Spanish language, so that it can be generally read and understood. <u>Recommendations</u> • It has been suggested to simplify the language by making shorter sentences and allowing multi-sentence provisions at the indicator level • It was suggested to take the standards of the Rainforest Alliance as a model for making the language more easily understandable.	<u>Recommendations</u> • Consideration needs to be given to simplifying the ISSC-MAP to make them more user-friendly for poor rural communities who have not had access to good educational opportunities. This could be achieved, e.g., by – simplifying the language used, – translating the ISSC-MAP into local vernaculars
	✎ *Numerous suggestions concerning restructuring – to reduce repetition, or expressing a different sense of priority relationships between elements of the standard (e.g., a proposal to combine Section III – collection practices and environmental impact /*				

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	conservation measures – with Section II – principles on assessment, management planning, and monitoring – to create one section on sustainable resource management). ✎ *Numerous comments point out unclear intent or confusing terminology.* ✎ *Proposals to simplify some parameters by providing simple rules (e.g., 7.4.1 – rate of production > rate of extraction; only vegetative parts can be collected; etc.)*				
3. ***Acronyms***	–	Recommendations The list of abbreviations should be expanded and **include ALL abbreviations used** throughout the standard, including the introduction.	–	–	–
	✎ *Two respondents proposed that the name of the standard should be changed or altered to be more user-friendly (i.e., not an acronym), include the word "wild", and replace "collection" with "sourcing".*				
4. ***Glossary***	–	Recommendations • Include – "**vigour**" – "**sensitive taxa**" • Make cross-references to the glossary in the text of the standard as an additional service to the reader	Recommendations • Include – "**tenure**" (and types of land and resource tenure) – "**precautionary**" – "**chain of custody**" – "**supply limitations**"	Recommendations • Offer definitions of – "**wild**" – "**cultivated**"	–
	✎ *There were numerous proposed corrections and additions to the glossary. Several respondents suggested that the term "botanicals" and its definition be removed.* ✎ *Several respondents mentioned relevant additional references or examples.*				

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C Components					
	✎ *For some components, a clear majority of respondents propose a similar action (e.g., to delete). For other components, there are contradictory and more-or-less equal actions proposed.* ✎ *Four of the seven respondents who commented generally on the structure of the standard itself (Annex III) found it clear and well organized.* ✎ *One respondent found the component definitions in Table 1 of the 2nd draft document confusing, and offered suggestions to clarify these definitions.* ✎ *Some criteria, in particular, should be reworded to include a performance aspect or measure.* ✎ *A clearer sorting and separation between indicator and verifier components is needed.*				
1. *Comprehensiveness, precision and rigidity*					
a) Comprehensiveness	**Findings:** • **Content is <u>too complex</u> [for collectors]** = ★★★ ***Recommendations*:** • ***Include further aspects or elements of importance:*** = ★ – *Secondary impacts resulting from medicinal plant harvesters using an area* – *Authenticity of an MAP product (which should include the correct species identification, geographic origin and processing procedures)* – *Management of pioneer plants* – *P #5: More detailed advice on the components of the management plan and inclusion of further issues and verifiers (s. below)* – *P #9: Aspects such as market surveys, assistance of business service providers, etc.*				
	<u>Findings</u> • Content sometimes too complex • How to deal with a pioneer plant? – Helichrysum grows in open, eroded areas with low and patchy vegetation types (garrigue). – Due to natural succession Helichrysum populations are decreasing when the vegetation becomes higher and denser (after ca. 20-30 y).	<u>Findings</u> • Principle #9: Important aspects such as market surveys, assistance of business service providers etc. are missing.	<u>Findings</u> In general, the document is too comprehensive; therefore so long it is unworkable. However, some important aspects are <u>not</u> addressed: • Secondary impacts resulting from medicinal plant harvesters using an area (e.g. hunting rare animal species, fuelwood use for drying medicinal plants, wood and bark use for shelters for medicinal plant harvesters) are not taken into account	<u>Findings</u> • The level of comprehensiveness is adequate; if anything, ISSC-MAP is too comprehensive and could benefit by becoming more concise. <u>Recommendations</u> • It is suggested to give considerably more detailed advice on the components of the MP and add further elements of importance: – description of the productive system;	<u>Findings</u> • In general, the ISSC-MAP is too complex for SHDC project harvesters who would struggle to understand its requirements and develop appropriate local mechanisms to deal with its implementation without external assistance.

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	– In this case, the definitions of what are long-term availability and sustainable yield is difficult. Also monitoring the populations causes problems.		• Authenticity of an MAP product (which should include the correct species identification, geographic origin and processing procedures for priority species)	– guide of regulations; – manual for collectors; – socio-economic studies; – definition of roles and responsibilities • Examples for additional verifiers could be: – Environmental Impact Assessments – Good practices (or policies on good practices) – implementation strategies • One of the most important elements for the operation is the **quality** of the MAP material. For this reason it is suggested to include this aspect in the ISSC-MAP in more detail, as a separate part (maybe an additional criterion) under the MP principle.	
b) Precision	–	–	Recommendations Clarification is required of the • Expected level of precision • **Spatial and time scales** (e.g. management plan)	–	–
c) Rigidity	**Findings:**	• **Level of detail is problematic especially for smaller projects**			= ★
		• **The reality of many projects or collection activities where a management plan does not exist is not sufficiently considered**			= ★
	***Recommendations*:**	• ***Reduce the ISSC-MAP requirements by identifying and prioritising the minimum requirements needed to develop maximum sustainable yields schemes***			= ★★★
		• ***Consider an adaptive management approach***			= ★
		• ***Provide options for compliance with P #4 to #7 in a more general way***			= ★

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		• ***Define minimum requirements***			= ★
	Findings • The reality of many projects or collection activities where a management plan does not exist is not sufficiently considered. Recommendations • Ask in a more general way for compliance with principles #4 to #7. • Define minimum requirements to be fulfilled for sustainability of collection	Assumptions • The level of detail of a number of requirements is seen problematic as this could be prohibitive for especially smaller projects, as full compliance requires considerable capacity and funding. Recommendations • In order to achieve a higher practicability of the ISSC-MAP without at the same time reducing its effectiveness and without endangering its overall objective, the suggestion has been made to use surrogates, whenever appropriate – These could be the definition of minimum requirements or concessive provisions, such as 'whenever possible' or 'using a precautionary approach / principle' – Some concern was expressed, though, that only clear and at times strict requirements will have an effect on the overall way MAP are sourced and traded. • Minimum requirements, which may not reflect the ideal situation (such as a species-specific RRA as a basis to develop a maximum sustainable yields scheme) but are	Findings • ISSC-MAP is too complex in [wording and] technical requirements • Entire FSC-centric approach with its rigidity, length, complex language and unattainable data requirements make the draft ISSC-MAP unworkable in China without major revision; for most NTFPs an adaptive management approach needs to be taken.	Findings • Users will be looking for loopholes rather than for guidance.	Recommendations • Reduce the ISSC-MAP requirements by identifying and prioritising the minimum requirements needed for the achievement of the desired results.

