CHICAGO BOTANIC GARDEN

BGCI
Plants for the Planet

Global Strategy for Plant Conservation
Regional workshop for the Americas
Chicago Botanic Garden
Sept 30 – Oct 01 2009

Workshop report

Supported by the Boeing Company

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Introduction

This regional workshop for the Americas was one of a series of meetings organized by Botanic Gardens Conservation International (BGCI), with the support of the Boeing Company, to provide input into the process of developing a revised Global Strategy for Plant Conservation (GSPC) for the period 2011-2020. The recommendations of the workshops will be synthesized and provided to the Secretariat of the Convention on Biological Diversity (CBD) for consideration during the development of a final draft revised GSPC. The revised GSPC document will be presented to the CBD's Subsidiary Body for Scientific, Technical and Technological Advice (SBSTTA) at its next meeting in May 2010.

Background

The GSPC, which includes 16 outcome-oriented targets to be achieved by 2010, was adopted by the Conference of the Parties (COP) to the CBD in 2002. In the years since then considerable progress has been made in achieving at least some of the targets. Moreover, the GSPC has provided a model for target setting at the global level within the CBD and has achieved notable success in stimulating the engagement of the botanical and plant conservation communities in the work of the CBD.

At their 9th meeting in 2008, the Parties to the CBD decided to consider the further development and implementation of the Strategy beyond 2010, including an update of the current targets. In response to this request, an on-line consultation on the future of the GSPC was held in early 2009 and the inputs received were discussed during a Liaison Group meeting, which was organized by the CBD Secretariat and the Global Partnership for Plant Conservation in May 2009. This meeting resulted in the development of a draft GSPC for the period 2011-2020. This document was made available on-line for peer review and further discussions are being held at a series of regional meetings organized by BGCI (Europe, Americas and Africa). This report records the discussions held during the American regional workshop.

Participants

The meeting included 36 participants with 5 countries across the Americas being represented: Brazil, Colombia, Costa Rica, Mexico and USA. Participants came from a wide range of organizations and disciplines, including botanic gardens, universities, government agencies, environmental NGOs and agricultural and forestry organizations. The participants from Brazil, Colombia and Mexico represented their country's GSPC focal points, and the Latin American Plant Science Network and the Caribbean and Latin American Association of Botanical Gardens were also represented. A full participants list is provided in Annex 1.

Workshop Day 1

The first day of the workshop included an introduction to the GSPC and the updating process, as well as presentations on national GSPC implementation in Colombia, Mexico and Brazil. Information was also provided on regional programmes in Central America that contribute to GSPC implementation and how the USA Plant Conservation Alliance's National Framework can be aligned with the GSPC.

Introduction to the GSPC – including review process and updating targets
Stella Simiyu, BGCI/SCBD GSPC Programme Officer.

This presentation provided an overview of the process for the development of a revised GSPC including:

- Outcomes of the in-depth review of the GSPC carried out in 2007-8;
- The results of the initial on-line consultation on the revision of the GSPC, carried out in April 2009 and the key messages resulting from this consultation;
- The development of a revised draft GSPC during the GSPC Liaison Group meeting in May 2009
- Process for finalizing the revised GSPC, including the in-puts from the regional workshops
- Linkages between the GSPC and the development of a new strategic plan for the CBD

A copy of the full presentation is provided in Annex 2.

Implementing the GSPC in Colombia
Alberto Gomez-Meijer, Red Nacional de Jardines Botánicos de Colombia

Colombia is believed to be home to approximately 26,500 higher plant species, equivalent to 12% of the world's total flora diversity. However, 300,000 hectares of Colombia's forests are lost each year as land is cleared for agriculture and development. Coca production is a particular threat; for each hectare of coca planted, three hectares are slashed and burnt. The consumption of 1 gram of cocaine requires the destruction of $4m^2$ of Colombian forest. Around one third of all Colombian plant species are believed to be at risk of extinction. Loss of biodiversity and poverty are closely linked in Colombia, and measures to protect the environment must also address social needs.

Colombia was the first country to have its own National Strategy for Plant Conservation, but implementation has been slow, mainly because the focal point for the GSPC was assigned to the Colombian Consulate in Montreal,

Canada. Finally in 2008, the Colombian Botanic Gardens Network was designated as the focal point.

Monitoring implementation of the GSPC in Colombia falls under the responsibility of the Alexander von Humboldt Biological Resources Research Institute, which coordinates the National Biodiversity Information System. A national plant conservation strategy web portal is being developed to provide information on 'who is doing what'. Priorities are being developed on a regional basis and particular attention is being given to Red Listing in order to identify conservation needs.

A copy of the full presentation is provided in Annex 3.

Mexican implementation of the GSPC
Yolanda Barrios, CONABIO - National Commission for the Knowledge and Use of Biodiversity, Mexico

The Mexican flora includes over 23,000 plant species, around half of which are endemic. There is as yet, no complete flora of Mexico. 314 Mexican plant species are included in the IUCN global Red List, 253 plant species are listed in CITES Appendix 1 and 1,445 in Appendix 2.

The Mexican Association of Botanic Gardens developed a Conservation Strategy for Mexican Botanic Gardens in 2000 and CONABIO was designated as focal point in Mexico for the GSPC in 2004. In 2006, the North American Botanic Gardens Strategy for Plant Conservation was developed, including Mexican Botanic Gardens. Subsequently, CONABIO met with the Mexican Association of Botanic Gardens, and agreed to organize a National Committee to develop and promote the Mexican Strategy for Plant Conservation.

The Coordinating Committee was established in 2007 and consists of 16 representatives from different sectors involved in the conservation and sustainable use of plant diversity. The Committee started by identifying national goals and recording achievements and strengths for each goal of the GSPC. Although only 5 government agencies are included in the Coordinating Committee, meetings are held with other agencies to involve them in the development of the Mexican strategy and in its future implementation.

The mission, vision, objectives and goals of the Mexican Plant Conservation Strategy were published in May 2008 and presented at COP 9 in Bonn, Germany. Following this, in September 2008, the Coordinating Committee met in order to organize the Strategy into a logical framework and to identify work programmes, projects and indicators of achievement. The Mexican Strategy now has 6 Objectives, which are divided into 9 Programmes or

initiatives and 33 Projects or activities each with goals for 2030, indicators and means of verification. The remaining activities include:

- Establishing a specific webpage for the Mexican Strategy
- Final revision by the Coordinating Committee
- Public consultation with different sectors for comments on the final version
- Identification of actors for the different projects and activities
- Official presentation of the strategy by the Minister of Environment

A copy of the full presentation is provided in Annex 4.

GSPC implementation in Brazil
Gustavo Martinelli and Miguel de Moraes, Rio de Janeiro Botanic Garden

A National Centre for Flora Conservation (CNCFlora) has been established at the Rio de Janeiro Botanic Garden (JBRJ) as part of the GEF-funded National Biodiversity Mainstreaming and Institutional Consolidation Project. CNCFlora started operating in 2009 and amongst its activities is the development of a National Strategy for Plant Conservation. CNCFlora is also responsible for the implementation of several GSPC targets, notably Targets 1, 2, 3, 8, 15 and 16.

CNCFlora is presently working on a Checklist of the Brazilian Flora with some 42,232 species now listed. This is based on the contributions of 370 taxonomists, and is expected to be available on-line in December 2009.

The Brazilian Official List of Endangered Species includes 472 species, 92 of which are in the *ex situ* collections of JBRJ. Revision and re-assessment of the Red List is ongoing and the Red Data Book of Endangered Species of Flora is expected to be published in 2010.

The major challenges facing CNCFlora include:

- Megadiversity in Brazil
- Data quality
- Coordination strategies
- Capacities and resources

A copy of the full presentation is provided in Annex 5.

Working towards the GSPC in the United States – Experiences from the U.S. National Framework for Progress
Peggy Olwell, Bureau of Land management, USA

The National Framework for Progress was developed by the Plant Conservation Alliance in 1995. This provides a framework for action for the

conservation of native plant species in the USA. It includes a series of goals divided into 5 strategic areas. This presentation examined how the 16 GSPC targets relate to the 5 strategies of the National Framework and provided an update on the progress that has been made towards achieving the GSPC in the USA.

A copy of the full presentation is provided in Annex 6.

