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Item 8 of the provisional agenda*

GLOBAL STRATEGY FOR PLANT CONSERVATION***Progress in implementing decision X/17***

Note by the Executive Secretary

EXECUTIVE SUMMARY

Since the adoption of the consolidated update of the Global Strategy for Plant Conservation 2011-2020, good progress has been made on a number of provisions contained in decision X/17, including the further development of the technical rationales and indicators for the Strategy as well as the development of the toolkit for the Strategy. Most Parties to the Convention for which information could be assessed (over 70 per cent of the 156 fourth national reports analysed) had reported either comprehensively or selectively addressing plant conservation needs in accordance with the Strategy adopted in 2002. Additional efforts are required however, to ensure the adequate reflection of plant conservation concerns in updated national biodiversity strategies and action plans.

The fourth meeting of the Liaison Group on the Global Strategy for Plant Conservation considered capacity needs in relation to the further implementation of each of the targets of the Strategy as well as available tools and approaches to address them. These have been taken into account in preparing plans and materials for a number of subregional capacity-building workshops on the Global Strategy for Plant Conservation to be carried out in the course of 2012, with a view to supporting Parties' efforts to reflect plant conservation concerns in their national biodiversity targets and strategies as appropriate.

* UNEP/CBD/SBSTTA/16/1.

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DRAFT RECOMMENDATION

The Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) may wish to adopt a recommendation along the following lines:

The Subsidiary Body on Scientific, Technical and Technological Advice,

Having reviewed the revised technical rationales and proposed indicators as well as the online toolkit for the Global Strategy for Plant Conservation,

Recommends that the Conference of the Parties adopts a decision along the following lines:

The Conference of the Parties

1. *Acknowledges* the financial contributions in support of the implementation of the Global Strategy for Plant Conservation from Finland, Japan, Spain, the United Kingdom and the Rufford Foundation and contributions from other partners, including the members of the Global Partnership for Plant Conservation;

2. *Thanks* the Missouri Botanical Garden for organizing the International Conference: A Global Partnership for Plant Conservation – Supporting the worldwide implementation of the Global Strategy for Plant Conservation and for hosting the fourth meeting of the Liaison Group on the Global Strategy for Plant Conservation;

3. *Takes note* of the terms and technical rationales contained in annex I to this document and *encourages* Parties and *invites* other Governments and relevant organizations to apply them in the development/update and promotion of national plant conservation strategies and their integration in national biodiversity strategies and action plans, sectoral strategies, land-use plans and development plans, as appropriate;

4. *Agrees* that monitoring the implementation of the Global Strategy for Plant Conservation, including the use of indicators should be seen in the broader context of, and linked to, the monitoring, review and evaluation of the Strategic Plan for Biodiversity 2011-2020 and notes in this context:

(a) The relevance of the indicator framework for the Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets¹;

(b) The analysis, contained in annex II to the present document, on the applicability to the Global Strategy for Plant Conservation of indicators contained in recommendation XV/1 of the Subsidiary Body on Scientific, Technical and Technological Advice;

5. *Recalling* paragraph 10 (b) of decision X/17, in which the Conference of the Parties requested the Executive Secretary to develop, by 2012, an online version of the toolkit for the Global Strategy for Plant Conservation in all United Nations official languages:

(a) *Welcomes* the preparation of the English version of the online toolkit for the Global Strategy for Plant Conservation and *expresses his gratitude to* Botanic Gardens Conservation International for coordinating the development of the toolkit by the flexible coordination mechanism for the Global Strategy for Plant Conservation;

(b) *Requests* the Executive Secretary, in collaboration with Botanic Gardens Conservation International and the Global Partnership for Plant Conservation, to proceed with the translation of the toolkit into the official languages of the United Nations;

(c) *Decides* that the toolkit for the Global Strategy for Plant Conservation should be maintained and further developed as a resource to which additional material should be added as it is made available, and *urges* Parties and *invites* other Governments and relevant organizations to make use of and further contribute to the toolkit;

¹ The indicator framework for the Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets has been agreed by the Subsidiary Body in recommendation XV/1.

(d) *Takes note* of the initiative of the Executive Secretary to develop guidance, in collaboration with the flexible coordination mechanism for the Global Strategy for Plant Conservation, to support focal points for the Strategy in the delivery of their mandates, with a view to making this guidance available through the toolkit;

6. *Reiterates* the call in decision X/17 to Parties and other Governments to develop or update national and, regional targets as appropriate, and, where appropriate, to incorporate them into relevant plans, programmes and initiatives, including national biodiversity strategies and action plans, and to align the further implementation of the Strategy with national and/or regional efforts to implement the Strategic Plan for Biodiversity 2011-2020;

7. *Invites* botanical and other biodiversity conservation institutions, members of the Global Partnership for Plant Conservation and members of the Consortium of Scientific Partners on Biodiversity to incorporate relevant aspects of the Global Strategy for Plant Conservation into their capacity-building activities and training materials, outreach programmes and awareness-raising activities, in order to support Parties as appropriate in enhancing national implementation of the Strategy.

I. INTRODUCTION

1. Through decision X/17 the Conference of the Parties adopted the consolidated update of the Global Strategy for Plant Conservation 2011-2020, decided to pursue the implementation of the Strategy as part of the broader framework of the Strategic Plan for Biodiversity 2011-2020 and invited Parties and other Governments to develop or update national and regional targets as appropriate.
2. In the same decision the Conference of the Parties requested the Executive Secretary, in collaboration with the Global Partnership for Plant Conservation and other partners and relevant organizations, to further develop the technical rationales, milestones and indicators for the updated Strategy, consistent with the Strategic Plan for Biodiversity 2011-2020 as well as to undertake a number of activities to support implementation of the Strategy.
3. It was further decided to undertake, in 2015, a mid-term review of the implementation of the consolidated update of the Strategy and its targets, in tandem with the mid-term review of the Strategic Plan for Biodiversity 2011-2020 and the review of the achievement of the Millennium Development Goals.
4. The current note reports on the activities undertaken in response to decision X/17 with a view to enabling a review of the adequacy of current progress in the lead-up to the mid-term review of the Global Strategy for Plant Conservation. Section II considers the updated technical rationales. Section III provides information on the updating of national plant conservation targets while section IV reports on progress in the development of mechanisms to support implementation and raise awareness on the Strategy. Finally, section V considers aspects related to monitoring the implementation of the Strategy in view of the mid-term and final reviews of the achievement of the Global Strategy for Plant Conservation and its targets, including milestones and indicators for the Strategy. A draft of this document was made available for review for a period of two weeks and comments received² were taken into account in finalizing this note.

II. TECHNICAL RATIONALES OF THE GLOBAL STRATEGY FOR PLANT CONSERVATION 2011-2020

5. In decision X/17, the Conference of the Parties requested the Executive Secretary, in collaboration with the Global Partnership for Plant Conservation and other partners and relevant organizations, and subject to the availability of the necessary resources to, *inter alia*, further develop, with the flexible coordination mechanism, the technical rationales, milestones and indicators for the updated Strategy, consistent with the Strategic Plan for Biodiversity 2011-2020, for review by the Subsidiary Body on the Scientific, Technical and Technological Advice.³
6. The fourth meeting of the Liaison Group on the Global Strategy for Plant Conservation held in St. Louis, Missouri, United States of America, on 8-9 July 2011,⁴ in considering the technical rationales for the updated Global Strategy for Plant Conservation, noted that the proposed revised GSPC targets were adopted by the Conference of the Parties at its tenth meeting without any significant changes from the recommendation agreed by the Subsidiary Body at its fourteenth meeting. It was therefore agreed that the technical rationales as provided in the note by the Executive Secretary on Global Strategy for Plant Conservation: technical rationale, justification for updating and suggested milestones and indicators (UNEP/CBD/COP/10/19) and the information note on progress in the Implementation of the Global Strategy for Plant Conservation and Development of a Consolidated Update Beyond 2010 (UNEP/CBD/SNSTTA/14/INF/16) were relevant to the adopted targets and would not require significant updating.