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		practicable without involving the high costs usually required for scientific analyses, would be a welcome tool to achieve acceptable sustainable use models without preventing the development of such schemes due to financial constraints.			
2. *Relevance and feasibility*	**Findings:** • **There is a considerable <u>overlap</u> between 'priority' and 'problematic' components** = ★★★				
	–	<u>Findings</u> • There is a considerable overlap between 'priority' and 'problematic' components	–	<u>Findings</u> • It is difficult to separate problematic components from priority components, as in some cases components are a priority, because they are problematic in terms of compliance by the operation (e.g. principle #1).	<u>Findings</u> • An assessment of the relevant and problematic components of the ISSC-MAP under this section is difficult as in almost all cases certain aspects of all the Principles can be identified as either relevant or problematic • In addition, a number of the components contain aspects that are crosscutting and both relevant and problematic at the same time.
	✎ *Some of the proposed deletions reflect particular limitations or concerns related to regional conditions for implementation (e.g., government attitudes toward precaution; absence of government recognition of legal land tenure).* ✎ *Suggestions to make language more regionally relevant (e.g., inclusion of "tribal" along with "local communities" and "indigenous peoples" for South Asian context)* ✎ *Numerous questions concerning responsibility for collecting information or carrying out investigations and monitoring needed to verify compliance with criteria (e.g., in many countries there is no formal process in place to identify threatened plant species; who is responsible for undertaking this work in order to apply the relevant criteria in the current draft ISSC-MAP?).* ✎ *Numerous requests for additional guidance on methods for measuring, assessing, or monitoring parameters associated with the proposed criteria and indicators.* ✎ *One respondent suggests a greater separation (e.g., with different levels in the hierarchy of components) of "soft" and "hard" criteria, the former defined as "social aspects and benefit transfer" and the latter defined as "technical measures for quality assurance".*				

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a) Most relevant components	**Findings:**	• **Principle #1** Indicators 1.2.1 – 1.2.3 • **Principle #2** • **Principle #3** • **Principle #4** • **Principle #5** • **Principle #6** • **Principle #7** • **Principle #8** • **Principle #9**			= ★★★ = ★ = ★ = ★ = ★★ = ★★ = ★★ = ★★ = ★★ = ★★★
	Findings • RANK 1 – 1.2.1 – 1.2.3 compliance with national, international laws and voluntary codes of practice, guidelines etc. • RANK 2 – P #7: in general, it includes all relevant questions to understand the manner of wild collection of Helichrysum italicum and the species-specific features (biology, ecology). – P #9 (cross check with organic certification)	Findings • All 10 principles were considered a priority by at least one interview partner. From a project perspective, – Principle #1 (highly complex and restrictive legal system in Brazil), – #3 (important to achieve high level of confidence) and – #9 (project focus on product development and market access) were selected as the most important ones, besides the core principles #4-#8.	–	Findings • RANK 1 = P #4 - #8 • RANK 2 = P #2 + #3 • RANK 3 = P #2 • RANK 4 = P #10 • RANK 5 = P #9	–
b) Most problematic components	**Findings:**	• **Principle #1** • **Principle #2** Criterion 2.4 • **Principle #4** • **Principle #5** • **Principle #6** • **Principle #7** • **Principle #10**			= ★★★ = ★ = ★ = ★★★ = ★★★ = ★ = ★★ = ★

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	Findings • As no management plan has been set up by the responsible authority, all principles referring to a management plan are therefore not implementable, especially 5, 6, partly 4, as many of these criteria address the creation / use / implementation of a management plan.	Findings • Principles 1, 4, 5 and criterion 2.4 were considered as the main problematic components to comply with in view of rather limited financial means and under a strict legislation.	Findings • Principle #1 (as collection activities are illegal in the area) • Principle #4 (due to the high cost of fulfilling data requirements for hundreds of species) • Principle #5 (as for #4, but in addition due to non-specified spatial and time scales) • Principle #7 (due to lack of knowledge / data) • Principle #10 (not applicable as collectors operate as part of the informal sector)	Findings • Principle #1 has been considered problematic due to the unclear legal situation in Ecuador with respect to many questions on the legal framework of the collection of MAPs from the wild. • Principle #7 has been highly controversial, with comments ranging from 'excellent' and 'model principle' to 'way too detailed and complicated to comply with', although all interview partners acknowledged that principle 7 is a core component of the standard. • For the operation, one of the most problematic elements of the ISSC-MAP is its limitation to MAP material sourced from the wild, as the majority of the material used by AAPPSME is of cultivated origin.	–

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3. *Evaluation on component levels*					
a) Principle level	***Recommendations:*** • ***Reduce the number of principles, reorder or regroup them*** ***– reorder: 4-5-6-7 → 7-4-6-5*** = ★ ***– group: 3 | 5 | 6 (4 moves next to 2)*** = ★ ***– combine: 4+5+6+7+8 under principle for management plan*** = ★★ ***– collapse all principles into two: I = legislation; II = management plan*** = ★				
	Recommendations • In any case, we suggest to re-order principles 4-7 to 7-4-6-5. The latter is the order of the questions we asked during the field test in BiH.	Recommendations • There were several suggestions made to reduce the number of principles or regroup them: – group principles 3, 5, and 6 together and make 2 and 4 come next to each other – expand the manage-ment plan principle (#5) and include several of the other sourcing principles (#4-8), as many items will be part of the MP – collapse all principles into just two: (1) legislation and (2) management plan • Relating to principles #1+2, several different suggestions were made: – collapse into one component – retain them – split principle #2 into legal aspects (which would go into principle #1) and in traditional practices (which would go into #4) • Integrate crosscutting issues into the relevant sections they refer to	–	Recommendations • The main suggestion was to reduce the number of principles and collapse principles #4-8 into one principle (Management Plan), as the MP is felt to be the most crucial part of the standard and of any operation that tries to work in compliance with the standard.	–

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b) Criterion level	**Findings:** • ***Function of this level is difficult to understand and sometimes unclear.*** = ★★				
	Findings • "Criteria" level is sometimes difficult to understand and confusing.	Findings • The **function of this level seems in some cases to be unclear** – criteria have been perceived as mere 'headlines' without increasing the effectiveness of the implementation of the document and without offering any practical advice – helpful if criteria and adherence to them will be illustrated by guidance and means of verification. • On the other hand, criteria were perceived as helpful, giving structure to the document. Even if some may not be applicable, the level of criteria **should be kept**.	–	–	–
	✎ *Performance aspects of some criteria need to be added to the way in which they are stated (e.g., 1.1, 1.2).* ✎ *Numerous proposals to expand or reduce the scope of some criteria (e.g., add "access" to 1.1; "tribal" to most of the criteria under Principle 2, Customary Rights)*				
c) Indicator level	–	–	–	Findings • The indicators were mostly perceived as clearly structured and cover the most important aspects. • Main point of criticism related to the indicators is the **type of language** used.	–

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d) Verification level		**Findings:** • ***Section 'Types of verification' were partly seen as confusing or unnecessarily restrictive***			= ★★
		Recommendations: • ***Clear statement required if (means and types of) verifiers represent optional lists or if application of ALL listed verifiers is required***			= ★★
		• ***Avoid repetitions of verifiers in different sections***			= ★
		• ***Ensure adequately neutral wording***			= ★
	–	Findings • Different opinions regarding the usefulness of the 'types of verification' section – positive, as they may help in reducing the amount of required methods to prove verification – negative, as in most cases all four types of verification could be used to prove verification and the most appropriate type of verification is self-evident from the means of verification • Verifiers are often repeated in different sections. Recommendations • A clear statement should be made in the standard, if the verifiers are an optional list or if they will all have to be fulfilled in order to comply with the related component • Helpful to include some guidance on how to select appropriate verifiers, in case they do not all need to be considered.	–	Findings • Means of verification: It is not evident if application of ALL listed verifiers is required in order to prove compliance with a component, or if the appropriate verifier(s) can be selected by the operation • Types of verification: These were partly been perceived as confusing. – On the one hand, they could be helpful, in order to show in which way compliance with a component should be verified – on the other hand it is unclear if ALL types of verification ticked are obligatory or if they can be chosen by the operation – In addition, it seems to be difficult to exclude any of the four alternative types of verification from the potential verification of almost all indicators, for which reason the overall usefulness of the types of verification may be	–

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		• Find a way to avoid a repetition of verifiers in different sections. • Delete the verifier 'No evidence of non-compliance' throughout the document • All verifiers should be checked if they are worded adequately neutral		checked	
	✎ *Traditional knowledge and rights are difficult to document and verify –more relevant means of verification should be listed and related guidance provided (e.g., verbally transmitted, videotaped, transcribed management rationale, description of adaptive management decisions and actions).* ✎ *Documentation recommended for verification (e.g. land title, permits) is often out of date, and therefore may not be an adequate indicator of legal land tenure and other criteria.* ✎ *Numerous suggestions address adding or altering the types of verification described or indicated to be more relevant to real situations.* ✎ *The notion of "awareness" as a means of verification was questioned: Does it equal "field inspection"? Moreover, does "field inspection" equal consultation and interviews at the collection site?* ✎ *Eliminating the absence of evidence ("no evidence of…") as a means of verification was proposed.*				
e) Guidance level	**Findings:** • **Guidance perceived as generally important and helpful but often provided inadequately or incompletely.** = ★★				
	–	Findings • All interview partners agreed that the guidance given is in general regarded as very important and helpful to understand what the respective indicator means. Recommendations • As the guidance and verifier sections have been perceived as the most practical and user-friendly elements of the document by some, it may be worth considering if it is	–	Findings • The level of guidance was generally perceived as inadequate. Many indicators only give general statements, which can be difficult to translate into practice by the operation, if no further guidance is given and details are provided on how to implement the provisions. Recommendations • Two main suggestions were made: – provisions at the indicator level are	–