Group discussion

Following the presentations outlined above, a general discussion was held and the following points were noted:

- It is essential to raise greater awareness of plant conservation needs and to make clear linkages between plant conservation and climate change – both with respect to mitigation and adaptation responses.
- The scale of the problem is large given the high levels of plant diversity in the region, and it is important to set realistic targets and goals.
- There is a particular need to conserve agro-biodiversity and plants of socio-economic importance.
- It is important to demonstrate linkages and show how national actions contribute to global issues.
- There is a desire to work together at the regional level and share resources and expertise.
- Funding is an issue, but there is a need to be 'creative' in looking for funds, and donors such as the Organization of American States (OAS) have already demonstrated interest.
- The GSPC has been successful in bringing people together – for example in the Latin American Plant Science Network. This is a clear contribution to Target 16.
- Good progress has been made on some targets in the region. For example:
    - In Mexico 50% of known threatened species are in *ex situ* collections (Target 8);
    - In Central America, Target 1 is 70% achieved, and in some countries, such as Nicaragua, it is complete;
    - Targets 1 and 2 have been achieved in the USA
    - Networks in the USA (such as the Centre for Plant Conservation, American Public Gardens Association and the Plant Conservation Alliance) are making good progress on Target 8.
- We need to celebrate our successes.

Workshop Day 2

The workshop participants split into 5 working groups on Day 2 to discuss in detail individual targets and provide comments on the proposed revisions to these targets for the 2011-2020 period.

The Workshops were divided as follows:

Workshop 1 – Targets 1, 2, 8 and 9
Workshop 2 – Targets 4, 5, 7, 10
Workshop 3 – Targets 6, 11, 12, 13
Workshop 4 – Targets 3, 14, 15, 16
Workshop 5 – Introductory text to the GSPC

Each working group was asked to examine the proposed new GSPC targets using the following criteria:

- Clarity
- Scope
- SMART (specific, measurable, achievable, realistic and time-bound)
- Milestones and indicators
- Linked initiatives and resources
- Gaps

The results of the discussions of workshops 1 - 4 are presented in Table 1 below and the revised introductory GSPC text is provided in Annex 7.

Table 1: Results of Workshop discussions – comments on the 16 proposed new GSPC targets

Target	Clarity and Scope	Milestones and indicators	Rationale	Comments / gaps
1. A widely accessible list of known plant species	Fine, but rationale should include reference to the broader goal of developing a world flora.	The following milestones are suggested: • Checklist completed and publicly accessible by xxx • xx% synonymy completed by xxx • xx% of geographic distribution information available by xxxx	It is not clear what 'widely accessible' means. This should be explained	
2. An assessment of the conservation status of all known plant species to guide conservation action at national, regional, and international levels	Is the 2nd part of the target (after 'to…) necessary? Target could be re-phrased as: 'Assess the conservation status of all known plant species'	Milestone a) needs clarification as to what information is included in the working list. The second part of Milestone a) should be a new milestone – with clarity as to what will be available by when. Milestone b) How is the published list different from the working list and why is three years needed? Milestone c) Does this reflect the Sample Red List Index Project? More details required.	Include the threats of climate change prominently in the rationale. The progress statement is confusing to non-IUCN specialists	If the list does not include multi-level assessment (e.g. critically endangered) it will be impossible to meet some of the milestones in other Targets (e.g. Target 8). The mention of RapidList is confusing – is this going to be used or not? If not, it should be removed from the rationale text.
3. Development and effective sharing of advice and guidance for plant conservation and sustainable use, based on research and practical experience	Suggested revision: 'Development *of models with protocols* and effective sharing of advice and guidance for plant conservation and sustainable use, based on research and practical experience'			A steering group (drawn from appropriate institutions) should be set up to establish a base-line study of the models and protocols in existence in order to identify gaps and set future targets

Table 1 – contd…

Target	Clarity and scope	Milestones and indicators	Rationale	Comments/gaps
4. Ecosystem services secured through effective management of at least 10% of major ecological regions	Proposed re-wording the target as: 'At least 10% of major ecosystem regions effectively managed to guarantee the plant diversity needed to ensure delivery of ecosystem services'	Dates are required for the milestones.	The term 'ecosystem services' could be elaborated here, not in the Target. Does there need to be some mention that 'minor' ecological regions can also be critically important? In p6 line 44 – the term 'network' should be clarified. This does not refer to human interactions but ecological area networks.	The term 'ecosystem services' confuses the focus of the target.
5. Protection of at least 50 % of the most important areas for plant diversity assured with effective management for conserving plant diversity in place			P.8, line 14. There is a concern that the 'largest and most resilient" populations' may not have the genetic makeup that best adapts them to changing climate conditions whereas smaller populations on the edges of distributions may be better adapted. This sentence could be changed to "Well managed protected areas will contain the most resilient populations of species from across their range."	It would be useful to mention published or online resources that provide recommendations for how threats can be addressed in management designs.
6. At least 30 % of production lands in each sector managed sustainably for plants and consistent with the conservation of plant diversity	The target of 30% is thought to be too low and it was suggested to increase this to 50%. Suggest the use of 'landscape' rather than 'land'.	The milestones need to be better defined. One milestone could be to identify the key sectors to engage at national level	The term 'sustainably' has been added to the target – but this term needs to be explained. Similarly the term 'sector' may not be clear.	Standards relevant to the target should be defined and the academic/business community could be engaged to develop practices and guidelines. For example linking with organic food production – e.g. Starbucks and sustainable sourcing. A gap in this target is in relation to amenity planting, private gardens etc.

Table 1 – contd…

Target	Clarity and Scope	Milestones and indicators	Rationale	Comments / gaps
7. At least 60% of threatened species conserved *in situ*		Milestone a) insert the text 'or managed outside the protected area network' after 'systems'. Milestone c) needs a measurable indicator and 'or' should be replaced with 'and/or' Milestones need timelines. .		In some countries the reported number of threatened plants is vastly different from the actual number.
8. At least 60% of threatened plant species in *ex situ* collections, and at least 10% in recovery and restoration programmes	There are concerns over measurability of this target. 'Recovery and restoration' should be replaced by 'reintroduction'	Milestone a) should include mention of 90% of critically endangered species – as is written in the rationale (p 10, line 32). Milestone b) might be difficult to achieve with the level of data required –e.g. genetic representation. Possible milestone: Countries with capacity consider banking non-threatened species focusing on areas most threatened by climate change. (restoration and insurance, given that what is threatened is rapidly changing).	First sentence of the Rationale should be replaced with '*ex situ* collections should be accessible, backed up, genetically representative, and preferably in the country of origin' There should be a much stronger emphasis on the fact that *ex situ* conservation (esp. seed banks) is the easiest and most rapid response to climate change we can take right now;	The toolkit protocols for management of *ex situ* collections are already available. This should be recognized and then stated that they should be more widely disseminated.

Table 1 – contd…

Target	Clarity and Scope	Milestones and indicators	Rationale	Comments / gaps
9. 70% of the genetic diversity of crops and other socio-economically valuable plant species conserved, and associated indigenous and local knowledge maintained	Target is clear	Milestone a) requires a date.	Suggest to start Terms and Rationale with a definition of socio-economically valuable plants and why their conservation is so critical in view of climate change.	How will 70% genetic representation be measured? Is there a reference that can be cited?
10. Effective management plans in place to address biological invasions for 50% of important areas for plants that are invaded		Milestone c). Suggest change to: 'Establish global principles for developing management plants *with partners* to recognize organisms. . ." Timeline for Milestone a) could be 2015.		Revise to indicate that plans should consider impact of invasive species on areas that may become important areas (because of climate change). Or this explanation could be added to the rationale.
11. No species of wild flora endangered by international trade	Is there a need to include the national movement of plants in the target as well as international?			This target does not address the issue of genetic contamination of native species due to the intentional /unintentional introduction of related species at both national and international level
12. A continuous increase in the percentage of plant-based products derived from naturally occurring sources that are sustainably managed, based on progressive inventory and assessment	To be consistent with the CBD, the goal should be 100%	A milestone might be to achieve a baseline and the target could then be set on this basis.	Aim of the target is not clear, does this include food/agricultural crops – or just wild-sourced plants? Agriculture and forestry is covered by the new Target 6. It is recommended that this target be limited to non-intensively produced crops (wild –harvested).	There is a need for greater linkage with and clarity between this target and Target 6. Target 6 focuses on land area and Target 12 on products.