² By 9 February 2012, comments had been received from and Pro Natura - Friends of the Earth Switzerland and from TRAFFIC International and WWF International.

³ In paragraph 10(a) of decision X/17, the Conference of the Parties requested this review to be done at the fifteenth meeting of SBSTTA. The Executive Secretary, on the advice of the SBSTTA Bureau, postponed consideration of the agenda item on the GSPC to the sixteenth meeting of SBSTTA.

⁴ The report of this meeting is available at <http://www.cbd.int/doc/meetings/pc/gspclg-04/official/gspclg-04-02-en.pdf>.

7. The meeting also agreed that members of the Global Partnership for Plant Conservation should be invited to undertake a critical review of the technical rationales contained in the documentation for the tenth meeting of the Conference of the Parties for compilation by the Secretariat of the Global Partnership for Plant Conservation under the guidance of the Chair of the Partnership.

8. In accordance with the revised working practices of the Global Partnership for Plant Conservation,⁵ four working groups established around the first four objectives of the Strategy and reviewed the technical rationales for targets 1 through 14 while each working group also considered the technical rationales for targets 15 and 16. The revised technical rationales prepared by the Global Partnership for Plant Conservation are contained in annex I to this document.

9. Milestones and indicators are addressed in section V of this document.

III. DEVELOPMENT OR UPDATING OF NATIONAL AND REGIONAL TARGETS RELEVANT TO THE GLOBAL STRATEGY FOR PLANT CONSERVATION 2011-2020

10. In decision X/17, the Conference of the Parties invited Parties and other Governments to develop or update national and regional targets as appropriate, and, where appropriate, incorporate them into relevant plans, programmes and initiatives, including national biodiversity strategies and action plans, and align the further implementation of the Strategy with national and/or regional efforts to implement the Strategic Plan for Biodiversity 2011-2020.

11. In the same decision, the Conference of the Parties requested the Executive Secretary to recommend measures to enhance national implementation of the Strategy and integrate the implementation of the Strategy with other programmes, instruments, protocols, and initiatives of the Convention, including harmonization with the Strategic Plan for Biodiversity 2011-2020 and its implementation measures.

12. An analysis of 156 fourth national reports revealed that twelve Parties had adopted national strategies for plant conservation (Argentina, Belize, Brazil, China, Colombia, Ireland, Lesotho, Malaysia, Mexico, Namibia, Trinidad and Tobago, and Venezuela).⁶ The majority of Parties (nearly 60 per cent) carried out plant conservation activities through other programmes of work (most commonly protected areas, forests and invasive alien species), in response to other conventions or international processes (e.g., CITES, FAO) or regional initiatives (e.g., European countries acting in response to EU Habitats Directive and Natura 2000), or through activities undertaken by botanical gardens, non-governmental organizations and other stakeholders. There are also a number of strategies relevant to the Global Strategy for Plant Conservation which do not address the Strategy explicitly but focus on specific aspects (e.g., a number of countries, particularly in Africa, have medicinal plant conservation strategies). Over one quarter of reporting Parties (45) did not make any clear reference to the Global Strategy or to plant conservation in general in their national reports.

13. Among national biodiversity strategies and action plans developed since the adoption of the Strategic Plan for Biodiversity 2011-2020 and the updated Global Strategy for Plant Conservation 2011-2020 (Australia, Belarus, France, Italy, Serbia, United Kingdom and Venezuela as well as the European Union) only one (Italy) makes a reference to the Global Strategy by noting the national contribution to the achievement of the European strategy.

14. The section on capacity-building activities (section IV C of this document) reports on ways in which countries can be supported in their efforts to effectively address plant conservation needs.

⁵ See <http://www.plants2020.net/gppcworking-practices/> for details on the revised working practices.

⁶ The list of national plant conservation strategies is not exhaustive. For example, more recently, Japan has prepared an analysis of progress towards and action needed to contribute effectively to the achievement of the targets of the updated Strategy 2011-2020. And at the regional level a revised European Plant Conservation Strategy was developed in 2007 for the period 2008 - 2014 by the Planta Europa Network and the Council of Europe.

IV. MECHANISMS TO SUPPORT IMPLEMENTATION OF, AND RAISE AWARENESS ABOUT, THE GLOBAL STRATEGY FOR PLANT CONSERVATION 2011-2020

A. National focal points for the Global Strategy for Plant Conservation

15. In decision X/17, the Conference of the Parties reiterated the invitation to Parties and other Governments to appoint national focal points for the Global Strategy for Plant Conservation, with a view to enhancing national implementation.

16. An invitation to Parties that had yet to appoint national focal points for the Global Strategy for Plant Conservation was included in notification SCBD/STTM/JM/RH/75923 (2011-087). As of 1 January 2012, 87 of 193 Parties have designated national focal points for the Global Strategy for Plant Conservation.

17. The fourth meeting of the Liaison Group on the Global Strategy for Plant Conservation emphasized the critical role of GSPC focal points in providing the linkage between government institutions and plant conservation actors in the respective countries and regions. The meeting recommended that the experiences of the focal points for the Global Strategy for Plants Conservation who have successfully mainstreamed the Global Strategy in national planning and decision-making processes should be compiled and used to provide guidance for, and facilitate the work of, other focal points for the Global Strategy. The meeting noted that in some countries the institutions that are most active on plant conservation are not informed of communications from the Secretariat of the Convention on Biological Diversity and are therefore unable to assist their national authorities on technical matters. The Liaison Group discussed the possibility of members of the Global Partnership for Plant Conservation to take a more proactive role, including by working with their partners on matters related to plant conservation .

18. In accordance with a recommendation from the Liaison Group, the Executive Secretary has initiated, in collaboration with the flexible coordination mechanism for the Global Strategy for Plant Conservation, the compilation of suggested elements that could assist focal points to support the enhanced implementation of the Strategy at national and subnational levels as appropriate, with a view to making these available, *inter alia*, through the toolkit.

B. Toolkit for the Global Strategy for Plant Conservation

19. In decision X/17, the Conference of the Parties requested the Executive Secretary, in collaboration with the Global Partnership for Plant Conservation and other partners and relevant organizations, and subject to the availability of the necessary resources to develop, by 2012, an online version of the toolkit for the Global Strategy for Plant Conservation in all United Nations official languages, including by convening a workshop to define the purpose, context, producers, users and evaluation of implementation of the toolkit, also taking into account the outline developed by the third meeting of the Liaison Group to facilitate and promote the development and updating of national and regional responses and to enhance national/regional implementation.

20. Taking into account both the guidance on the toolkit from meetings and workshops prior to the tenth meeting of the Conference of the Parties and the results of an online survey (see notification SCBD/STTM/JM/RH/74766 (2011-017)) the elements and functionalities of the toolkit were discussed in a workshop held as part of the International Conference: A Global Partnership for Plant Conservation – Supporting the worldwide implementation of the Global Strategy for Plant Conservation. Detailed recommendations on the finalization of a first draft of the toolkit were then made at the fourth meeting of the Liaison Group on the Global Strategy for Plant Conservation.⁷

21. On the basis of these instructions, Botanic Gardens Conservation International prepared the toolkit for the Global Strategy for Plant Conservation which was launched in September 2011 and is accessible from <http://www.plants2020.net/>. Through [notification 2011-171](#) of 9 September 2011 Parties and relevant organizations were informed of the availability of the toolkit and invited to send comments

⁷ St. Louis, United States of America, 8-9 July 2011.

and assist in identifying gaps in the toolkit as well as to draw attention to other guidance and approaches not yet made available. Three Parties (Brazil, France and Mexico) and one organization (Royal Botanic Gardens, Kew) responded to the notification. The working groups of the Global Partnership for Plant Conservation which were specifically tasked to review the content of the toolkit also provided additional material.

22. It is envisaged to have the online toolkit available in the official languages of the United Nations in time for the eleventh meeting of the Conference of the Parties. Given the dynamic nature of the toolkit further thought needs to be given to the preparation of printed products.