	Bosnia-Herzegovina	Brazil	China	Ecuador	Namibia
		possible to find a structure in which you can read the document from both ends (starting with the principle or starting with the guidance)		more detailed and do include practical information – the guidance section of all indicators is elaborated and more concrete advice and examples are given • Guidance what factors are most important	
	✎ *One respondent proposed that guidance should be provided for all components of the standard (e.g., how to develop a management plan for a MAP wild collection operation), so that the standard can be used as a "how to" manual.* ✎ *Two respondents proposed that examples (e.g., of existing MAP sustainable wild collection management plans) be included with other guidance.* ✎ *Several respondents identified guidance that will need to be appropriate for different situations (e.g., substitution of plant parts collected, as a measure to reduce collection impacts, will not work in Germany, but may be feasible in other countries).*				
4. *Results by principle*					
a) Principle #1	**Findings:** • **Compliance perceived problematic, either due to (unclear) tenure arrangements or unfavourable laws** = ★★★ ***Recommendations*:** • ***Change title from 'legitimacy' to 'legislation'*** = ★				
	Findings • Laws in RS are rather or even sufficiently comprehensive but implementation and enforcement is very poor • Radovan Anđelić fulfills the requirements of the Trebinje Forestry Administration but not the legal requirements.	Findings • Tenure arrangements seem to be clear in almost all cases, but compliance with all laws and regulations is in theory desirable, but in practical unrealistic as Brazilian legislation relating to the use of natural resources in very complex and rather prohibitive Recommendations • The title 'legitimacy' is confusing, as it relates more to transparency, whereas in fact the principle basically deals with legislation. Therefore it should be renamed 'legislation'.	Findings • No compliance in most cases. Most of the collection takes place in State forests or Nature reserves. In principle, collecting wild plants in these forests is not allowed. Although local people to a large extent still rely on the collection as one of the major source of cash income, harvesting wild plant are generally not encouraged and sometimes forbidden by government.	Findings • As several aspects of principle #1 are not clearly defined within the operation, the consultation team shared the opinion that it is a crucial principle and suggested to have it analysed in more detail for project purposes.	–

	Bosnia-Herzegovina	Brazil	China	Ecuador	Namibia
		Resource estimates • Time estimate to achieve compliance: 2-3 years			
b) Principle #2	–	Findings • The principle is clearly worded, fully understood and accepted by all. • There are no indigenous peoples in the project area, but local communities, to whom the principle applies	Findings • In China, all land belongs to the State. Local and indigenous community rights to land can therefore be extinguished if there is policy interest in doing so. Wanglang National Nature Reserve is a landscape customarily used as a grazing and medicinal plant harvesting area by the Baima Tibetan people. They no longer have access. Even some Baima sacred forests in the study area were logged in the 1980's.	Findings • The relevance of this principle to the project has been controversial. It was regarded as – very important – less important or – important but difficult to formalize in the case of this operation • In general, the rights of local communities seem to be respected, as Horchata is a typical product of the area and has a long tradition within the community. • However, there is a clear trend towards depletion of the resources, in the case of both cucharillo and cola de caballo, which seems to be partly due to over-collection by community members and partly due to collection by others brought in from outside	–
c) Principle #3	Findings • Information flow very poor between stakeholders	Findings • The principle has been mostly considered as very important and generally accepted. Recommendations • '**Transparency**', is a word with a very wide meaning and **should be defined**, so that it cannot be misin-terpreted or bent to what-	Findings • There is communication, but given the illegal nature of harvest in protected areas and State Forest, people understandably keep information to themselves.	Findings • It was suggested considering transparency as a priority topic for the operation, as it includes the ways and levels of consultation within the project.	–

	Bosnia-Herzegovina	Brazil	China	Ecuador	Namibia
		ever direction is suitable. • The importance of transparency should be made clear in the introduction to the document.			
d) Principle #4	**Findings:**	• **Concerns were raised due to required data not being obtainable or causing excessive costs**			= ★★★★
	***Recommendations*:**	• ***Consider rapid resource assessments as a minimum requirement***			= ★★
	Findings • The collection area and the quantity collected in each area is not recorded in the collectors' invoices but not in the processing books.	Findings • The principle is considered as relevant but complex and not easy to understand. Recommendations • It has been suggested to either shorten it or divide it into resource assessment and the assessment of 'social / cultural / economic issues' • As inventorying the target MAP species and the development of maximum sustainable yields will need to be part of the Management Plan of the operation, it may be worth collapsing principles 4 and 5	Findings • In many cases in diverse habitats and in most developing countries, there is no base-line data nor population level data for medicinal plants being traded. This applies in this case, although trade data from a relatively quick survey are available for the Minshan area, giving quantity (in kilograms or tonnes) of species traded and estimates of quantities which have been confiscated from illegal harvesters in the core conservation area, Wanglang NNR. The main source of information indicating trends in resource stocks is from oral evidence from local harvesters and traders. • No maps, site descriptions or field surveys are available	Findings • Considered as relevant and important by all interview partners. Recommendations • It was suggested to keep the requirements as practical and low as possible, e.g. include Rapid Resource Assessments as proper means of assessing the resource.	–
e) Principle #5	***Recommendations*:**	• ***Management plans and associated documentation should not be required for all "targeted species" but for a few priority species***			= ★
		• ***Annex an example management plan and a short guideline how to develop a management plan***			= ★

	Bosnia-Herzegovina	Brazil	China	Ecuador	Namibia
		• ***Consider exceptional situations where a management plan cannot be provided or related to***			= ★
	Findings • The ISSC-MAP gives priority to the management plan. It has to be considered that in many regions/projects no management plan exists. Projects without a documented management plan, but with any kind and level of resource assessment and monitoring are not enough reflected in and valued by the standard. • The fact, that in many projects no management plan exist and that it is unlikely to be developed in the short term, will make acceptance and application of the ISSC-MAP more difficult.	Findings • The principle is considered important by all interview partners. It is easily understandable and applicable. Recommendations • Principle #5 may include several others of the core principles as well (such as principles 4, 6, 7 and 8), as they will be part of the MP. • It may be helpful to annex an example management plan to the document. Another valuable annex would be a short guideline of how to develop an MP. Resource estimates • Time estimate to achieve compliance: 1-2 years	Findings • Management plans for the plants are required, but the spatial scale(s) and the targets of the managements were not mentioned. Recommendations • Expectations for maps and management plans for all "targeted species" need to be seriously reconsidered if ISSC-MAP is to work at all – even on a small spatial scale. This would only be possible, at most, for a few (2-3) priority species.	Findings • Considered as the core principle of the standard by most interview partners Recommendations • It is suggested that the MP principle – includes the minimum requirements to be fulfilled in order to comply with the standard and – provide more details on the indicator and / or the guidance levels • It should include principles 4, 6, 7, and 8 as well, as they are part of the MP • It should integrate a number of additional aspects and indicators (see Part II: 2 a)	–
f) Principle #6	–	Findings • The principle is considered as applicable and very important, but at the same time it **over-laps almost completely with principle #5**. Recommendations • Several interview partners suggested to integrate principle #6 into #5. • Guidance would be very helpful (e.g. **guidelines**	Findings • In the study area, the only regular monitoring aside from patrols which detect c. 20% of illegal harvesters, is through remote sensing – and of Giant panda populations. It is unrealistic to expect up-to-date management information of volumes, rates and impacts of collection. At most, scientific monitoring could be done in selected sites for 2-3		–