Table 1 – contd…

Target	Clarity and Scope	Milestones and indicators	Rationale	Comments / gaps
13. The decline of plant resources, and associated indigenous and local knowledge innovations and practices, that support sustainable livelihoods, local food security and health care, halted	The wording is not clear. The scope of the target is very broad. It is recommended that the focus of the target should be on indigenous knowledge. Plant conservation is covered by other targets.	A proposed milestone could be: xx% of indigenous knowledge measured/ recorded by xxx.		There needs to be more inclusion and involvement of indigenous people in the GSPC process. There is a need for formal assessment of presently existing indigenous knowledge
14 The importance of plant diversity and the need for its conservation incorporated into communication, education and public awareness programmes	Suggested revision: 'importance of plant diversity, *its relevance to climate change* and the need…'	Another milestone could be created related to the creation of communications and marketing strategy for Target 14 itself.	Make clear link with climate change in the rationale	Individual regions should strive to develop SMART objectives in relation to Target 14 and a milestone for this should be created
15. The number of trained people working with appropriate facilities in plant conservation increased, according to national needs, to achieve the targets of this Strategy	Does this target address the current issues associated with the building of plant conservation capacity adequately enough?	A milestone could relate to a specific percentage of national needs being assessed by specific deadlines, e.g: 30% by 2101 60% by 2015 100% by 2020.		The target should specifically address the fact that the numbers of trained personnel are decreasing along with plant science infrastructure, e.g. herbaria, and botany departments at universities
16. Networks for plant conservation activities established or strengthened at national, regional and international levels	Possible milestones are: • The membership of the GPPC expanded. • Dissemination of the information on the progress of GSPC implementation by the GPPC expanded and increased • .A 'network directory' containing the variety of sectoral, national, regional and international networks established. • The desired increase in cross-sectoral partnerships to include academia.			

Final discussion – communicating success

A final discussion was held on ways and means to communicate the GSPC and especially how to celebrate the successes achieved. A summary of the key points is provided below:

- 2010 is the International Year of Biodiversity – so provides a good 'hook' for plant conservation stories;
- The website www.plants2010.org (the website of the Global Partnership for Plant Conservation) could provide a 'platform' for sharing information and success stories;
- A fact sheet or summary of achievements could be useful – and could be used as a basis for press releases;
- The website of the US Forest Service provides success stories on the conservation of rare species (www.fs.fed.us/wildflowers);
- It would be important to highlight the GSPC at the next COP in Nagoya, Japan (October 2010);
- Plant Conservation Day is on May18th – which is during the next SBSTTA meeting. This could provide an opportunity for awareness raising.
- Upcoming congresses where the GSPC could be promoted include the Latin American Botanical Congress, Chile, October 2010 and the International Botanical Congress in Melbourne in 2011.
- Efforts should be made to engage the private sector in supporting the GSPC, with a focus on the timber, petroleum and mining industries.
- Would it be possible to get support from the private sector or from donors for a high-level public awareness campaign?

It was agreed that BGCI, as well as members of the Global Partnership for Plant Conservation, would continue to look for support for the GSPC wherever possible.

The meeting concluded with a vote of thanks to the Boeing Company for providing support for the meeting and to the Chicago Botanic Garden for hosting the meeting and providing excellent logistical support.

Annex 1 - List of Participants at the GSPC Regional Workshop for the Americas

	First Name	Last name	Title	Institution	Country	Email
Ms.	Yolanda	Barrios	International Agreements Analyst	CONABIO - National Commission for the Knowledge and Use of Biodiversity	Mexico	yolanda.barrios@conabio.gob.mx
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Ms.	Holly	Forbes	Curator and Conservation Officer	University of California Botanical Garden at Berkeley	USA	hforbes@berkeley.edu
Dr.	Kakoli	Ghosh	Agriculture Officer	United Nations, Food and Agriculture Organization	Italy	Kakoli.Ghosh@fao.org
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Dr.	Sonia	Lagos-Witte	Latin American Plant Science Network, Regional Coordinator for Central America and Caribbean. Research Associate Natural Products Research Center CIPRONA	University of Costa Rica	Costa Rica	sonia.lagos@ucr.ac.cr AND sonialagoswitte@hotmail.com

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Dr.	Valerie	Pence	Director of Plant Research, Center for Conservation and Research of Endangered Wildlife	Cincinnati Zoo & Botanical Garden	USA	valerie.pence@cincinnatizoo.org
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Annex 2

The Global Strategy for Plant Conservation:

Stella Simiyu

BGCI/SCBD GSPC Programme Officer

Convention on Biological Diversity

BGCI Plants for the Planet

Background - CBD Decision IX/3,

***The Conference of the Parties decided to*:**

- consider the further development and implementation of the Strategy beyond 2010,
- taking into account current and emerging environmental challenges on plant diversity,
- including an update of the current targets within the broader context of and consistent with the new Strategic Plan beyond 2010,
- taking into account national priorities and circumstances, capacities and
- differences in plant diversity between countries.

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Process for a consolidated update of the Strategy beyond 2010

- In depth Review of the GSPC - *UNEP/CBD/COP/9/2, annex*
- On line Consultation – 1st – 30th April 2009
- Liaison Group – Dublin 26th -28th May 2009
- Online Review of the Liaison Group Meeting Report – 10th August – 1st October 2009
- Regional Meetings: e.g. Europe (June) Americas (Sept), Africa (Nov), Asia (Dec).
- SBSTTA 14 – May 2010

In Depth Review – 9th Conference of the Parties 2008

Key Messages: The Strategy 2002 – 2010

- Was a useful framework to harmonize and bring together various initiatives and programmes in plant conservation at both the national and regional levels.
- *Was notably successful in stimulating the engagement of the botanical and plant conservation communities in the work of the Convention, e.g. in particular the Global Partnership for Plant Conservation.*
- Through national implementation provided opportunities for addressing the Millennium Development Goals especially poverty reduction (goal 1), the health crisis (goal 6) and environmental sustainability (goal 7).

In Depth Review- Constraints:

Planning Stage:

- **Limited institutional integration,**
- **Lack of mainstreaming, and**
- **Inadequate policies and legal frameworks.**

Operational level:

- **Lack of taxonomic capacity and of data (taxonomy, biology and conservation),**
- **Lack of tools and technologies,**
- **Limited financial and human resources.**

In Depth Review

Noted:

Notable progress

Targets 1, 5, 8, 9, 11, 14, 15, 16

Limited Progress

Targets 2, 4, 6, 10, 12

Gaps

Targets 3, 7

Online Consultation

30 days (1-30th April 2009)

Purpose: To assess (where we are coming from)

(a) whether strategy had served **its purpose** in achieving the 16 outcome oriented targets (products, services and systems) *(In depth Review)*

(b) if these outputs had led to **desired effect** on reducing the continuing loss of plant diversity (changes in status of knowledge, skills, responses and actions) and

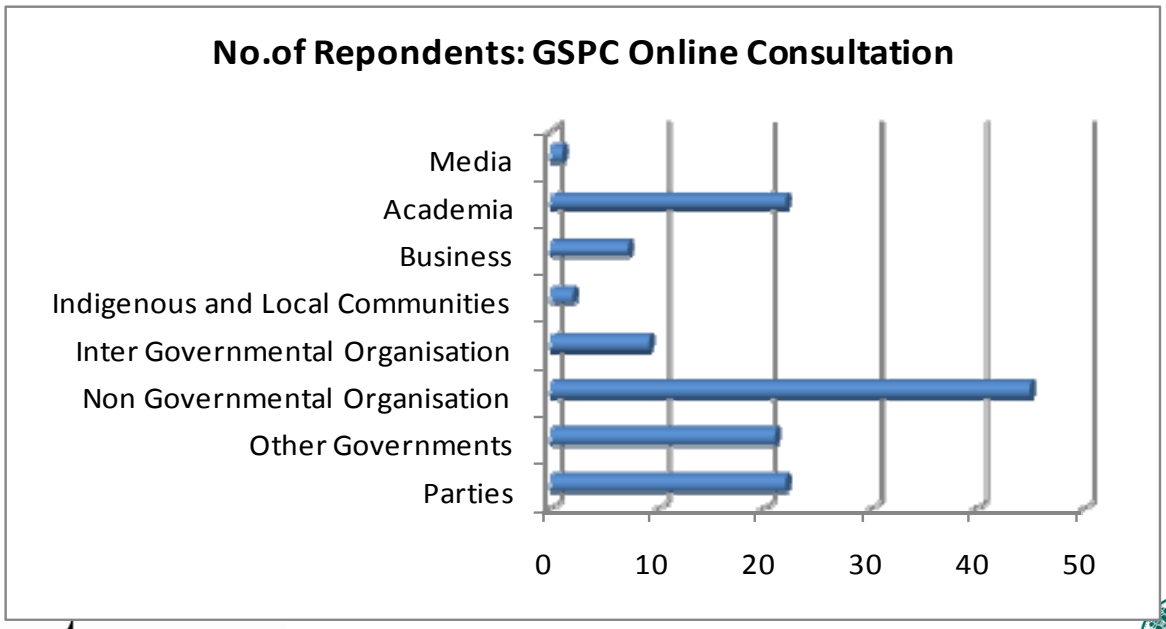
(c) if the strategy had led to **impacts beyond** reducing the loss of plant diversity (change in status leading to sector specific contributions).