23. A scientific paper reviewing the uptake of the Global Strategy for Plant Conservation by botanic gardens⁸ noted the important role of communication and feedback to policy formulators and suggested that the toolkit could serve this purpose, for example, by including an interactive online forum which provides examples of projects that consider GSPC targets and discusses the outcomes of these projects. The paper further noted that improved communication through the toolkit could also encourage botanic gardens to communicate and build links with organizations beyond the botanic garden community, providing a chance to discuss GSPC implementation by a variety of institutions.

C. Capacity-building activities

24. In decision X/17, the Conference of the Parties emphasized the need for capacity-building, particularly in developing country Parties, and especially in the least developed countries and small island developing States, as well as Parties with economies in transition, to facilitate implementation of the Strategy and requested the Executive Secretary, in collaboration with the Global Partnership for Plant Conservation and other partners and relevant organizations, to organize regional capacity-building and training workshops on the national, subregional and regional implementation of the Strategy in conjunction with other relevant workshops, when possible.

25. The fourth meeting of the Liaison Group on the Global Strategy for Plant Conservation considered capacity needs (institutional, technical and financial) in relation to the implementation of each of the 16 targets and noted their links to the 20 Aichi Biodiversity Targets.⁹ The report of the Liaison Group offers concrete options to facilitate capacity-building for each target.¹⁰

26. It is noteworthy that botanical institutions with international programmes are engaged in a range of capacity-building activities relevant to the implementation of selected targets of the Global Strategy for Plant Conservation without necessarily making this link explicit.

27. In general, capacity-building activities for the implementation of the Global Strategy for Plant Conservation should be seen in the broader context of the support mechanisms for the Strategic Plan for Biodiversity 2011-2020. The 2012 work plan for the Global Strategy envisages a number of subregional workshops to be conducted in conjunction with other relevant workshops including workshops on the updating of national biodiversity strategies and action plans, when appropriate. The first of these workshops will take place in Johannesburg, from 13 to 16 February 2012, back-to-back with a technical training workshop on plant conservation techniques (Cape Town, South Africa, 17-23 February). A capacity-building module on the integration of plant conservation considerations in national biodiversity

⁸ Williams, S.J., Jones, J.P.G., Clubbe, C., Sharrock, S., Gibbons, J.M. 2010. Why are some biodiversity policies implemented and others ignored? Lessons from the uptake of the Global Strategy for Plant Conservation by botanic gardens. *Biodivers Conserv* DOI 10.1007/s10531-011-0174-1 accessible from http://www.plants2020.net/files/Plants2020/gspc_paper_s_williams.pdf.

⁹ See annex 4 of the report of the fourth meeting of the Liaison Group on the Global Strategy for Plant Conservation (<http://www.cbd.int/doc/meetings/pc/gspclg-04/official/gspclg-04-02-en.doc>)

¹⁰ See section V of the report of the fourth meeting of the Liaison Group on the Global Strategy for Plant Conservation (<http://www.cbd.int/doc/meetings/pc/gspclg-04/official/gspclg-04-02-en.doc>)

strategies and action plans is currently being finalized and will be made available through the clearing-house mechanism of the Convention as well as the GSPC toolkit.¹¹

D. Financial resources to support implementation of the GSPC

28. In decision X/17, the Conference of the Parties stressed the urgent need to mobilize, in line with the strategy for resource mobilization of the Convention, the necessary financial, technical and human resources and invited Parties, other Governments, the financial mechanism, and funding organizations to provide adequate, timely and sustainable support to the implementation of the Strategy.

29. In this context it should be noted that the Executive Secretary has commissioned a team of experts to prepare an assessment of funding necessary and available for the implementation of the Convention for the period from July 2014 to June 2018 in accordance with the objective and methodology set out in decision X/26. Furthermore, an assessment of the funds needed for the implementation of the Convention for the sixth replenishment period of the Global Environment Facility (GEF-6) is also currently underway.

30. Many GEF projects listed in the GEF project database are relevant to the objectives and specific targets of the Global Strategy for Plant Conservation, particularly those related to protected areas, medicinal plants conservation, invasive alien species and the management of plant genetic resources. Unfortunately, very few of these project documents make reference to the Global Strategy for Plant Conservation.

31. It is expected, however, that the Global Strategy for Plant Conservation will be addressed in the projects to support GEF Eligible Parties for the Revision of NBSAPs and Development of Fifth National Report to the Convention on Biological Diversity.

32. Funding for the development and use of other tools and products to support Parties in their implementation of decision X/17, *inter alia*, for the GSPC toolkit and a number of publications and training materials, has been made available through grants from Finland, Japan, Spain, the United Kingdom and the Rufford Foundation and contributions from other partners, including the members of the Global Partnership for Plant Conservation.

E. Raising awareness about the Global Strategy for Plant Conservation

33. In decision X/17, the Conference of the Parties requested the Executive Secretary, in collaboration with the Global Partnership for Plant Conservation and other partners and relevant organizations to raise awareness about the contribution of activities carried out as part of the implementation of the Strategy beyond 2010 in achieving the Millennium Development Goals, and contributing to human well-being and sustainable development.

34. The fourth meeting of the Liaison Group on the Global Strategy for Plant Conservation made a number of recommendations to promote the Strategy, including through the preparation of a range of materials for different audiences. Some of these products were produced in 2011 including: the Guide to the GSPC,¹² available in English, French, Spanish and Chinese; the GSPC bookmarks with the 2011-2020 targets available in all official United Nations languages, as well as Portuguese and Italian; a module for incorporating the updated GSPC in NBSAPs; and a GSPC flier. Others are planned for 2012, including a brochure with the full technical rationales for each target of the GSPC in all official United Nations languages.

35. Awareness about the Global Strategy for Plant Conservation could be further strengthened if Parties and relevant institutions, including the members of the Global Partnership for Plant Conservation, made more systematic use of the mandates offered through the Strategy and related decisions. This could be achieved through the incorporation of relevant aspects of the Strategy into capacity-building activities

¹¹ Capacity-building materials will be accessible from <http://www.plants2020.net/capacitybuilding/>

¹² http://www.plants2020.net/files/Plants2020/popular_guide/gspcguide.sing.lr.pdf

and training materials, outreach programmes and awareness-raising activities of organizations involved in plant conservation activities.

**V. MONITORING IMPLEMENTATION AND REVIEW OF THE
ACHIEVEMENT OF THE GLOBAL STRATEGY FOR PLANT
CONSERVATION 2011-2020**

36. In decision X/17, the Conference of the Parties requested the Executive Secretary, in collaboration with the Global Partnership for Plant Conservation and other partners and relevant organizations, to further develop, in addition to the technical rationales, the milestones and indicators for the updated Strategy, consistent with the Strategic Plan for Biodiversity 2011-2020.

37. The fourth meeting of the Liaison Group on the Global Strategy for Plant Conservation considered the suggested milestones listed in the note by the Executive Secretary to be ([UNEP/CBD/COP/10/19](#)) as unhelpful. It noted that some suggestions did not constitute milestones while others were unrealistically ambitious. Moreover, it was found that the purpose of having suggested milestones was unclear and they could be misinterpreted as binding for Parties. The meeting agreed that it would not be useful to attempt to further develop these suggested milestones. Instead, information should be compiled on actual milestones developed by Parties at national or (sub-) regional level and these should be shared through the toolkit for the Strategy. Such milestones would provide better guidance to Parties as they would be the result of national/regional consultations and analyses.

38. With regard to indicators, the working groups of the Global Partnership for Plant Conservation examined the suitability of the indicative list of indicators for the Strategic Plan for Biodiversity 2011-2020 contained in recommendation XV/1 of the Subsidiary Body. In particular, the current and potential ability of disaggregating indicators for information relevant to plants was thereby considered. The results of this analysis are contained in annex II to this document. In general, monitoring the implementation of the Global Strategy for Plant Conservation should be seen in the broader context of monitoring, review and evaluation of the Strategic Plan for Biodiversity 2011-2020.