	Bosnia-Herzegovina	Brazil	China	Ecuador	Namibia
		how to develop monitoring reports) including concrete examples of such records attached as annex.	species. Additional information could be collected from confiscated material or in traders warehouses (e.g. to detect changing size classes of rhizomes or declining thickness to bark), but would be proxy information only, difficult to link to specific sites.		
g) Principle #7	***Recommendations*:** • ***Collapse overlapping criteria where they address long-term vigour and production***				= ★★
	Findings: • Most indicators are of great relevance to the project, particularly as no management plan exists; but the language is too complicated.	Findings • Together with principles #4 and #6, this forms the core of the practical work of the project: The principle is considered very important and applicable. • The wording may be a little complex, though, and the level of detail of some of the criteria (7.1 – 7.4) seems to be too high. Recommendations • Principle #7 could be a model principle for elaborating the other elements of the ISSC-MAP in a similar way. • It is suggested to collapse overlapping items and make the text more streamlined.	Findings • Fine in theory, highly unrealistic in practice. There is neither the time nor money in WWNR or Baima State Forest for regular monitoring of growth rates or for a well designed inventory system.	Findings • All interview partners agreed that principle #7 is of crucial importance to the standard and to the operation and that all criteria are important. • The way this principle has been structured and developed, however, caused rather controversial reactions. Recommendations • Suggestions for simplification are to collapse all criteria into one, as they almost all address long-term vigour and production. • The difference between the two terms 'vigour' and 'production' is not clear; it may be helpful to either explain it or replace the two terms by one, if possible.	–
h) Principle #8	–	Findings • The principle is	Findings • This Principle is not	–	–

	Bosnia-Herzegovina	Brazil	China	Ecuador	Namibia
		considered as important and applicable. Recommendations • Make wording easier.	relevant to medicinal plants in the study area. Medicinal plant harvesting takes place in diverse habitats and is dispersed across the landscape amongst other species. There is no parallel to clear felling for timber which can affect ecosystem structure and function or environmental services (such as water quality).		
i) Principle #9	–	Findings • The principle and its wording are considered as very good and nicely summing up sustainability. It is relevant and applicable • The provisions of this principle are considered as too general and occasionally superficial. **Important aspects such as market surveys, assistance of business service providers etc. are missing**. Resource estimates • Time estimate to achieve compliance: ≥ 2 years	Findings • **Financial sustainability** is highly unlikely in China and **is a core problem with certification for small-scale producers** worldwide. • With a relatively high diversity of species in trade, from a high number of informal sector suppliers and from sometimes secret (ie: often illegal source areas, such as nature reserves), traceability and accurate record keeping are unlikely	Findings • As the operation is profit-oriented and its success largely depends on successful marketing, this principle is perceived as crucially important to the operation.	–
j) Principle #10	**Findings:**	• **Collectors often operate as part of an informal, non-organised and partly illegal, sector where neither health and safety regulations nor workers' rights can be applied**			= ★
	***Recommendations*:**	• ***Integrate this principle into principle #1, as it is basically a legal issue***			= ★
	–	Findings • The principle is difficult to understand.	Findings • Health and safety regulations do not apply to informal sector	Findings • Mostly considered as less important for the project as there are, on	–

	Bosnia-Herzegovina	Brazil	China	Ecuador	Namibia
		Recommendations • It may be helpful to find an easier wording, or make 2-3 sentences out of the complex one. • It has been suggested to integrate this principle into principle #1, as it is basically a legal issue.	activities. These regulations are not cost effective for harvesters, and at best, will shift high value harvest into the formal sector, away from the rural poor. • MAP collectors are not employees. This is a part time activity of otherwise unemployed – or at most seasonally employed people, largely from farming communities.	state level, no clear rules or regulations on most of the provisions - most is negotiated locally and it will be very difficult to implement this principle in this project.	

Part III: Implementation – scenarios and barriers

	Bosnia-Herzegovina	Brazil	China	Ecuador	Namibia
A Scenarios					
I (Co-)Certification	• Considered effective to prevent overexploitation and to provide economic incentives; for both, exporters and buyers, it could be a competitive advantage. • Could be particularly interesting where organizations have some of their products (organically) certified. Possibly focus on the company association level. • Preconditions: – Strong demand from the buyer side for such a standard – Practical (simple/effective) implementation is possible				= ★★★(★)
II Voluntary Codes of Practice	• Document could serve as a basis for the development of voluntary codes of practice or internal operation policies • Temporary solution until legal establishment of ISSC-MAP: Incentives must be given for those who implement the standard voluntarily [e.g. by the state] • Preconditions: – and or resource tenure issues have been sorted out				= ★★★
III Legal Adoption	• Can be an appropriate instrument in countries where – MAP species are considered to constitute a crucial part of the national biodiversity – the national industry of MAP collection (and cultivation) is of outstanding importance – governments lack tools to address the issue of sustainable use and require clear guidelines • Can turn out to be counter-productive and impractical as it would add to the burden the operation needs to carry • Preconditions: – implemented through laws at the state level – enforced throughout the supply chain – benefits are provided for those who have to implement corresponding legislation				= ★★★
IV Guidance document	• ISSC-MAP could serve as a standard and guidance document for the development of a Management Plan for the sustainable wild collection of MAP species – Indicators would be developed by the users as part of the MP in development – Verification of compliance could take place on two different levels: Auto-verification and through an external party				= ★
V Co-management of resources	• Co-management (state / local communities), starting at an experimental level possibly through multiple-use zones • Preconditions: – management agencies had sufficient resources for site inspections – collectors were well organized and likewise have sufficient management capacities – communities / collectors would act in full compliance with legislation				= ★

	Bosnia-Herzegovina	Brazil	China	Ecuador	Namibia
	<u>Scenario I: (Co-)Certification</u> • As some of the locally operating companies have organically certified products, another scenario for the implementation of ISSC-MAP could be through (co-)certification on the company association level or through the certifiers [?] • Prerequisite is a strong demand from the buyer side for such a standard. For both, exporters and buyers, it could be a competitive advantage. <u>Scenario II: Voluntary codes</u> • It was suggested that as a temporary solution those who implement the standard voluntarily shall get incentives [by the state]. <u>Scenario III: Legal adoption</u> • All participants of the workshop agreed that ISSC-MAP should be implemented through laws at the state level and should be enforced throughout the supply chain. • The Ministry for Foreign Trade and Economic Relations was seen as an adequate institution to push the ISSC-MAP so that it could be enforced like a law (e.g.	<u>Scenario I: (Co-)Certification</u> • The implementation of ISSC-MAP through a certification scheme would be fully supported if the scheme is practicable and can be handled, but is not the prime interest of the project. • To prevent overexploitation and to harness economic incentives, certification would be a good tool. <u>Scenario II: Voluntary codes</u> • The development of a voluntary code of practice or an internal policy of the operation based on ISSC-MAP could be an interesting alternative for *Medicina da Mata*. <u>Scenario III: Legal adoption</u> • Implementation through national legislation is considered as very negative and impractical as any additional legal instrument would only add to the burden the operation needs to carry without having obvious benefits. <u>Scenario IV: Guidance document</u> • Using the ISSC-MAP as a guidance document for the development of a	<u>Scenario II: Voluntary codes</u> • Harvesting under self-regulated guidelines ("wild-crafter standards") Preconditions: – land or resource tenure has been sorted out <u>Scenario V: Co-management</u> • Co-management of natural resources (state / local communities), possibly through multiple-use zones. Preconditions: – the management agencies had enough human resources and material facilities to inspect all the sites; – the collectors were well organized, – their collection in state forests and natural reserves became a legal activity; and – the collectors were not so poor. This could only take place at an experimental level after careful discussion at a high policy level in China (cf. background theory from work by Eleanor Ostrom & Robert Wade (Cunningham, 2001, Ch. 7))	<u>Scenario I: (Co-)Certification</u> • Main interest of AAPPSME would be a practical implementation of the standard in the realm of organic certification. • A standard dealing only with wild collection [and not cultivation issues] may have a limited use. • The ISSC-MAP initiative should analyze the interconnection between cultivation and wild collection, in terms of certification. <u>Scenario III: Legal adoption</u> • The Ecuadorian government (Ministry of Environment) seems to be interested in the standard as a basis for adoption of a legal instrument targeting the sustainable use of MAPs: The minister was aware of the project process and thinks it is a very good option for wild collected plants, as Ecuador does not have a tool to address this issue and requires clear guidelines. In her perception, the Ministry would like that the standards could be legally adopted.	• The most likely scenario for the effective implementation of the ISSC-MAP would be that which followed or is built on that which is currently in place. [?]