Basis for a framework for further implementation and update of the Strategy

Focus of the Questions in Section A

1. Effectiveness and relevance of the Strategy;
2. Effectiveness of the Strategy in responding to its objectives;
3. Effectiveness of the Strategy in responding to the 3 objectives of the CBD;
4. Relevance of the Strategy in responding to pertinent issues as well as an opportunity for respondents to provide any additional information.

OUTCOMES: Responses n=166



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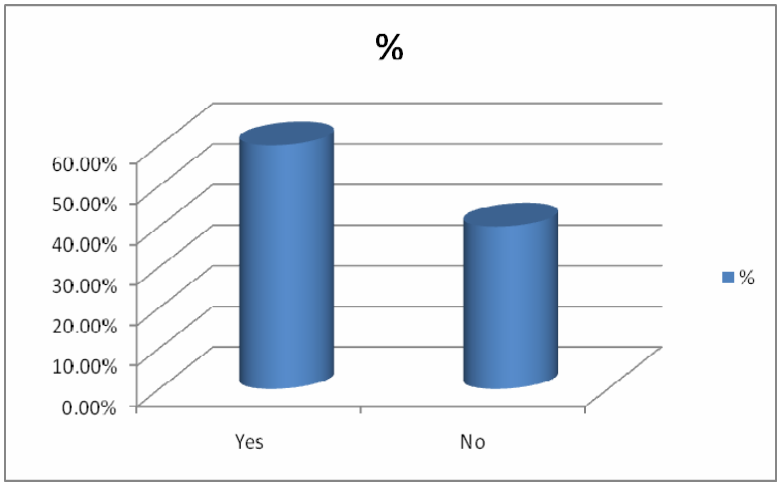
Was the current time frame for the Strategy sufficient to achieve the Targets.



Main Constraint:

- **Resources**

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GSPC Liaison Group Meeting
Dublin, Ireland 26th -28th May 2009

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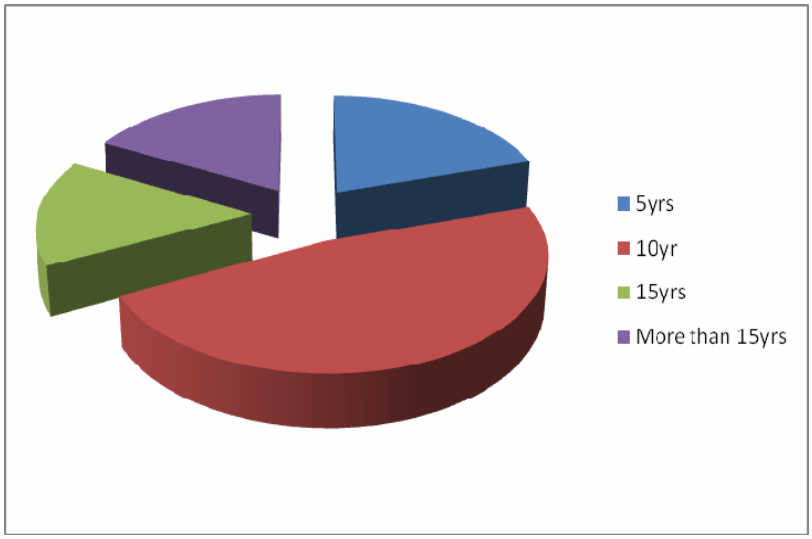
Proposals for time frame for further implementation/update of the Strategy



Key Points

1. **Political mandates often 5yrs**
2. **10 years sufficient**
3. **Longer time frame – targets may loose significance and cause potential inability to respond to emerging challenges**

Defining the framework

97% favoured use of short , medium and long term goals

- Long term vision – *Provide context at global, regional and national level*
- Medium term goals – *high level and unlikely to change with time*
- Short term objectives – *immediate priorities for implementation by different stakeholders*

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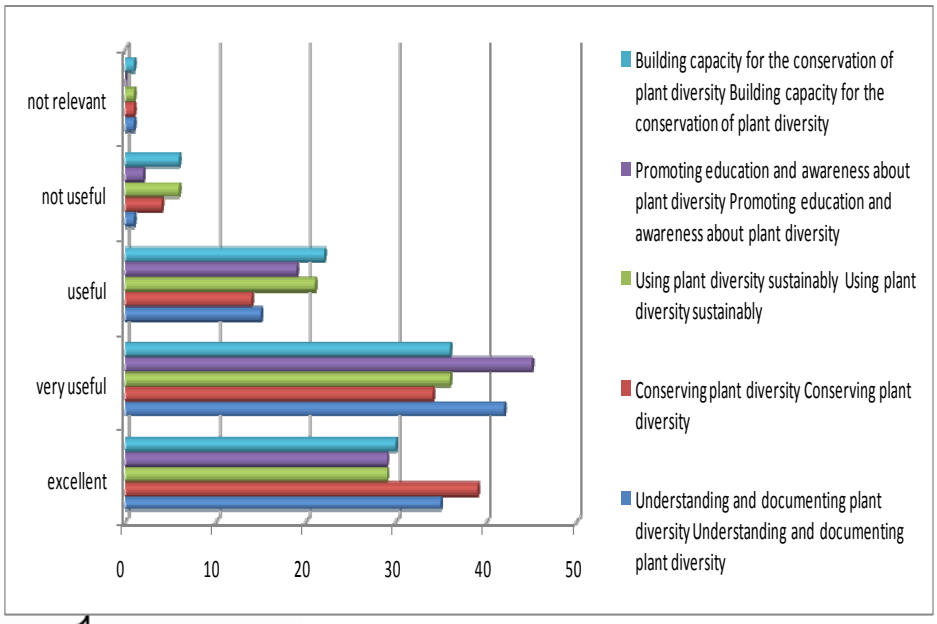
Robustness of the Objectives



- **Support for use of measurable targets – 96%**
- **Robustness of the global targets for developing national and regional targets – 65%**

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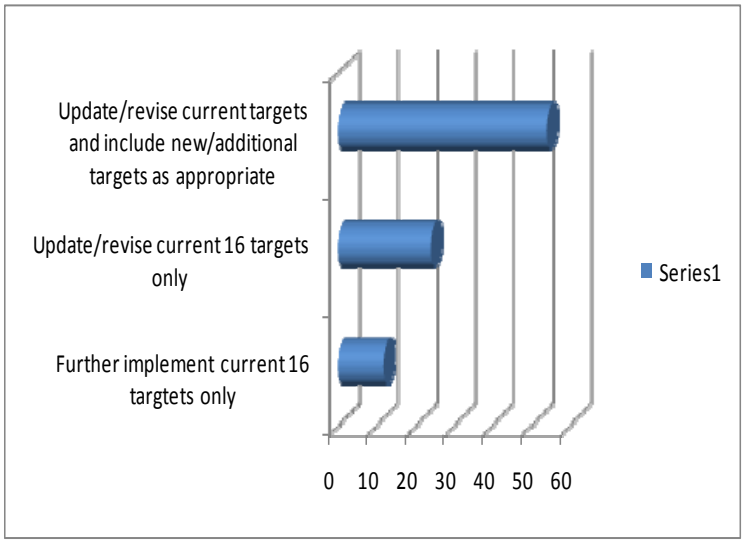
What about the sixteen targets



Gaps

(i) sustainable use to improve conservation and provide incentives at local level,
(ii) new challenges related to climate change such as promoting old growth forest and extending forest cover,
(iii) marine species,
(iv) demand and marketing trade chains,
(v) measures to promote and enable links between sustainable use and human well-being,
(vi) links to Access and Benefit Sharing (ABS) and article 8j, and
(vii) diversity of lower plants.