*Annex I***TERMS AND TECHNICAL RATIONALE FOR THE TARGETS OF THE GLOBAL STRATEGY FOR PLANT CONSERVATION 2011-2020*****Objective I: Plant diversity is well understood, documented and recognized***

Target 1: An online Flora of all known plants.

Terms and technical rationale: A widely accessible Flora of all known plant species is a fundamental requirement for plant conservation and provides a baseline for the achievement and monitoring of other targets of the Strategy. The previous (2010) target 1 aimed to develop “a widely accessible working list of known plant species as a step towards a complete world flora,” and this target was achieved at the end of 2010, as The Plant List (www.theplantlist.org). Drawing from the knowledge gained in producing The Plant List, an online World Flora of all known plant species is now projected for 2020. The structure of the Flora is yet to be determined, but it should be a framework capable of accommodating regional floristic information (at national or lower level) that can provide answers in both regional and global contexts. Enhancements should include more complete synonymy; geographic distributions to at least country level, drawing on national floras, checklists, and monographs; habitat data; identification tools, principally interactive keys, images, and descriptions; conservation status (with links to assessments being carried out under Target 2); and other enhancements as practicable, e.g., vernacular names. Much of these data already exist in digital or printed format, and they can be used to populate the Flora. This is much more than an information technology project, though, and plant taxonomists will play a crucial role in resolving taxonomy that differs between geographic regions and in generating new floristic and monographic work to update old information and fill in the considerable gaps that exist. Capacity-building in taxonomy, as outlined in the Global Taxonomy Initiative (GTI), and linkage between national, regional and global initiatives, will also be critically important to maintaining, improving, and updating the Online World Flora.

Target 2: An assessment of the conservation status of all known plant species, as far as possible, to guide conservation action.

Terms and technical rationale: The IUCN Red List Categories and Criteria provide a robust framework for this target enabling comparison of threat across a variety of spatial and temporal scales. Although it is not realistic to assess all species by this method by 2020, assessments for a representative sample of plant species (the IUCN Sampled Red List Index for plants - SRLI) will provide a global overview and a baseline against which trends can be tracked. IUCN Red Lists of globally assessed groups and national Red Lists will also provide useful policy relevant information. The assessment of species of socio-economic importance could be prioritized to help guide activities under Targets 9, 12 and 13. The conservation status of many plant species has been assessed either through country-level processes and/or through international initiatives using a variety of processes. Compilation of these evidence-based assessments could provide a vital overview of existing conservation status information, and a starting point to guide conservation action. Such a working list of conservation assessments is a necessary and feasible approach commensurate with the urgency of assessing species in order to facilitate progress towards Targets 7 and 8. Dissemination could be through an internet portal allowing access to all existing assessments for each species and linked to the Online World Flora (Target 1). A full assessment of all known plant species to a consistent international standard is the longer term aim to facilitate conservation action.

Target 3: Information, research and associated outputs, and methods necessary to implement the Strategy developed and shared.

Terms and technical rationale: Conservation biology research, methodologies and practical techniques for conservation are fundamental to the conservation of plant diversity and the sustainable use of its components. Conservation initiatives will benefit through the development and effective dissemination of information, tools and case-studies based on the results of existing and new research and practical

management experiences. Key areas where the development of guidance and advice is required include: the integration of *in situ* and *ex situ* conservation into relevant plans programmes and strategies; maintenance of threatened plants within ecosystems; information on plant species responses to climate change and mitigation measures; applying the ecosystem approach; balancing sustainable use with conservation; methodologies for setting conservation priorities; guidance on ecological restoration; and methodologies for monitoring conservation and sustainable use activities. However, needs may vary from country to country. The development of a toolkit is a useful contribution to achieving this target.

Objective 2: Plant diversity is urgently and effectively conserved

Target 4: At least 15 per cent of each ecological region or vegetation type secured through effective management and/or restoration.

Terms and technical rationale: The aim of this target is to maintain the provision of ecosystem services through the conservation of ecological regions or vegetation types at national and/or regional levels, generating benefits at global level. Ecological regions are understood as areas of land or water that contain a geographically distinct assemblage of natural communities that share species composition, ecological dynamics and environmental conditions, and interact ecologically in ways that are critical for their long-term persistence. Various approaches are available for their identification, but under the scope of this strategy, those based on major vegetation types (e.g. tundra, mangrove, temperate coastal forest) are more adequate. These ecological regions or vegetation types must be secured through effective management, which means to manage the area in order to ensure the persistence of the vegetation, and associated biotic and abiotic components. The target includes undertaking restoration work in degraded ecosystems to enhance their conservation status and improve delivery of ecosystem services in tandem with securing plant diversity.

In general, forests and mountain areas are well represented in protected areas networks, while natural grasslands (such as prairies) and coastal and estuarine ecosystems, including mangroves, are poorly represented. The target implies: (i) increasing the representation of unsecured ecological regions in protected areas networks, and (ii) increasing the integrity of geographically distinct assemblages of natural communities through effective management and ecological restoration.

In order to allow progress to be measured, classification schemes must be available for ecological regions at national and/or regional level, and be equivalent to major classifications schemes recognized at a global level. Mechanisms contribution to this target include ecological networks, protected areas, sites subject to REDD+ initiatives (Reducing emissions from deforestation and forest degradation), corridors, peace parks, Indigenous and community conserved areas (ICCAs) including sacred forests, wetlands and landscapes, village lakes, catchment forests, river and coastal stretches and marine areas. Actions taking place under the CBD programme of work on protected areas and under Target 5 will contribute to this target.

Target 5: At least 75 per cent of the most important areas for plant diversity of each ecological region protected with effective management in place for conserving plants and their genetic diversity.

Terms and technical rationale: This target has two components – identifying the areas important for plant diversity and then ensuring effective protection of at least 75 per cent of these areas. The longer-term goal is the protection of 100 per cent of all important areas for plant diversity; including enlarging or connecting the areas, as appropriate, to combat threats, especially those associated with climate change.

The most important areas for plant diversity can be identified according to criteria including endemism, vulnerability of species and habitats, species richness, genetic variability patterns and/or uniqueness of habitats, including relict ecosystems, also taking into account the provision of ecosystem services. These areas should be identified at national and local levels. Protection (safeguard) can be assured through effective land management, including, but not limited to, protected areas.

The key challenge will be to ensure that appropriate management measures are supported that maintain and enhance plant diversity. Threats to consider when designing effective management will vary in different regions/on different sites but should include the threats posed by climate change. The

implementation of this target will also help implement Target 4; conserving ecological regions, and the management of invasive alien species under Target 10. To date, more than 66 countries have taken steps to identify important areas for plant diversity and at least 17 have ongoing programmes that are addressing conservation issues as well as documenting sites. Some important areas for plant diversity fall within officially protected areas though this figure varies considerably between countries. The percentage of important areas for plant diversity protected does not necessarily mean the site is maintained in good condition. Well-managed important areas for plant diversity will contain the largest, most resilient populations of species and numerous microhabitats; they provide staging posts for migration and a reservoir of genes for evolution; they will therefore be the core of any landscape scale conservation schemes to mitigate the impacts of climate change.

Target 6: At least 75 per cent of production lands in each sector managed sustainably, consistent with the conservation of plant diversity.

Terms and technical rationale: The ultimate goal is for all production lands to be managed sustainably, without negative impacts on plant diversity. For the purpose of the target, “production lands” refer to lands (including wetlands) where the primary purpose is agriculture, including horticulture, grazing, aquaculture, mariculture or forestry. The sectors to be considered under this target include, *inter alia*, croplands, pasture, forestry, including harvesting of non-timber forest products, and aquaculture. “Consistent with conservation of plant diversity” calls for a responsible management of resources use, while improving long-term conservation and restoration of plant diversity, communities and associated habitats. This implies that a number of objectives are integrated into the management of such production lands: (i) the conservation of plant diversity including genetic diversity; (ii) protection of other plant species in the production landscape that are unique, threatened, or of particular socio-economic value; and (iii) use of management practices that avoid significant adverse impacts on plant diversity in surrounding ecosystems. The target therefore encourages the use of good agricultural, horticultural and forestry practices.