	Bosnia-Herzegovina	Brazil	China	Ecuador	Namibia
	in a similar way as Codex Alimentarius, European Pharmacopoeia)	clear project structure, the management plan, and/or for developing an internal policy (main interest) – Community develops their own indicators as part of the MP in development – Auto-verification is considered as an important element, which may result in two different levels of verification / assessment, one performed by the community, the other by an external party •			
	Most respondents wanted more clarity on how the standard will be implemented (e.g., voluntary code of conduct, good-practice guidance, certification system). *Several respondents felt that the current draft standard will not be practical to implement, because:* ✎ *Fundamental conditions, such as establishing clear legal resource access and tenure, either do not exist or cannot be enforced in many countries and local situations.* ✎ *Where legitimate access and tenure do exist and are acknowledged, it may not be possible for resource managers to limit access only to the otherwise legitimate collectors who also comply with this standard (i.e., sustainable use has less priority than do customary rights).* ✎ *Too little ecological information about MAP resources is available, and there are insufficient funds and research capacity to provide the information needed.* ✎ *Many wild MAP resources have scattered, fragmented distributions, and collection activities are similarly dispersed and decentralized (i.e., compliance with this standard based on distinct populations or management areas will be impractical).*				
[*Harmonization*]	✎ *Harmonization with other product labels and process certification standards (e.g., organic agriculture, forest products, and fair-trade) can build on:* *– MAPs already included in certification systems – organic, fair-trade (Rooibos), forest management (Taxus).* *– Overlap in scope and objectives of draft ISSC-MAP with existing labels and certification systems (especially with organic and trade association codes of practice, which are also concerned with practices that contribute to waste reduction and superior product quality, e.g., by regulating time of collection).* ✎ *ISSC-MAP could concentrate on sustainability components, and liaise with other organizations that concentrate on fair-trade and product quality for realistic components and implementation in these areas.* ✎ *Attention is needed to match definitions and hierarchy of components with other standards (e.g., FSC, IFOAM)*				

	Bosnia-Herzegovina	Brazil	China	Ecuador	Namibia
1. *Users and responsibilities*	• The question who would be responsible for the development of the management plan was clearly answered: it would be the task of the state, in this case the Forest Administration.	–	• Main users would be – Nature reserve managers and forestry staff – Independent certifiers – Collectors (informal sector) – Policy makers (legislation) • **Responsibilities must be clarified** regarding: – capacity building and training – funding – implementation – data collection, processing, storage and decision making on them – developing the management plan	• The ISSC-MAP initiative should develop a process to support producers in their way to certification.	• Responsible actors would be – CRIAA SA-DC, – Harvesters, – MET and – competent authority.
	✎ *Many of the respondents posed the question, "Who is responsible?", broadly for overseeing application and outcomes of the standard, and more specifically for the research, monitoring, and other actions required to meet many of the proposed criteria. Suggestions include different institutions (village or collectors' organizations, federations of village organizations, industry and trader organizations and federations of these, government line departments, law enforcement agencies, research institutions, certification/labeling organizations, conventions and treaties) taking responsibility for different sections of the standard.*				

	Bosnia-Herzegovina	Brazil	China	Ecuador	Namibia
2. *Required resources*	**Findings:**	• **Common concern that the process and implementation of ISSC-MAP requires too many resources, in terms of time, capacity, and money**			= ★★★★
		• **Need for <u>capacity building/training</u> identified for collectors and those responsible for implementation**			= ★★
	***Recommendations*:**	• ***Costs of compliance need to be minimized – this could be achieved by*** **– *making a <u>thorough</u>* <u>cost-calculation</u> by the author organisations and trying to avoid all requirements, for which compliance would involve unreasonably high costs** **– simplifying the standard and state the <u>minimum requirements</u> clearly** **– focussing on a few (2-3) <u>priority species</u>**			= ★★★
	<u>Findings</u> • Certain education level necessary to understand and work with the ISSC-MAP. • There is a need for capacity building/training of collectors.	<u>Findings</u> • Concern that the ISSC-MAP process – may be too time and capacity consuming – requires a lot of documentation. People who take part will need to be trained in order to understand the principles of how documentation works and must get some guidance on how to document. <u>Recommendations</u> • To minimize costs, it is suggested making a thorough cost-calculation by the author organisations and trying to avoid all requirements, for which compliance would involve unreasonably high costs.	<u>Findings</u> • "high costs" of implementation (for training, data collection and monitoring)	<u>Findings</u> • As for the AAPPSME project, the total costs of developing the management plan (incl. preliminary research) are estimated at about 25,000 USD. • A certification for the wild components and one for the cultivated elements would add costs to a probably unbearable level for a company that hardly breaks even. • Only a NTFP certification scheme that is as cheap as possible to implement and maintain, is considered as potentially successful in the country. <u>Recommendations</u> • For these reasons, most partners interviewed suggested to simplify the standard and state the minimum requirements clearly. • The cost benefit relation of certification for producers should be analyzed and alternatives to certification identified.	–

	Bosnia-Herzegovina	Brazil	China	Ecuador	Namibia
3. *Expected benefits*		• **Enable fair competition and create opportunities for competitive advantages to improve / sharpen the profile of…** = ★ ├ **PRODUCTS produced according to the standard** = ★★ └ **better access to / increased presence on international markets** = ★★★ └ **price premiums for the products traded** = ★★★★ └ **higher income for traders and operations** = ★ ├ **higher income for harvesters** = ★★ ├ **increased local value addition** = ★ **multiplier effects** = ★ └ **OPERATIONS adhering to the standard** = ★★ └ **better access to funds** = ★ • **Increase knowledge on…** ├ **RESOURCE management** = ★ └ **sustainable use of MAP resources** = ★ └ **long-term availability of the commodity** = ★ └ **ORGANISATIONAL skills in other fields** = ★ └ **contribution to community empowerment in the broader sense** = ★			
	Assumptions • Achieve sustainable use of plant resources and therefore long-term availability of the commodity. • Price premiums achieved on export • Implementation of the standard would equalize conditions for all the companies involved in the business which is seen as a possibility to secure competitive advantages	Assumptions • The process could help increase the profile of Medicina da Mata on international and national levels, thus helping to improve access to funds. • Draft ISSC-MAP already helps during MP development • Validation of the Iracambi project through international field consultation • On the long term, the ISSC-MAP, once established and recognized, could be a valuable tool for Medicina da Mata to improve the profile of its	Assumptions • Some middlemen and government agencies responsible for "economic development" may welcome ISSC-MAP if middlemen or local people profit financially	Assumptions • As one of the main goals of the operation is to increase its presence on international markets (and to enter the European market), organic certification is a primary aim strived for by AAPPSME. The ISSC-MAP could be beneficial to the project if integrated into the organic certification scheme, covering the two MAP species still collected from the wild. • The ISSC-MAP process and the selection of the AAPPSME project as a field consultation project could be a way to indirectly promote the	Assumptions • Economic: The major economic benefit is that compliance with the standard has the potential to command a higher price thereby increasing the income for harvesters. • Market Access: Standards can facilitate access to niche markets which are – prepared to pay the premium price. – invariably more secure for producers in the long-term. • Processing: In certain circumstances standards can facilitate increased local value addition.