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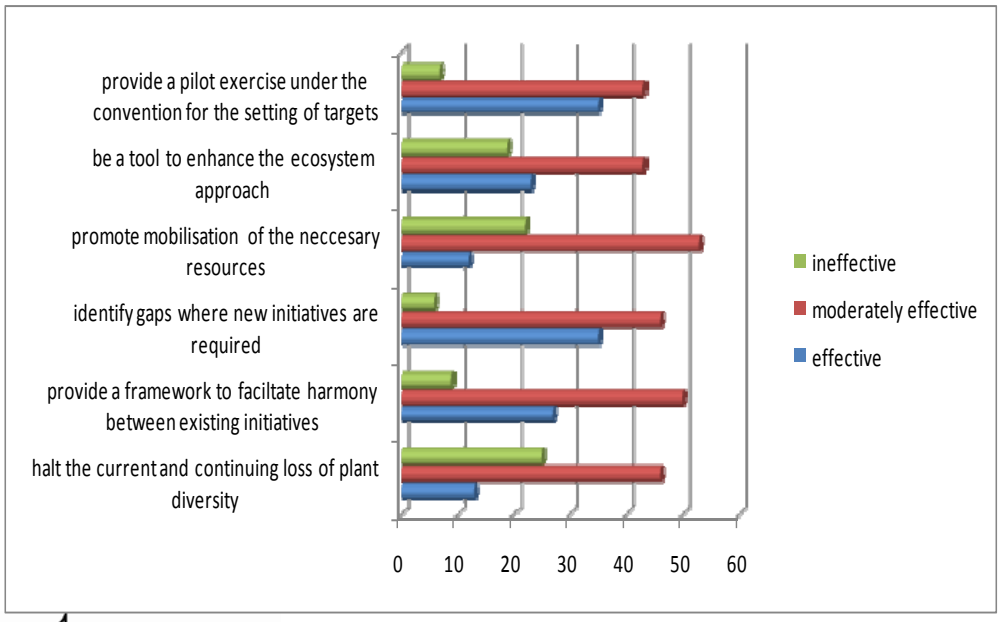
Effectiveness of Strategy in addressing other aspirations of the Convention



Key Messages from online consultations

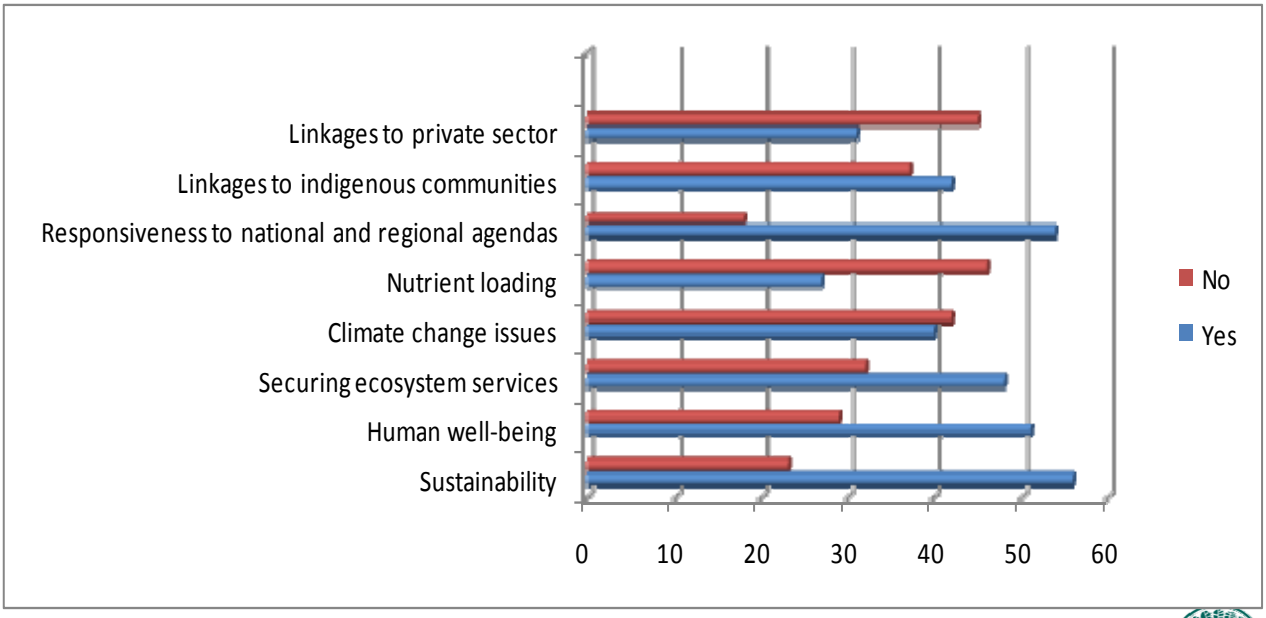
Strategy effective in :

- providing a framework for implementation at the global, regional and international level;
- supporting the ecosystem approach,
- employing *in situ* conservation as the primary approach for conservation and supporting national inventories.

However, the Strategy was less effective in:

- in applying the provisions on Access and Benefit Sharing and implementing article 8j. T
- effective mainstreaming at national level.
- engagement with local indigenous and local communities in some instances during implementation of some targets.
- provision of specific guidance to address the issues related to access and benefit sharing, article 8j and the application of the ecosystem approach.

Effectiveness in addressing other issues relevant to the three objectives of the Convention.



Section B: REVISION OF TARGETS Responses n=77

- **Section B targeted technical experts who have been involved in the implementation of the Strategy,**
- **Aim:** ***to garner more insight on proposals for the update/review and/or further development of the existing sixteen outcome targets*****.**

For each target, choose one of the four options

- (a) maintain target as is,
- (b) maintain target but put in place measures to enhance implementation,
- (c) update/review target and
- (d) create new target.

General Outcomes

Need to:

- need to define the targets better,
- improve clarity and reduce ambiguity in targets,
- ensure that all targets are SMART,
- define baselines for monitoring,
- define milestones, indicators and sub targets where needed.

Cont.

- **Targets 3, 13,14, 15 and 16 enabling targets, open ended and difficult to measure and monitor (more aspirational than measurable).**
- **Potential impact of climate change creates urgency to achieve some targets (e.g. target 2, 7, 9 and 10);**
- **justification for investment in the some targets at national and regional level (e.g. targets 8, 9,13)**
- **basis for reviewing some targets thresholds upwards (e.g. target 4, 5, 6, 12, 14 and 15).**