Increasingly, integrated production methods are being applied in agriculture, including integrated pest management, conservation agriculture, integrated crop-livestock production, and on-farm management of plant genetic resources. Similarly, agroforestry and other sustainable forest management practices are being more broadly applied. Against this background, and with the above understanding of the terms used, the target is considered feasible. Higher targets are appropriate for natural or semi-natural forests and grasslands. Sustainable management of production lands is key, as this will lead to actions that have as a consequence the conservation of plant diversity. Biofuel production is an issue of particular concern, and management of production areas used for this purpose should take measures to avoid exerting pressure on the conservation of plant diversity. Further work may be needed to develop sector specific sub-targets as a basis for monitoring progress in achieving this target.

In order to measure progress, clear baselines, performance indicators and definitions for terms are important. A new paradigm of “Sustainable crop production intensification (SCPI)” has recently been developed by FAO (www.fao.org/ag/save-and-grow/index_en.html). It presents approaches on how to produce more from the same area of land while conserving resources, reducing negative impacts on the environment and enhancing natural capital and the flow of ecosystem services.

Target 7: At least 75 per cent of known threatened plant species conserved in situ.

The achievement of this target should be seen as a step towards the effective *in situ* conservation of all threatened species. “Conserved *in situ*” is understood to mean that biologically viable populations of these species occur in at least one protected area or the species is effectively managed outside the protected area network, through other *in situ* management measures. Effective conservation needs to consider (i) the genetic diversity of the species and (ii) ecosystem function and resilience to such threats as climate change, for example, by determining whether the protected area network includes corridors, altitudinal gradients, or the presence of multiple habitats to facilitate species movement. The target should also be interpreted to allow for significant habitat and ecological restoration to enable its achievement. Many endemic species are by definition vulnerable, and should be treated as a priority, a sub-target of ensuring

all endemics are found in at least one conservation area, or are covered by species plans may be useful. In this regard, guidelines in the toolkit should provide adequate guidance on restoration and species recovery. The development of internationally agreed guidelines for assisted migration of species impacted by climate change will be an urgent requirement of the toolkit.

Many protected areas, especially in developing countries, do not have well-articulated management objectives of any kind – let alone specific ones relating to protecting species. The progress on this target has been limited by a lack of baseline information. It will be important to move from conserving 75 per cent *in situ* to the conservation of 100 per cent. Therefore, the actions underpinning this target will remain essential beyond 2020, as the current target is only a milestone towards the objective of halting the loss of plant diversity.

Target 8: At least 75 per cent of threatened plant species in ex situ collections, preferably in the country of origin, and at least 20% available for recovery and restoration programmes.

Terms and technical rationale: This target moves towards achieving a comprehensive programme of *ex situ* conservation that complements *in situ* conservation, through the development of genetically representative collections and measures which strengthen responses to the impacts of climate change, unsustainable land use and overharvesting of plant resources. Common objectives for *ex situ* and *in situ* approaches should be identified and activities coordinated between the two to ensure an integrated approach at a national level.

Currently, over 10,000 threatened species are maintained in living collections (botanic gardens, seed banks and tissue culture collections). Progress has been made towards the 2010 target to conserve 60% of all threatened plant species, through the development of greater capacity, resources, expertise and extended standard operating procedures. These achievements will be built on to realize the 2020 target. Significant progress has been made by some countries, but those with high biodiversity still face great challenges. In the absence of updated global, regional and national lists of threatened species, and with different lists in use, it has been difficult to measure the achievement of this target.

Ex situ collections should be both accessible and duplicated and should preferably be in the country of origin. Purpose-oriented and transparent regulations for accessing *ex situ* collections should be developed and made publicly available in order to facilitate and increase the use of *ex situ* collections, e.g., for recovery and restoration and other uses of plant genetic resources.

Priority should be given to developing genetically representative collections (considering population sizes, distribution and ecological traits) of the most critically threatened species, for which a target of 90 per cent should be attained. Further definition of priority taxa is needed, such as narrow endemics, sub-specific taxa, critically endangered species, taxa with known or potential future use and wild relatives of useful plants (see Target 9). The mere presence of species in *ex situ* collections should not be seen as the outcome, but rather collections should be genetically representative of species. With only an estimated 5 per cent of threatened species currently included in recovery and restoration programmes, there is a need to increase the percentage of species available for such programmes, to allow for evolution and adaptation, especially in the face of growing environmental change. Toolkits under this target need to include protocols for genetically representative sampling, documentation of sampling and *ex situ* collections, genetic management of *ex situ* collections, and reintroductions.

Target 9: 70 per cent of the genetic diversity of crops including their wild relatives and other socio-economically valuable plant species conserved, while respecting, preserving and maintaining associated indigenous and local knowledge.

Terms and technical rationale: The genetic diversity of crops and their wild relatives provides the biological basis for humankind's food security, well-being and livelihoods, as well as ensuring the continuing evolution of these species in nature. The conservation of this diversity and associated indigenous and local knowledge is thus fundamental to ensure that the plant genetic resources needed by people are available for use now, and in the future. Theory and practice demonstrate that, with appropriate strategies, conserving 70 per cent of the genetic diversity of a crop is a reasonable target to achieve for

most crop species in a relatively small sample (generally less than one thousand accessions), provided a scientifically sound sampling strategy is applied.

For some 200-300 major crops, it is likely that 70 per cent of genetic diversity is already conserved *ex situ* in gene banks. Genetic diversity is also conserved through on-farm management and active *in situ* conservation in natural ecosystems, but this is currently un-quantified. Maintenance of associated indigenous and local knowledge presents a particularly significant challenge and to date there is a lack of tested methodologies and limited assessments of indigenous and local knowledge associated with plant genetic diversity. The conservation of genetic diversity of minor crops and other socio-economically important species, including those of local importance has received less attention. Priority species to be addressed under this target may include certain medicinal plants, non-timber forest products, local land races, wild relatives of crops, neglected and underutilized plant resources as well as major forage and tree species, which may become the crops of the future. These species may be prioritized at national and regional level on a case-by-case basis, according to national and/or regional priorities. Through the combined actions of countries, some 2,000 to 3,000 of these species could be covered under this target.

A Second Report on the State of the World's Plant Genetic Resources for Food and Agriculture (SOW2) has been published highlighting major changes which have occurred in the conservation and sustainable use of plant genetic resources globally. Also its associated Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture (GPA-2) was adopted by the FAO Council on 29 November 2011. The GPA-2 contains a set of 18 inter-related priority activities prepared on the basis of regional consultations and the gaps and needs identified by the SOW2.

Target 10: Effective management plans in place to prevent new biological invasions and to manage important areas for plant diversity that are invaded.

Terms and technical rationale: This target addresses biological invasions that threaten plants, plant communities and associated habitats and ecosystems. It targets sites that are important for plants. The target combines both the invasion of the alien species (plant, animals or micro-organisms) and the reactions of ecosystems or habitats into which they are introduced (i.e. there is not always a negative reaction by the ecosystem). This target would be considered as a first step towards developing management plans for all types of major biological invasions.

Management plans should be designed (using the ecosystem approach) to redress damage done to plants and/or their communities and to restore ecosystem functions, goods and services. This requires that target ecosystems/habitats be defined, in this case as "important areas for plant diversity". There is an urgent need to recognize that climate change will enhance the spread and impact of invasive alien species. Hence, future work on this target should ensure that there is adequate preparedness and that management plans should include options for adaptation to climate change.

Objective 3: Plant diversity is used in a sustainable and equitable manner

Target 11: No species of wild flora endangered by international trade

Terms and technical rationale: The collection of certain rare, endemic or commercially desirable plant species for trade poses a major threat to their survival in the wild. This is especially the case where their habitat itself might be threatened or where the species occur naturally in low numbers. This target focuses on those species of wild flora that are: (i) currently threatened by international trade, and (ii) may become threatened in the near future due to high levels of international trade. Species of wild flora endangered by international trade include but are not limited to species listed on the Appendices of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). The target is consistent with the main purpose of the CITES Strategic Vision:¹³ "*No species of wild flora subject to unsustainable exploitation because of international trade*".