	Bosnia-Herzegovina	Brazil	China	Ecuador	Namibia
		products and get better market access and higher revenues for the products traded.		operation and its products. • The ISSC-MAP could be an interesting tool to achieve keen to sharpen the operation's profile and further enhance the development of a distinguished product, for which finally a higher price can be achieved.	• Multiplier Effect: The realisation on the part of others that good practices such as standards yield positive benefits can stimulate them to engage in similar practices. • Resource Knowledge: Standards can contribute to improved knowledge regarding the resource and can thus also improve resource management. This is particularly the case when resource management uses a combination of local (traditional) knowledge and scientific research results. • Social Capital and Empowerment: The organisational and other requirements of standards that require training in various fields can be considered to contribute significantly to community empowerment in the broader sense.
	✎ *One respondent points out that efforts to certify product quality (e.g., sanitation, handling) of NTFPs have benefited retailers and consumers, but have not been beneficial to producers (creating trade barriers and re-configuring trade networks).* ✎ *The same respondent also points out that there is not currently a retailer/consumer market for sustainably produced NTFPs, nor for MAP products, and that the most promising approach will likely be to encourage producers (collectors, consolidators, processors, distributors, manufacturers, and others in the chain of supply) to be interested in MAP resource sustainability.*				

	Bosnia-Herzegovina	Brazil	China	Ecuador	Namibia
B Barriers and limiting factors					
1. *Local factors (project or site specific)*					
a) Sourcing practices	Findings • **Resource assessments are only done sporadically** and only in a quite simple way • **No information exchange** between collectors • **Low level of documentation**.	Findings • Project includes the mechanism of **enrichment planting** (growing plants in a nursery and replanting them into their natural environment), and is not purely using wild stock	Findings • Locations and quantities of valuable medicinal plants is kept secret by communities. • Current levels of over-harvesting is resulting in **resource declines** in more vulnerable species countrywide.	Findings • Project includes mainly **species of cultivated origin** (collected from home gardens) which are not covered by the ISSC-MAP. • There is a clear trend towards **depletion of the resources**, in the case of both *cucharillo* and *cola de caballo*, which seems to be partly due to over-collection by community members and partly due to collection by others brought in from outside.	–
b) Organizational degree	Findings • **Collectors are not organized** in an association and **no official collectors' meetings** are held	Findings • Several problems relating to social aspects became evident: – there is a **lack of community organisation** – the **educational level** of many people within the community is relatively low – **training and capacity building needs** are considerable which will add up to the costs	Findings • Collectors usually act on their own or **poorly organised** due to their activities being **illegal**.	–	Findings • The devil's claw industry in Namibia and the other range states is **without a credible representative organisation of stakeholders**.

	Bosnia-Herzegovina	Brazil	China	Ecuador	Namibia
c) Limited resources and poverty	**Findings:**	• **Costs involved to reach compliance with and implement the standard are too high for average operations and local communities.**			= ★★★★
		• **Local communities lack the capacity and know-how to be actively involved, both in the development and the implementation of the ISSC-MAP**			= ★★★
		• **Government agencies face lack of qualified staff, a limited budget, and lack of knowledge**			= ★★
	Findings • The responsible management (forestry) authority faces lack of qualified staff, a limited budget, immense karst problems, and lack of knowledge how to develop an overall management plan for MAP species. • Companies do not show ambitions to create a plan for them or for the region as they already pay for collection licences and therefore expect the authority to provide the management plan.	Assumptions • The costs involved in certification may be too high to be covered by the project, which so far has relied a lot on volunteer work and operates with a low budget. Findings • Identified fields where training and capacity building is needed: – Concept of sustainability – ISSC-conform documentation – Monitoring – Markets and market access – Product processing and handling – Development of the management plan – Cultivation of MAP in agroforestry systems – Community assessment – Collection and identification of plants – Organisational and legal training – Communication – Fund raising	Findings • Local communities and villagers often lack the capacity, financial resources and local institutions to be actively involved in the implementation of the ISSC-MAP process, so are unlikely to share in the benefits. • Better-educated and self-organised local people engage in cultivation of medicinal plants while typically the poorer ones have to rely on wild collection for livelihood. • ISSC-MAP not workable in view of the many hundreds of species involved for which extensive data collection and monitoring is required. • Systems of harvesting licenses are not working due to limited resources of management agencies	Findings • In the case of the AAPPSME project it would be possible to cover the related costs of a potential implementation of the standard, if used as a (or as part of a) certification scheme due to substantial financial input from EcoCiencia, UNCTAD/Biotrade and others, but in similar projects without this financial support, certification according to this standard would be too costly and could not be realised. • Efforts to establish comparable certification schemes such as FSC proved to be highly ineffective in Ecuador, so far.	Findings • It should be noted that poor communities are at a relative disadvantage and have to compete like all other players in an open market. Assumptions • It is unlikely that poor communities would have the necessary capacity to fully implement and comply with the proposed ISSC-MAP. • The technical and administrative knowledge required constitutes a professional specialisation in its own right. • Poverty and sustainability are inextricably linked and unless the issues of poverty are addressed, through, for example, the realisation of "real" benefits or options to primary producers, sustainability will always remain problematic.

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2. *Socio-economic factors*					
a) Land tenure	–	–	Findings • In China, all land belongs to the State. Local and indigenous community rights to land can therefore be extinguished if there is policy interest in doing so. • **Complex or uncertain tenure arrangements** (due to repeated changes of ownership over the last decades) • **Competition between local collectors and those from other areas** and counties • Wanglang National Nature Reserve is a landscape customarily used as a grazing and medicinal plant harvesting area by the Baima Tibetan people. They no longer have access. Even some Baima sacred forests in the study area were logged in the 1980's.	Findings • The **legal situation relating to tenure and land use rights is very unclear** in Ecuador. • A problem inherent of wild collection is the fact that it happens on a land open to everybody. Even if certified collectors respect sustainable ages and quantities, others will not and this may (will probably) end up in an over-consumption of the resource.	Assumptions • The sustainable utilisation of devil's claw, or any NWFP for that matter, cannot be addressed by standards alone. The issues impacting on sustainable use are far broader in nature and revolve mainly around livelihood security. • The practices entailed by sustainable utilisation are **difficult to implement when there is, for example, a lack of clarity regarding land ownership and access**, and acute poverty, particularly in communal or open-access areas.
b) Legislation and law enforcement	**Findings:**	• **Legal restrictions exist with regard to collection from the wild ⇨ collectors operate at the edge of illegality where licenses are difficult to obtain or poorly managed** = ★★★ • **Systems of collection licences are not working properly and therefore do not allow the establishment of reliable data on quantities.** = ★★★ • **National legislation on biodiversity and conservation issues complex and partly inconsistent** = ★★ • **The level and speed of law enforcement varies or is very poor.** = ★★			
	Findings • Up to now law	Findings • Brazilian legislation – in	Findings • No wild collection is	Findings • Ecuadorian law does not	–

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	enforcement in BiH is very poor and Forestry Departments, which would be responsible for the relevant law enforcement, are not equally developed throughout the state. Therefore, implementation of ISSC-MAP by law as suggested would need several years. • One main problem in BiH is the complicated administrative structure as two entities, Republika Srpska and Fed. BiH, both show a number of symptoms of an independent state formation with more or less independent administrative structures. – As a result the issue of MAP in BiH is covered by different ministries at the state and the entity level – Furthermore, both entities have different laws relevant to MAP wild collection • Currently, collection licences are not restricted to well-defined collection areas but are issued for whole forestry districts. This is not in accordance with the Law on Forests and with the Regulation on usage of other forest products. As not all traders operating in the area are applying for a collecting licence,	general and especially with regard to biodiversity and conservation, health and safety, trade, and land registry / tenure / taxation – tends to be complex and administration is famous for its high level of bureaucracy. • Insecurities relating to the level and speed of law enforcement and the risk of paying considerable fines for non-compliance with a regulation make conservation and sustainable use projects like 'Medicina da Mata' an adventure, especially for small producers • High sensitisation of the potential impacts of bio-piracy in the country and new projects focusing on the sustainable use of natural resources tend to be scrutinized for any possible involvement of bio-piracy • Local and regional forestry policy addresses mainly reforestation and preservation rather than promoting conservation and the sustainable use of natural resources	permitted within nature reserves nor within many state forests, although local people to a large extent still rely on the collection as one of the major source of cash income • Systems of harvesting licenses are not working due to limited resources of management agencies	allow the commercial collection of MAP from the wild, unless it is for scientific research and / or successful propagation projects. • Although collection of MAP from the wild is now possible through the establishment of a management plan (without protocols), it requires a collection permit or 'management patent', which is not easy to get and need to be paid for. • For this reason, hardly anybody does have this permit, especially in the case of medicinal plants where trade dynamics are poorly known and understood. <u>Recommendations</u> • The ISSC-MAP initiative should analyze the relation between its requirements and legislation – probably at country level, and identify mechanisms to overcome the issue.	