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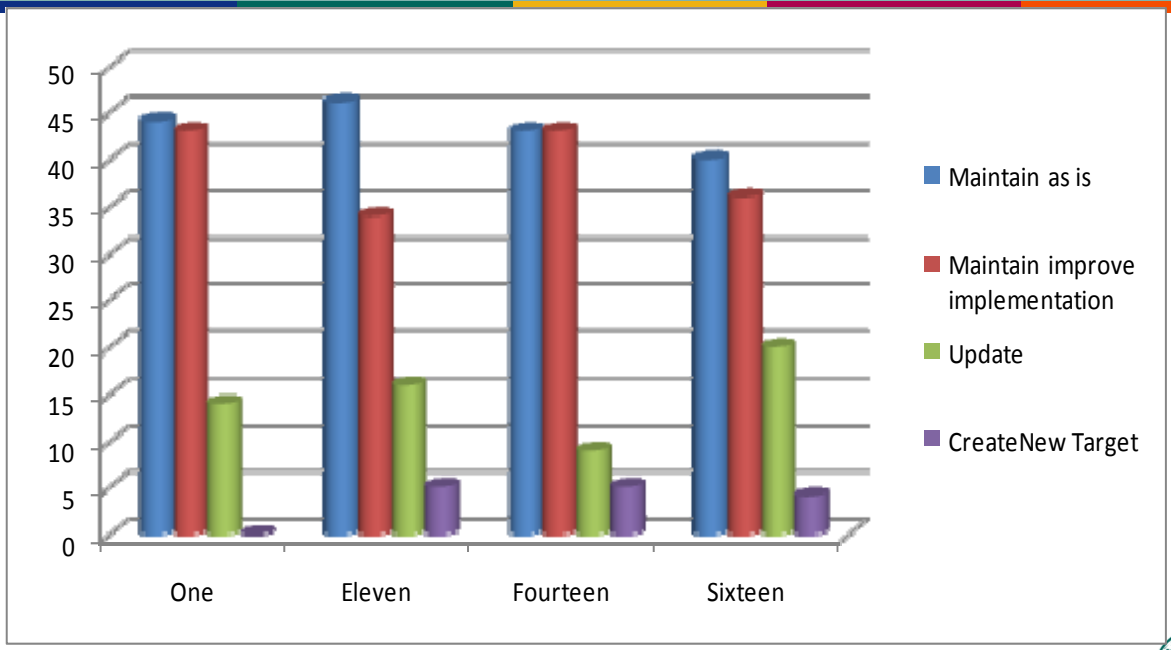
Some considerations

- Targets which required no institutional and policy changes hence easy to implement by all stakeholders (e.g. target)
- Targets which needed cross sectoral investments, making it harder to implement at national and regional level.
- Targets better suited for global implementation and while progress had been made at this level, it was hard to deliver similar progress at national level e.g. 4 and 10

(a) maintain as is
Targets 1, 11, 14, and 16



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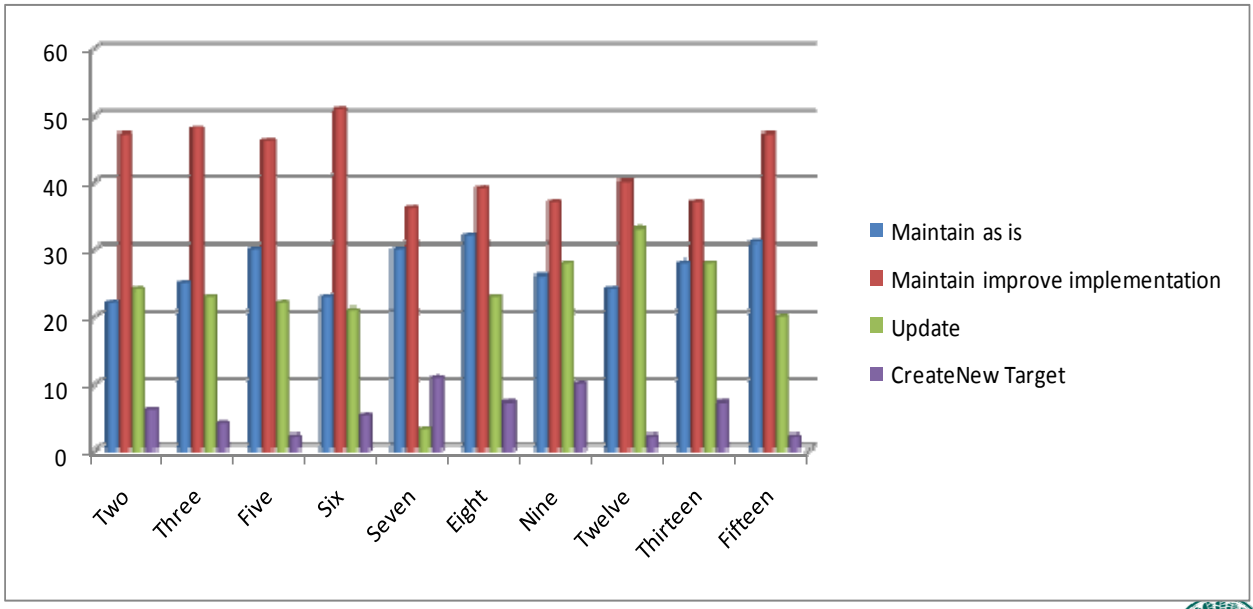
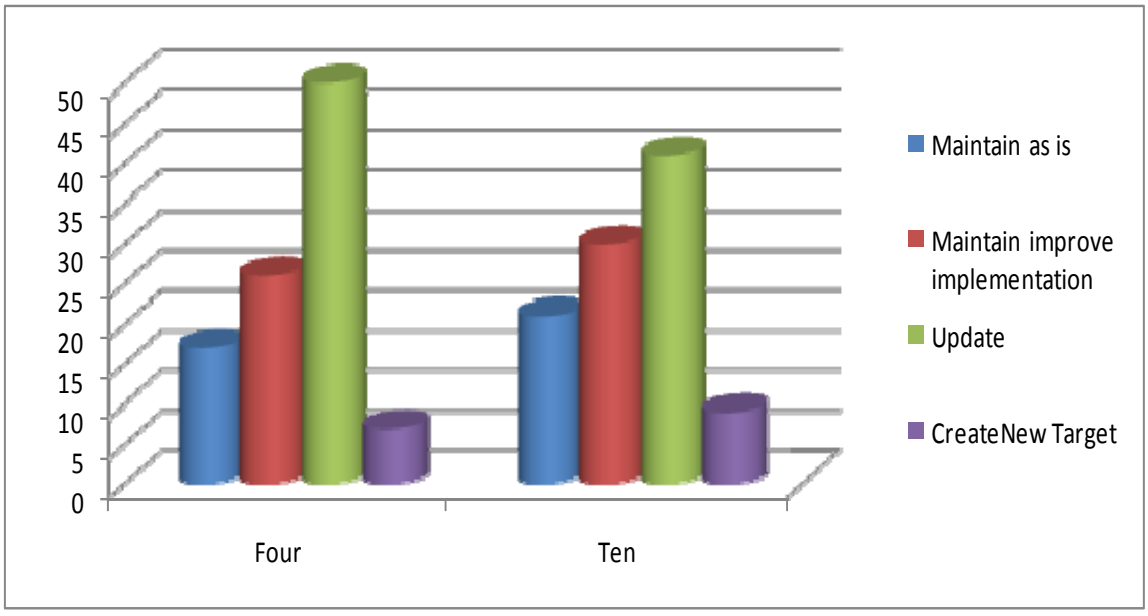
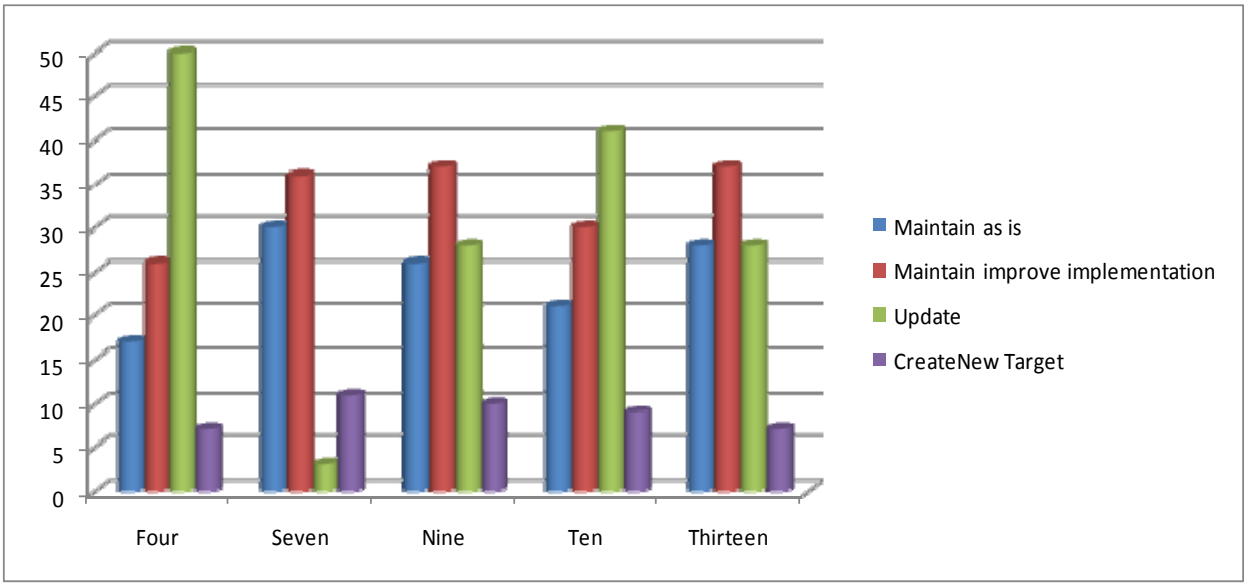
maintain but improve measures for further implementation of Targets 2, 3, 5, 6, 7, 8, 9, 12, 13 and 15



update targets 4 and 10.