¹³ The *CITES Strategic Vision: 2008-2013* is annexed to CITES' Resolution of the Conference 14.2 (<http://www.cites.org/eng/res/14/14-02.php#vision>).

Traditionally the plants covered by CITES have been ornamentals (such as orchids and cacti) threatened by commercial collecting from the wild for gardens and greenhouses. However, more attention is now being focused on the major commercial groups of internationally traded species such as timbers and medicinal plants. International monitoring and control of the trade in threatened plants through CITES is today the principal means of international cooperation and monitoring of plant trade. CITES allows trade in plant species that can withstand current rates of exploitation, but prevents trade in those that face extinction. International trade in species of wild flora, in addition to threatening survival of species, may be detrimental for the local use and fair sharing of benefits from utilization of species.

This target is unique in the context of GSPC, in that its implementation, monitoring and review is through synergy with the Plants Committee of CITES. This target is also considered to be complementary to Target 12.

Target 12: All wild harvested plant-based products sourced sustainably

Terms and technical rationale: This target is consistent with the second objective of the Convention on Biological Diversity, and its long-term goal is to achieve sustainable sourcing of all naturally occurring plant resources. “Plant-based products” harvested from wild sources include food products, timber, paper and other wood-based products, other fibre products, rattans, gums, resins, plant dyes and ornamental, medicinal and other plants for direct use, including non-timber forest products, local land races, wild relatives of crops, and neglected and underutilized plant resources. “Sourced sustainably” ensures that practices along at the supply chain integrate social, environmental and economic considerations, such as the fair and equitable sharing of benefits and the participation of indigenous and local communities. Value addition and processing should also aim to ensure that waste is reduced and does not damage the environment. Sources that are sustainably managed are understood to include natural or semi-natural ecosystems that are sustainably managed by avoiding overharvesting of plant products, or affecting other components of the ecosystem.

The target wording reflects the need to first inventory plant-based products (and identify the species from which they are derived) and to assess or certify their sustainability according to explicit and scientific criteria. Assessment of progress will be assisted by the adoption of criteria and indicators for the sustainability of harvesting of wild plants (for example, the FairWild Standard),¹⁴ and the development of criteria and indicators for sustainable management of the broad range of habitats in which these species occur. It is understood that for some categories of products, it will be more difficult to reach the target and more difficult to monitor progress than others. Implementation requires a combination of product-specific and sector-wide approaches, consistent with the Convention’s programmes of work on agricultural biodiversity and sustainable use. There is a need for strengthened linkages with the private sector and consumers consistent with the Convention’s Business and Biodiversity Initiative.

Target 13: Indigenous and local knowledge innovations and practices associated with plant resources, maintained or increased, as appropriate, to support customary use, sustainable livelihoods, local food security and health care.

Terms and technical rationales: Plant diversity underpins livelihoods, food security and health care of traditional communities. The preservation, protection and promotion of the traditional knowledge, innovations and practices of local and indigenous communities (TK) that relate to the use of plant diversity is of key importance, particularly for developing countries. Relevant knowledge, innovations and practices are largely site specific and thus preservation of this must be locally driven. However, as many of the products are traded worldwide, the consumer also has a responsibility for maintenance of traditional knowledge. Target 13 ties the GSPC to Article 8(j) and 10(c) of the Convention on Biological Diversity, and relates it to the principles for the ecosystem approach¹⁵ and the Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity.¹⁶ The principles for the ecosystem approach, adopted

¹⁴ <http://www.fairwild.org/publication-downloads/fairwild-standard-ver-20/FairWild-Standard-V2.pdf>.

¹⁵ Decision V/6, annex, section B.

¹⁶ Decision VIII/12, annex II.

in 2000, advocate an ecosystem wide approach and recommend the decentralization of management to the lowest appropriate levels, including by communities. The Addis Abba Principles and Guidelines, adopted in 2004, advocate state recognition that use and knowledge of resources lead to sustainable management, particularly by local people. This target is also a strategic link to the MDG framework and links well to sustainable livelihood initiatives.

As a complement to Target 9, implementation of this target may, in the long run, help local and indigenous communities to adapt to emerging environmental challenges such as climate change and the associated biodiversity loss, as well as to adapt to new technologies. As it stands, this is an enabling target, but indicators measurable in the mid- and long-term should be identified and participation of stakeholders, especially indigenous and local communities should be improved and broadened. There is a need for guidance for practical implementation at the national level and definition of sub-targets for different priorities.

Although this target is difficult to assess in quantitative manner, initial steps require an increase in the understanding of the diversity of traditional communities in the world and the identification of the most common activities related to plant use and management of resources per community. Robust tools to conserve traditional knowledge are also required.

Objective 4: Education and awareness about plant diversity, its role in sustainable livelihoods and importance to all life on Earth is promoted

Target 14: The importance of plant diversity and the need for its conservation incorporated into communication, education and public awareness programmes.

Terms and technical rationale: Broad-based understanding of the role of plants in our daily lives will greatly facilitate appropriate conservation behaviour. Communication, education and awareness about the importance of plant diversity and its sustainable use are critical for the achievement of all the targets of the Strategy. Key concepts to communicate include:

- Plants are essential to all life on Earth;
- Plants are central to ecosystem products and services;
- Plants play an important role in the mitigation of climate change;
- Plants are critical to the functioning of and well-being for our everyday lives and livelihoods;
- As responsible stewards of the environment, we need to take action to conserve and sustainably use plants both wild and cultivated.

These concepts need to be widely understood by all sectors of society, including indigenous and local communities, the business sector, media and policy-makers as well as those in all levels of formal and informal education. Consideration should be given to developing specific indicators to monitor progress towards achievement of the overall target. For example, given the strategic importance of education about plant conservation, this issue should be included not only in environmental and scientific curricula, but should also be included in broader areas of mainstream education policy such as history, politics and economics. Issues to be addressed include the over-emphasis on animals and neglect of plants in environmental education programmes, a need for increased teacher-training relative to plant diversity, a lack of opportunity to experience nature first-hand and messages being lost under an overwhelming level of advertising in all media.

Objective 5: The capacities and public engagement necessary to implement the Strategy have been developed

Target 15: The number of trained people working with appropriate facilities sufficient according to national needs, to achieve the targets of this Strategy.

Terms and technical rationale: The updated Strategy emphasizes national and regional implementation and its scope goes beyond traditional plant conservation activities to include sustainable use, as well as

working with local and indigenous communities. The achievement of the targets included in the Strategy will require considerable capacity-building, particularly to address the need for conservation practitioners trained in a range of disciplines, with access to adequate facilities. In addition to training programmes, both domestic and international, the achievement of this target will require long-term commitment to maintaining infrastructure. “Appropriate facilities” are understood to include adequate technological, institutional and financial resources. Capacity-building should be based on national needs assessments. It is likely that the number of trained people working in plant conservation worldwide will need to double. Given the current geographical disparity between biodiversity and expertise, this is likely to involve considerably more than a doubling of capacity in some countries. Increased capacity should be understood to include in-service training, as well as the training of additional staff and other stakeholders and decision-makers, particularly at the community level.

This target remains fundamental for the achievement of the Strategy; however, overall there has been limited commitment and leadership from all sectors. While there is no global baseline from which progress can be measured, and despite relatively few countries having conducted needs assessments, several global programmes have made considerable progress in increasing the number of trained people in plant conservation, particularly in developing countries. The target needs to be made more measurable, baselines defined and a coordination and monitoring framework recommended. The focus should not only be on numbers, but also quality. National needs assessments may be an initial priority. Plant science needs to be bolstered in all related disciplines, especially at tertiary level education, so that all sectors value the importance of plant conservation. Where capacity and facilities already exist, knowledge transfer should be encouraged. Internationally, this can be achieved by strengthening the transfer of technologies and technical knowledge. Accelerated and increased investment in Target 15 is critical for the overall achievement of all the targets by 2020.