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	there is no data collection on quantities and areas of collection and consequently no basis for evaluating the sustainability of the overall herb collection or for establishing an area rotation and quota system.				
c) Markets	**Findings:** • **National markets characterized by** **low consumer awareness of issues such as sustainable / organic harvesting practices** **informal trade, partly including illegal harvest with complex marketing chains and suffering** **opportunistic and often unpredictable short-term fluctuations**				= ★★★
	Findings • The national market for certified organic herbal products is poor; products are mainly exported to the wealthier Central and Western European countries and to a certain amount to the US market. • Workshop participants stressed the importance of the supply chain: Only pressure from the side of traders / buyers / consumers would result in the acceptance/use of ISSC-MAP in the source regions.	–	Findings • Marketing chains are fairly complex, including illegal harvest from WNNR and Baima State Forest, with c. 100 illegal harvesters, some travelling from towns 100 km away, being arrested annually. • No existing consumer awareness in China of issues such as sustainable harvesting practices or social equity for harvesters	Findings • At present, the operation is doing reasonably well on the national market and also on the US market, but all interview partners mentioned that (local and national) competitors on the market are a substantial problem for the operation.	Findings • The largest part of the existing trade in the region is conducted through informal markets characterised by low harvester prices, low levels of value-adding and low overall levels of benefits achieved off fairly large volumes of material. • Markets are opportunistic and often unpredictable and so communities sometimes find themselves caught by short-term fluctuations, caused by over-supply, falling prices or worsening terms of trade.

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3. ***Technical / methodical factors***	Findings • Often two or even more certifiers are active in one area **without sharing their information**. Sustainability of the collection may therefore not be given in some cases.	Assumptions • A restrictive and demanding standard will most probably result in **less participation of producers** and will increase the logistic burden (e.g. techno-scientific (research) studies, legal requirements, costs)	Findings • **Knowledge gaps about medicinal plant diversity**: ISSC-MAP approach (sustainable management of medicinal plant resources) is limited by three issues – **Taxonomy** (of even some very important species) not well known – Not enough knowledge of medicinal plant **population dynamics** – Links between plant populations and **habitat disturbance dynamics** or stochastic events • Botanical diversity and taxonomic uncertainty are just the tip of the ice-berg, signalling the challenge for ISSC-MAP when we hardly know which species we are dealing with, let alone their population dynamics, population density or sustainable yields for different populations.	Findings • The current manifestation of ISSC-MAP is useful as a source that can provide guidelines in regards to the necessary scope of any potential certification / legislation program, but the language of ISSC-MAP makes the standard neither easy to use directly for certification nor for legislation. Recommendations • There needs to be a document that explains why each principle and criterion is important to the overall objectives.	–
4. ***Existing reservations***	Findings • From company side, there is only **little demand to implement another strict standard** as many are already certified organic • As many **consumers (in**	Findings • There are no major reservations related to ISSC-MAP within the project. Medicina da Mata supports the development of this document.	Findings • **Limited interest of local government representatives** and forest managers in introducing sustainable collection programs (due to limited chances to	Findings • The participants are confused and sceptical about the various visitors they have in regards to ISSC-MAP, they are worried that their objectives are not taken	–

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	countries abroad, e.g. Germany) are not aware of the problems related to wild collection and its sustainability, and further are not aware what organic certification in the context of the EU Regulation means, companies do neither see a market for this certification nor an advantage		claim achievements in terms of economic development and to obtain visual benefits)	into account.	

Part IV: Synopsis

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Main conclusions					
General approach: consider re-orientation	–	Scope • It was suggested not to develop an international MAP sustainability standard, but a **standard and guidance document for the development of a Management Plan** for the sustainable wild collection of MAP • Also **address cultivation (of native species**) as this would increase the relevance of ISSC-MAP for agro-forestry ecosystems which are found throughout Brazil, and the MAPs produced in such systems Process • **Local communities** should be **included in the process** of developing the ISSC-MAP	Scope • It is suggested that the **authenticity** of the medicinal plants be included or further emphasized, which should include the correct species identification, geographic origin and processing procedures for priority species.	Scope • It is suggested by the operation to widen the scope of the ISSC-MAP to **include sourcing MAP material from cultivation**.	Scope • Poverty and sustainability are inextricably linked and unless the issues of poverty are addressed, through, for example, the realisation of "real" benefits or options to primary producers, sustainability will always remain problematic. • Does not **link or include others in the supply chain** (For example, importers, manufacturers and distributors). This is critical to facilitate and allow benefit sharing to take place.
Structure and format: improve user-friendliness	***Recommendations:***	• ***Simplify the language by shorter sentences and less complex syntax***			= ★★★
	–	Language • Shorter sentences and less complex syntax would be helpful	–	Language • It has been suggested to simplify the language by making shorter sentences and allowing multi-sentence provisions at the	Language • Consideration needs to be given to simplifying the ISSC-MAP to make them more user-friendly for poor rural communities who have not had access

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				indicator level	to good educational opportunities. This could be achieved, e.g., by – simplifying the language used, – translating the ISSC-MAP into local vernaculars
	✎ *Simplify – accept proposed changes that reduce complexity and length* ✎ *Generalize – consolidate components (principles, criteria) that are broadly relevant to many situations* ✎ *Move indicators, verifiers, and other guidance into a supporting annex or companion document*				
Contents / components: focus on practicability	***Recommendations:***	• ***Identify and prioritise practical and cost-effective minimum requirements***			= ★★★★
		• ***Re-order / reduce principles #4 – #8***			= ★★★
		• ***Clarify whether suggested means and types of verification are obligatory (ALL means/types must be used) or whether selections can be made and alternatives chosen***			= ★★
		• ***Expand the guidance section and include on-the-ground, concrete examples***			= ★★
	Principles • In any case, we suggest to re-order principles 4-7 to 7-4-6-5. The latter is the order of the questions we asked during the field test in BiH. Rigidity • Ask in a more general way for compliance with principles #4 to #7. • Provide alternatives when no (area) management plan is available.	Principles • Several suggestions to reduce the number of principles or regroup them: Rigidity • Develop "minimum requirements" (e.g. a species-specific Rapid Resource Assessment as a basis for a maximum yield scheme) or concessive provisions, such as 'whenever possible' or 'using a precautionary approach / principle' in order to achieve a higher practicability • A clear statement should be made in the standard, if the verifiers are an optional list or if they will	–	Principles • It is suggested that the MP principle #5 – includes principles 4, 6-8, as they are part of the MP process – should integrate a number of additional aspects [cf. Part II: 2 a] – give considerably more detailed advice on the components of the MP – includes the minimum requirements to be fulfilled in order to comply with the whole standard Comprehensiveness • It is suggested to include the quality aspect in the ISSC-MAP in more detail, as a separate part (e.g. an additional criterion)	Rigidity • Reduce the ISSC-MAP requirements by identifying and prioritising the minimum requirements needed for the achievement of the desired results.