Limited support for deleting these targets and creating new ones from them



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Conclusions from the consultation

- **Overall, the Strategy should be kept simple and focused.**
- **The implementation process should effectively engage all key stakeholders including indigenous and local communities, business and media,**
- **Effort should be intensified to address challenges of research and knowledge gaps, limited resources, tools and capacities.**
- Current targets should not be changed substantially as they have already been mainstreamed and adopted at national, regional and global level.
- Incorporate associated indigenous and local knowledge, innovations, practices and technologies.
- Need to link the implementation of these targets to benefits accrued at local level by local communities, incorporate more priorities and needs these communities

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Conclusions continued

- Maintain current objectives of the Strategy with appropriate review to capture emerging issues
- Define short, medium and long term goals
- New and additional targets may be created to address gaps identified in updating the objectives of the Strategy.
- Differentiate types of targets, i.e. enabling targets vs outcome targets
- Include learning targets related to generation of new knowledge
- Concretise action targets to be SMART to enable monitoring and evaluation and assess impact of the Strategy in the medium and long term.
- While the Strategy may be developed for 10yr period, a review be made in 2015, in tandem with the review of the MDGs.

Liaison Group Meeting 2009

- **Reviewed outcomes of the online consultations,**
- **Reviewed the Strategy document 2002-2010 in line with the additional comments, the plant conservation report and group discussions,**
- **Prepared a proposal for update of the Strategy 2011-2020 and new text including vision, objectives, rationale, scope, general principles, targets, framework and further work required to implement the Strategy.**

Additional processes

- Online Review of Report of the Liaison Group Meeting
- Further input from Regional Meetings
  - Americas, Africa, Asia and Europe
- Harmonisation with the Review of the Strategic Plan of the Convention and the Review of the 2010 Target
- Preparation of SBSTTA 14 Documents – Jan 2010
- Presentation to SBSTTA 14 – (10-21 May 2010 – Nairobi , Kenya)
- Presentation of the consolidated proposal for the Strategy beyond 2010 at COP 10 - (18-29 October 2010 -, Nagoya, Japan).

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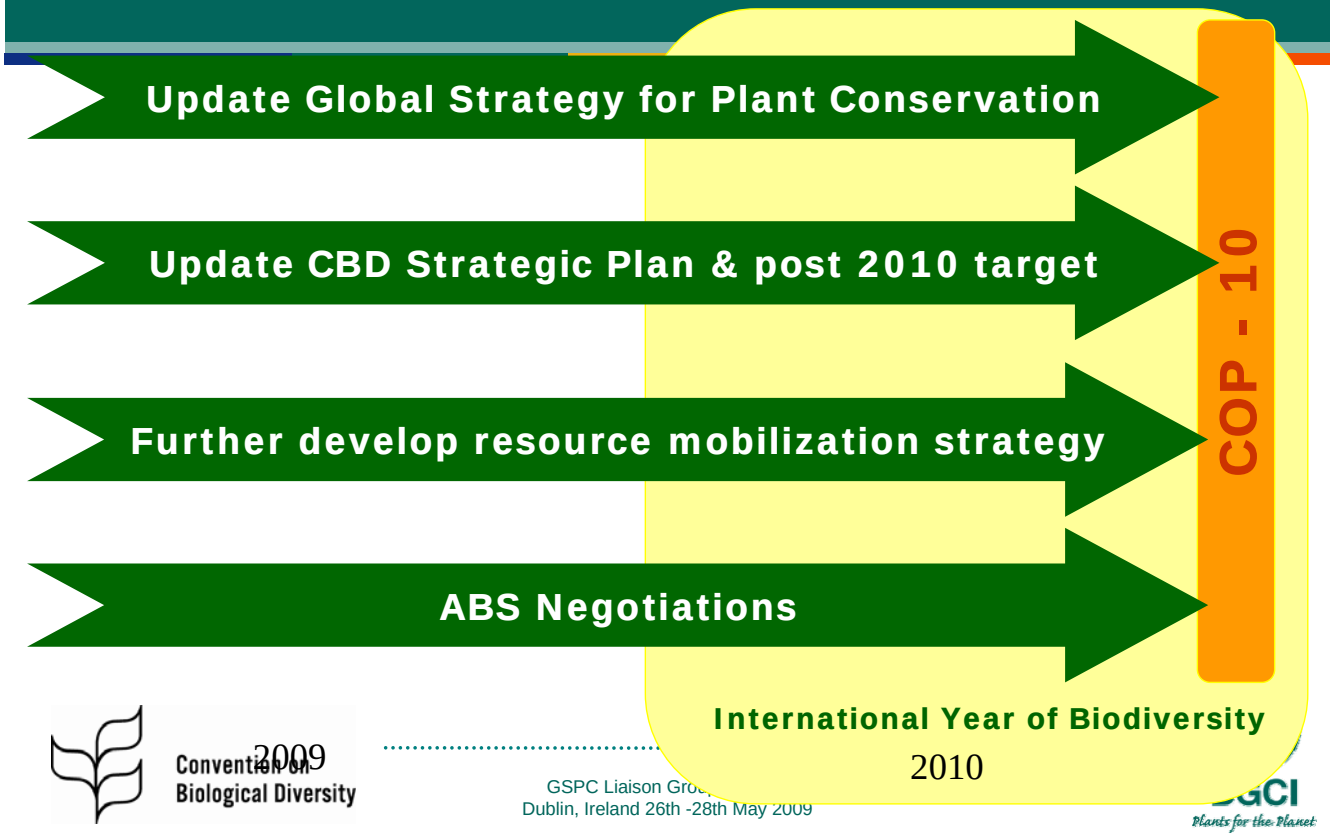
Indications for new STRATEGIC PLAN POST 2010

- Timeframe 2010-2020 with review in 2015 (MDGs)
- Promote ecosystem approach in planning processes
- Address drivers of biodiversity loss
- Respond to global challenges
- Focus on practical implementation