Target 16: Institutions, networks and partnerships for plant conservation established or strengthened at national, regional and international levels to achieve the targets of this Strategy.

Terms and technical rationale: Networks of practitioners can, if effective, enhance communication and provide a mechanism to exchange information, know-how and technology and provide an important component in the coordination of effort among many stakeholders for the achievement of all the targets of the strategy. Networks provide an essential link between on-the-ground conservation action and coordination, monitoring and policy development at all levels.

National implementation of the Strategy is constrained by limited institutional capacity and capabilities in many countries. There is therefore a need to strengthen institutional frameworks. This target includes broadening participation in existing networks, as well as the establishment, where necessary, of new institutions and networks. Partnerships are needed to strengthen links between different sectors relevant to conservation, e.g., the botanical, environmental, agricultural, forest and educational sectors as well link to local and indigenous communities.

At the global level the establishment of the Global Partnership for Plant Conservation (GPPC) has made a good start at bringing together the plant conservation community, however there is still a lack of cross-sectoral networks, with limited institutional integration and a lack of mainstreaming. Where national responses to the Strategy have been prepared, this has helped provide a focus for networking amongst the stakeholders.

Annex II

**APPLICATION OF THE INDICATIVE LIST OF INDICATORS AGREED IN SBSTTA
RECOMMENDATION XV/1 TO THE GLOBAL STRATEGY FOR PLANT CONSERVATION
2011-2020**

The updated Global Strategy for Plant Conservation 2011-2020 is aligned with the Strategic Plan for Biodiversity 2011-2020. Accordingly, the indicative list of indicators for the Strategic Plan agreed through SBSTTA recommendation XV/1 applies *mutatis mutandis* to the Global Strategy for Plant Conservation. The table below lists the most relevant indicators for each target¹⁷ and provides comments on areas for which a more specific application or disaggregation of the operational indicators would facilitate monitoring.

GSPC Target	Headline indicators (in bold) and operational indicators for the Strategic Plan that are applicable to the GSPC (A: Priority and ready for use globally, B: Priority to be developed at global level, C: For consideration at sub-global level). <i>Additional indicators proposed specifically for the GSPC are in italics</i>	Comments
Objective I: Plant diversity is well understood, documented and recognized		
Target 1 - An online Flora of all known plants	Trends in accessibility of scientific/technical/traditional knowledge and its application Number of maintained species inventories being used to implement the Convention (C)	For this target, the indicator would track the number of species available in the online Flora; national and regional Floras covered; and plant families and genera covered.
Target 2 - An assessment of the conservation status of all known plant species, as far as possible, to guide conservation action	Trends in abundance, distribution and extinction risk of species Trends in extinction risk of species (A) (decision VII/30 and VIII/15) (MDG indicator 7.7) (also used by CMS) Trends in distribution of selected species (B) (decision VII/30 and VIII/15) (also used by UNCCD)	These indicators are also relevant to Targets 7 and 8. Over 12,000 plant species (4% of all plants) have been fully assessed for their conservation status through the IUCN Red List of Threatened Species, although many more have been assessed nationally or regionally. The Sampled Red List Index for Plants, based on a representative sample of the world's plants, provides a baseline of the extinction risk facing plants. National assessments and results of periodic reviews by the CITES Plants Committee should also be considered.
Target 3 - Information, research and associated outputs, and methods necessary to implement the Strategy developed and shared	Trends in accessibility of scientific/technical/traditional knowledge and its application Trends in coverage of comprehensive policy-relevant sub-global assessments including related capacity-building and knowledge transfer, plus trends in uptake into policy (B) <i>Trends in web-based resources available to help implement the GSPC (C)</i>	The GSPC toolkit is designed as a clearing house for plant-related information. The number of users utilizing these resources would be a good indicator of its effectiveness.

¹⁷ Many indicators are relevant to several targets and are listed only once in this table.

Objective II: <i>Plant diversity is urgently and effectively conserved</i>		
<p>Target 4 - At least 15 per cent of each ecological region or vegetation type secured through effective management and/or restoration</p>	<p>Trends in extent, condition and vulnerability of ecosystems, biomes and habitats</p> <p>Trends in proportion of degraded/threatened habitat (B)</p> <p>Trends in fragmentation of natural habitats (B) (decision VII/30 and VIII/15)</p> <p>Trends in condition and vulnerability of ecosystems (C)</p> <p>Trends in proportion of natural habitats converted (C)</p>	<p>For these indicators, as well as those listed for Target 5, information could be disaggregated to make them particularly relevant to plants. This would include an examination of the ecological regions or vegetation types covered within protected areas or with restoration projects, the coverage of Important Areas for Plant Diversity or Key Biodiversity Areas within protected areas networks and other effective management schemes.</p>
<p>Target 5 - At least 75 per cent of the most important areas for plant diversity of each ecological region protected with effective management in place for conserving plants and their genetic diversity</p>	<p>Trends in coverage, condition, representativeness and effectiveness of protected areas and other area-based approaches</p> <p>Trends in representative coverage of protected areas and other area based approaches, including sites of particular importance for biodiversity, and of terrestrial, marine and inland water systems (A) (decision VII/30 and VIII/15)</p> <p>Trends in protected area condition and/or management effectiveness including more equitable management (A) (decision X/31)</p> <p>Trends in the connectivity of protected and other area based approaches integrated into land and sea scapes (B) (decision VII/30 and VIII/15)</p> <p><i>Number of management plans for important areas for plant diversity which include systematic actions and strategies for plant conservation. (C)</i></p> <p><i>Number of important areas for plant diversity in which systematic actions and strategies for plant conservation are implemented. (C)</i></p>	<p>This target focuses on those areas where plant conservation is most critical and urgent. Besides protected areas “other effective area based approaches” can include conservation corridors, sacred sites, local nature reserves and/or Indigenous and community conserved areas.</p> <p>These indicators are also relevant to Target 4.</p>
<p>Target 6 - At least 75 per cent of production lands in each sector managed sustainably, consistent with the conservation of plant diversity</p>	<p>Trends in integration of biodiversity, ecosystem services and benefits-sharing into planning, policy formulation and implementation and incentives</p> <p>Trends in area of forest, agricultural and aquaculture ecosystems under sustainable management (B) (decision VII/30 and VIII/15)</p> <p>Trends in pressures from unsustainable agriculture, forestry, fisheries and aquaculture</p> <p>Trends in population of forest and agriculture dependent species in production systems (B)</p> <p>Trends in proportion of land affected by desertification (C) (also used by UNCCD)</p> <p>Trends in production per input (B)</p> <p>Trends in coverage, condition, representativeness and effectiveness of protected areas and other area-based approaches</p> <p>Population trends of forest-dependent species in forests under restoration (C)</p>	<p>The indicator related to products derived from sustainable sources could be disaggregated to consider products relevant to GSPC. With regards to sustainable management, the degree to which management plans address the integration of biodiversity, ecosystem services, and benefit sharing could be assessed.</p> <p>Some of these indicators can also be used to help assess progress towards Target 7.</p>