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		all have to be fulfilled in order to comply with the related component <u>Guidance</u> • Expand the guidance section and include on-the-ground, concrete examples as guidance in an annex that could be cross-referenced from various indicators / verifiers		under the MP principle. <u>Rigidity</u> • It was suggested to keep the requirements as practical and low as possible, e.g. include Rapid Resource Assessments as proper means of assessing the resource. • Most partners interviewed suggested to simplify the standard and state the minimum requirements clearly. <u>Guidance</u> • Provisions at the indicator level should be more detailed and include practical information; OR • The guidance section of all indicators is elaborated and more concrete advice and examples are given	
Potential for implementation	**Findings:**	• **The standard in its current form is too complex and its requirements too high in order to be implemented in a cost-effective way that meets the reality of local communities and collecting operations.**			= ★★★★(★)
	<u>Legislation & enforcement</u> • Implementation of ISSC-MAP by law at the state level is complicated – by **inefficient and co-responsible; administrative structures** – by **lack of proper law enforcement**. Therefore, implementation of ISSC-MAP by law as suggested would need several years. • While an eco-labelling	<u>Guidance</u> • Implementation of ISSC-MAP as an **informal guidance document** being translated into a locally adapted management plan seems at current the most practical tool of implementation <u>Local adaptation</u> • ISSC-MAP implementation should be an **adaptive process taking local realities into account**	<u>Data requirements</u> • Very low potential for implementation: ISSC-MAP **not workable in view of the many hundreds of species involved** for which extensive data collection and monitoring is required <u>Costs</u> • At present, the ISSC-MAP is in no state to be implemented and if it was, **costs would far**	<u>Costs</u> • In the case of the AAPPSME project it would be possible to cover the related costs of a potential implementation of the standard, if used as a (or as part of a) certification scheme due to substantial financial input from EcoCiencia, UNCTAD/Biotrade and others, but in similar projects without this financial support,	• The implementation of the ISSC-MAP in general within the SHDC project is achievable, although **not all of proposed requirements are relevant or could be applied in full**. • At present the mechanisms that would be required for the full implementation of the ISSC-MAP as they stand is not possible, however, a simplified version that ensures compliance with

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	system is required according to the Law on Environmental Protection, no implementing regulation exists until now Management plan • **Government authorities lack capacities** (time, budget, know-how) to set up a management plan, though required by law. Incentives & benefits • Voluntary adherence would require the **provision of adequate incentives** • Integration with organic certification **requires a strong demand from the buyer's side**	Costs • To minimize costs, it is suggested making a **thorough cost-calculation** by the author organisations and trying to avoid all requirements, for which compliance would involve unreasonably high costs.	**outweigh the benefits**.	**certification according to this standard would be too costly and could not be realised**.	organic standards and what we regard as essential MAP standards are in place. • Consequently, as new Standards emerge they should **reflect the lower standards and capacity of non-SHDC project areas**.
5. ***Major questions and concerns***	**Findings:**	• **Undefined target audience and responsibilities** = ★★★★(★) • **Level of detail and complexity (number and scope of requirements)** = ★★★★ • **Costs of implementation and of certification** = ★★★★			
	• **Target group** for standard use/implementation • Do we really need the **level "Criteria"**, as they are sometimes difficult to understand and confusing? • The ISSC-MAP gives priority to the management plan. It has to be considered that in many regions/projects no management plan exists. **Projects without**	• The ISSC-MAP process may be too time and capacity consuming • **Level of detail of documentation** required • Potentially **high costs** of implementation	• Pre-condition for certification to work is a **"caring'" market** prepared to pay price premiums and increased access to a wider market due to consumer awareness – China, however, generally is an "uncaring" market with regard to sustainable harvest. • **High cost of fulfilling data requirements** for hundreds of species	• High level of **complexity of the language** used in the ISSC-MAP (in particular on indicator and verifier levels), • Uncertainties about the **target audience** and intended way(s) of implementation • **Number and scope of requirements** • Generally **low level of specific guidance** provided on how to implement the provisions	• The **legal status** of ISSC-MAP • Identification of **responsible or competent authority** • The structures & mechanisms required to implement, monitor and enforce compliance • **Lack of flexibility** to allow for adaptation to changing circumstances • The **costs** associated with inspection & certification of

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	a documented management plan, but with any kind and level of resource assessment and monitoring are not enough reflected in and valued by the standard. • How to deal with a **pioneer plant**? • To what extent does an operation have to comply with the ISSC-MAP in order to be judged as operating on a sustainable basis? – **(How) could compliance with the indicators be weighted?** (e.g. 80% of the indicators have to be fulfilled) – Or, are there indicators which have to be met in any case or which should be weighted double?		• **Unclear spatial and time scales** of requirements and **non-specified responsibilities**	• Potentially **high costs** of implementation of the standard, if used as a (or as part of a) certification scheme. • Question has to be raised in how far the ISSC-MAP is relevant to the project which aims to fully source MAP material from **cultivation**. • What are the **accompanying measures** (e.g. technical assistance) contemplated by the ISSC-MAP initiative? • Is there a market demand for certified MAP? – Is the demand strong enough to bring substantial benefits to producers? – What mechanisms are envisaged to increase this demand? – Is any connection between potential buyers and sellers (planned to be) established? – Is any commitment from potential buyers (about to be) secured? • What kind of structure is envisaged to avoid conflict of interests between auditing (certification), drafting of the standard (standardization), and technical assistance?	compliance • The potential for **additional or related benefits** to be realised • Does not link compliance of ISSC-MAP to associated benefits • Does not link or include **others in the supply chain** (For example, importers, manufacturers and distributors). This is critical to facilitate and allow benefit sharing to take place.
	✎ *Is it possible to revise the current draft standard so that it is both more precise (more "how-to"), and simpler (easier to understand, more practical)?* ✎ *Should the standard concentrate on supporting collectors' organizations and community-based enterprises? Or should it focus on larger-scale commercial operations involved in wild collection of MAPs? Can the standard address both?*				

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	✎ *How much detail should be included in the standard itself, rather than in supporting documents (e.g., application and implementation manuals)?* ✎ *How can the standard provide for sufficient flexibility in requirements specified to enable application to/ implementation in different regions and field situations?* ✎ *Can the standard have different levels or degrees of implementation (e.g., minimum components required / maximum components desired)?* ✎ *How can the standard or supporting documentation address the relatively specialized topics that have come up as important in advisory group (e.g., ex situ conservation, infra-specific genetic diversity and genetic reserves, symbiotic relationships between species)?* ✎ *How can the standard more strongly support an adaptive management approach?*				

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6. ***Required research***	–	–	Botanical research • **Taxonomy** (of even some very important species) not well known • Medicinal plant **population dynamics** • Links between plant populations and **habitat disturbance dynamics** or stochastic events Market features • Identify **proportion of the medicinal plant market prepared to pay a premium** Limiting factors • Analyse other factors that limit successful implementation of ISSC-MAP Other schemes / policy tools • Explore **other (certification) processes where small-holder production is involved**. • Other policy tools (e.g. direct payments) to achieve the same goals for conservation and local livelihoods (which may be more effective and have a higher chance of adoption)	–	–

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C Starting points					
1. *Market-oriented activities*	• It was suggested that as a temporary solution those who **implement the standard voluntarily** shall get incentives [by the state]	–	**Develop marketing networks** enabling certified producer associations or companies to capitalize on certification.	–	–
2. *Capacity building and promotion*	–	–	**Promote the formation of non-profit organizations** who have the specific goal of developing national standards to promote certification in China	–	–
3. *Working with existing schemes, approaches, and instruments*	Data collection through licenses • Based on the data available from collectors and traders and if the **requirements for obtaining licenses** could only be slightly raised, it would be relatively easy to start the development of a management plan. Rapid resource assessment through interviews and field tests • Further, a rapid resource assessment may be undertaken in a short time and with limited budget.	–	Give credibility to the certification systems through **promoting appropriate types of certification for appropriate products**, fitting in with the national policy context, such as GMP, GACP, ISO standards, and certification of origin. Setting conservation priorities and strategies • Set conservation priorities by taking phylogenetic uniqueness into account (e.g. by the **IUCN-MPSG "Top 50" approach**) with ethnobotanical surveys of regional markets as a starting point, followed by a combination of – strict protection – adaptive management approach for a few priority species – ex-situ conservation for high priority	–	–

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			species		
4. ***Policy instruments***	<u>Closing gaps in laws and regulations</u> • Set up **adequate regulations** on wild collection, • Identify MAP species with **declining populations** • Develop a **quota system** for MAP collection with declining populations or unknown population status. • Further MAP topics should be included in the **Nature Protection Strategy** • It is urgent to create a **new red list**.	–	–	–	–
5. ***Pilot tests***	–	–	**Test simplified certification procedures** at a pilot-study level in selected State Forests after careful coordination with forestry laws	–	–