<p>Target 7 - At least 75 per cent of known threatened plant species conserved <i>in situ</i></p>	<p>Trends in abundance, distribution and extinction risk of species Trends in abundance of selected species (A) (decision VII/30 and VIII/15) (UNCCD indicator)</p> <p>Trends in extent, condition and vulnerability of ecosystems, biomes and habitats Extinction risk trends of habitat dependent species in each major habitat type (A)</p> <p>Trends in pressures from unsustainable agriculture, forestry, fisheries and aquaculture Population trends of habitat dependent species in each major habitat type (A)</p>	<p>When determining trends in abundance, information related to the number of known species with viable populations in effectively protected areas could be presented.</p>
<p>Target 8 - At least 75 per cent of threatened plant species in <i>ex situ</i> collections, preferably in the country of origin, and at least 20 per cent available for recovery and restoration programmes</p>	<p>Trends in access and equity of benefit-sharing of genetic resources ABS indicator to be specified through the ABS process (B)</p> <p>Trends in abundance, distribution and extinction risk of species <i>Number of threatened species in ex situ collections. (C)</i> <i>Number of recovery programmes and ecological restoration projects involving threatened plant species. (C)</i></p>	<p>The Plant Search database of BGCI (http://www.bgci.org/plant_search.php) documents the species found in the plant collections of botanical gardens worldwide, including threatened species.</p>
<p>Target 9 - 70 per cent of the genetic diversity of crops including their wild relatives and other socio-economically valuable plant species conserved, while respecting, preserving and maintaining associated indigenous and local knowledge</p>	<p>Trends in genetic diversity of species Trends in genetic diversity of cultivated plants, and farmed and domesticated animals and their wild relatives (B) (decision VII/30 and VIII/15)</p> <p>Trends in genetic diversity of selected species (C)</p> <p>Trends in distribution, condition and sustainability of ecosystem services for equitable human well-being Population trends and extinction risk trends of species that provide ecosystem services (A) <i>Trends in ex situ collections that have associated indigenous and local knowledge respected, preserved and maintained (C)</i> <i>Number of projects aimed at the conservation and use of plant genetic resources being implemented at different scales (C)</i></p>	<p>As part of the assessment of trends in the genetic diversity of cultivated plants information related to the number of traditional crop varieties still in cultivation could be gathered.</p>
<p>Target 10 - Effective management plans in place to prevent new biological invasions and to manage important areas for plant diversity that are invaded</p>	<p>Trends in pressures from habitat conversion, pollution, invasive species, climate change, overexploitation and underlying drivers Trends in the impact of invasive alien species on extinction risk trends (A) Trends in number of invasive alien species (B) (decision VII/30 and VIII/15)</p> <p>Trends in integration of biodiversity, ecosystem services and benefits sharing into planning, policy formulation and implementation and incentives Trends in policy responses, legislation and management plans to control and prevent spread of invasive alien species (B) Trends in invasive alien species pathways management (C) <i>Number or national and regional early warning and biological invasion monitoring systems in place (C)</i></p>	<p>The presence of invasive alien species in areas important for plant biodiversity could be presented as part of some of these indicators. Similarly for the indicators related to invasive alien species management plans, information related to the restoration of important plant ecosystems could also be gathered</p>

Objective III: <i>Plant diversity is used in a sustainable and equitable manner</i>		
Target 11 - No species of wild flora endangered by international trade	<p>Trends in pressures from unsustainable agriculture, forestry, fisheries and aquaculture</p> <p>Trends in population and extinction risk of utilized species, including species in trade (A) (also used by CITES)</p> <p>Trends in integration of biodiversity, ecosystem services and benefits-sharing into planning, policy formulation and implementation and incentives</p> <p>Trends in extent to which biodiversity and ecosystem service values are incorporated into organizational accounting and reporting (B)</p>	These indicators are also relevant to Target 12. The indicator dealing with utilized species could be disaggregated to specifically present information related to traded plant species. As part of this process the potential for sustainable wild collection could be assessed.
Target 12: All wild harvested plant-based products sourced sustainably	<p>Trends in pressures from habitat conversion, pollution, invasive species, climate change, overexploitation and underlying drivers</p> <p>Ecological limits assessed in terms of sustainable production and consumption (C)</p> <p>Trends in pressures from unsustainable agriculture, forestry, fisheries and aquaculture</p> <p>Trends in proportion of products derived from sustainable sources (C) (decision VII/30 and VIII/15)</p> <p><i>Trends in implementation of international standards for harvesting plant-based products from the wild (C)</i></p> <p><i>Trends in the Wild Commodities Index (C)</i></p>	These indicators are also relevant to Target 11. Information gathered by CITES, such as Non Detriment Findings (NDF) for Appendix II species or the status of source species for plant based products, could be used to help inform these indicators. Similarly demand and supply reports for wild plants and products at different levels could also be used. Information reported by private sector and related initiatives on the progress with certification and verification of sustainable wild plants harvesting and sourcing could also be used.
Target 13 - Indigenous and local knowledge innovations and practices associated with plant resources maintained or increased, as appropriate, to support customary use, sustainable livelihoods, local food security and health care	<p>Trends in integration of biodiversity, ecosystem services and benefits sharing into planning, policy formulation and implementation and incentives</p> <p>Trends in land-use change and land tenure in the traditional territories of indigenous and local communities (B) (decision X/43)</p> <p>Trends in the practice of traditional occupations (B) (decision X/43)</p> <p>Trends in accessibility of scientific / technical/traditional knowledge and its application</p> <p>Trends in which traditional knowledge and practices are respected through their full integration, safeguards and the full and effective participation of indigenous and local communities in the national implementation of the Strategic Plan (B)</p> <p>Trends of linguistic diversity and numbers of speakers of indigenous languages (B) (decision VII/30 and VIII/15)</p>	A large number of initiatives to maintain traditional knowledge, including knowledge about plants and their uses exist at the local and national level. Additional efforts to develop and refine indicators of trends in the maintenance of such knowledge are underway in the context of Articles 8(j) and 10(c) of the Convention on Biological Diversity.
Objective IV: <i>Education and awareness about plant diversity, its role in sustainable livelihoods and importance to all life on Earth is promoted</i>		
Target 14 - The importance of plant diversity and the need for its conservation incorporated into communication, education and public awareness programmes	<p>Trends in awareness, attitudes and public engagement in support of biological diversity and ecosystem services</p> <p>Trends in awareness and attitudes to biodiversity (C)</p> <p>Trends in public engagement with biodiversity (C)</p> <p>Trends in communication programmes and actions promoting social corporate responsibility (C)</p>	One type of information which could be used to provide data for these indicators is the number of visits to protected areas, natural history museums and botanical gardens

Objective V: The capacities and public engagement necessary to implement the Strategy have been developed		
<p>Target 15 - The number of trained people working with appropriate facilities sufficient according to national needs, to achieve the targets of this Strategy</p>	<p>Trends in mobilization of financial resources</p> <p>Indicators agreed in decision X/3 (B)</p> <p><i>Trends in resource availability to support the implementation of the Strategy (B)</i></p> <p><i>Trends in the number of national, regional and international training programmes related to GSPC (C)</i></p> <p><i>Trends in the number of people (at various levels) employed in activities related to the implementation of the GSPC (C)</i></p>	<p>Target 20 of the Strategic Plan for Biodiversity 2011-2020 will be subject to changes contingent to resource needs assessments to be developed and reported by Parties.</p>
<p>Target 16 - Institutions, networks and partnerships for plant conservation established or strengthened at national, regional and international levels to achieve the targets of this Strategy</p>	<p>Trends in integration of biodiversity, ecosystem services and benefits sharing into planning, policy formulation and implementation and incentives</p> <p>Trends in number of effective policy mechanisms implemented to reduce genetic erosion and safeguard genetic diversity related to plant and animal genetic resources (B)</p> <p>Trends in implementation of National Biodiversity Strategies and Action Plans, including development, comprehensiveness, adoption and implementation (B)</p> <p>Trends in number of countries that have assessed values of biodiversity, in accordance with the Convention (C)</p> <p>Trends in number of countries incorporating natural resource, biodiversity, and ecosystem service values into national accounting systems (B)</p> <p>Trends in integration of biodiversity and ecosystem service values into integrated in sectoral and development policies (C)</p> <p>Trends in policies considering biodiversity and ecosystem service in environmental impact assessment and strategic environmental assessment (C)</p> <p><i>Trends in the number of countries and regions with plant conservation stakeholder groups and networks (C)</i></p> <p><i>Number of initiatives organized and/or supported by the Global Partnership for Plant Conservation (C)</i></p>	<p>The Global Partnership for Plant Conservation (GPPC) has been established to support the implementation of GSPC (http://www.plants2020.net/gppc/). National focal points for GSPC play an important role in linking the efforts of GPPC members and other plant conservation initiatives and organizations to the implementation of the Convention and its Strategic Plan.</p>