International Year of Biodiversity and COP-10 Nagoya



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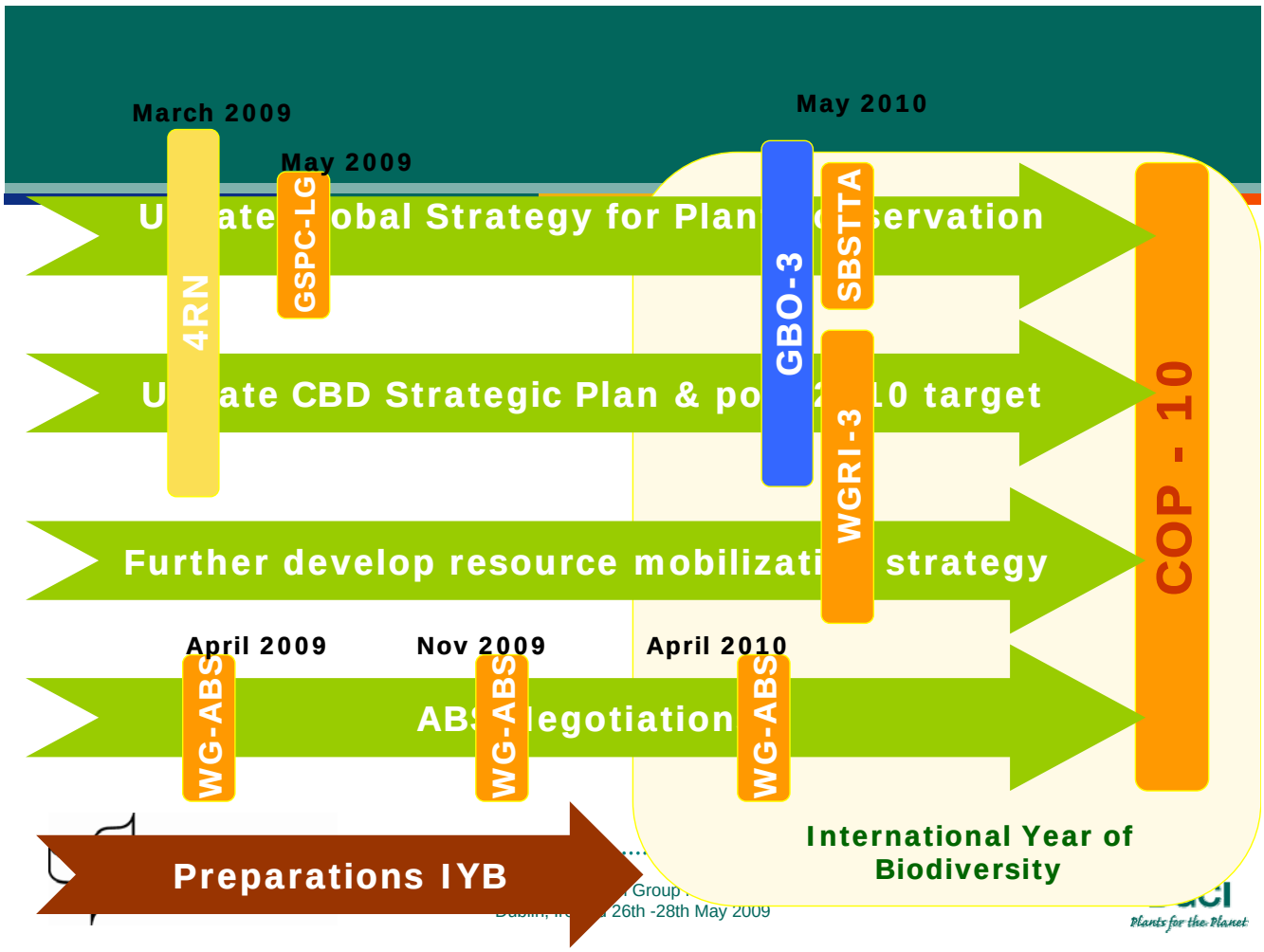

Dublin, Ireland 26th -28th May 2009

Thank You

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GSPC Liaison Group Meeting
Dublin, Ireland 26th -28th May 2009

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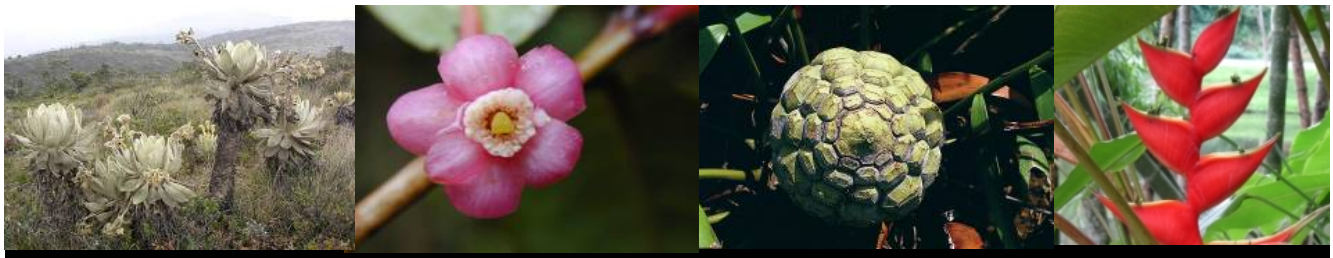
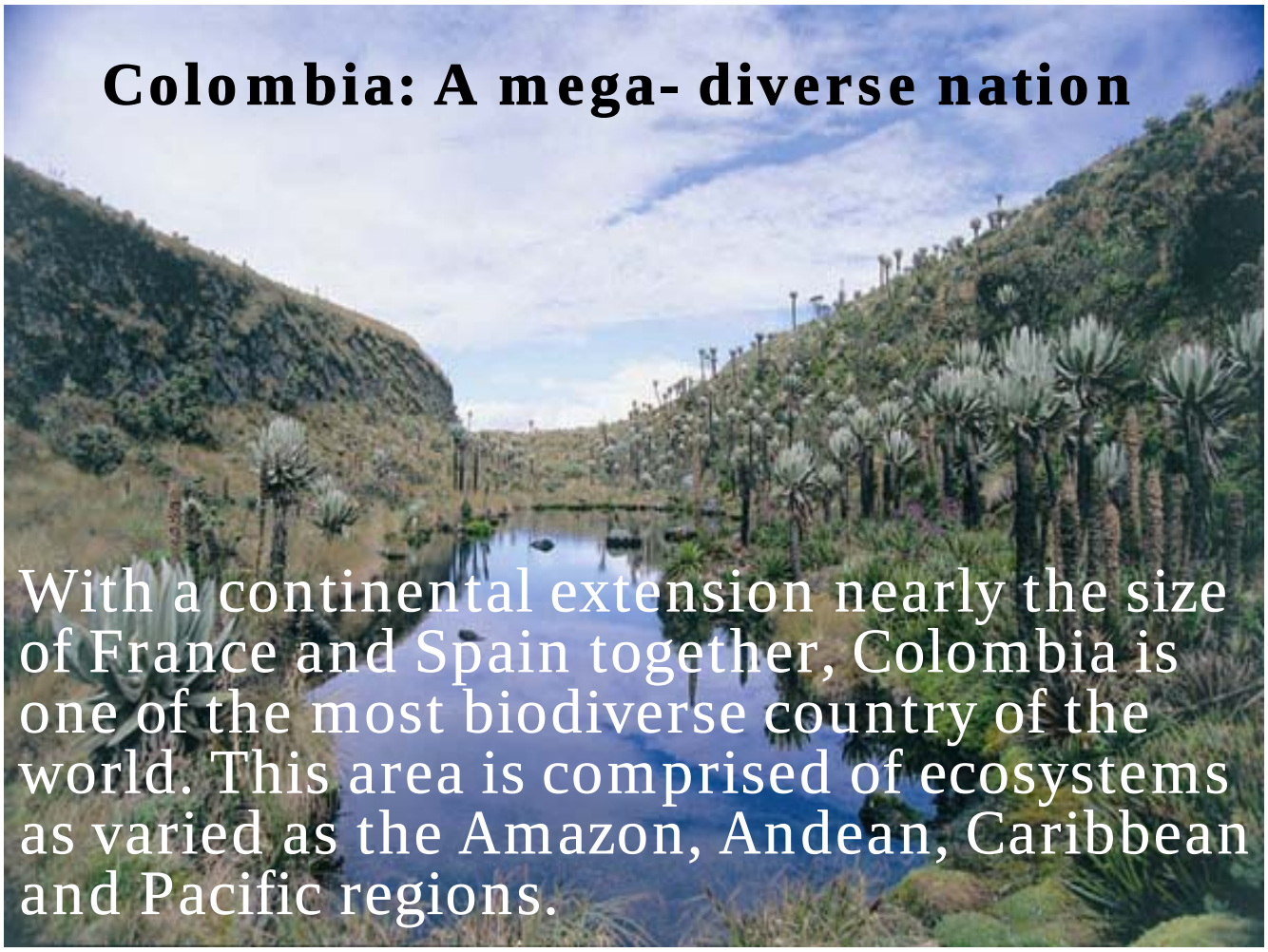
Annex 3



COLOMBIA AND THE GLOBAL STRATEGY FOR PLANT CONSERVATION

Red Nacional de Jardines Botánicos de Colombia

Senecio puracensis Cuatr.



COLOMBIAN FLORA RICHNESS

Colombia is believed to be home to approximately 26,500 superior plant species equivalent to 12% of the world's total flora diversity.

230 palm species → the richest country in America and the second in the world after Malaysia.

36 Magnolia species → the second richest country after China.

Between 3.000 and 3.500 orchid species → 15% of the world's diversity.

PRODUCTS AND SERVICES PROVIDED BY OUR PLANT DIVERSITY

Ecological processes

- Pollination
- Seeds dispersal
- Predation
- Nutrients cycling
- Primary production
- Biogeochemical cycles
  - Water
  - Carbon
  - Nitrogen

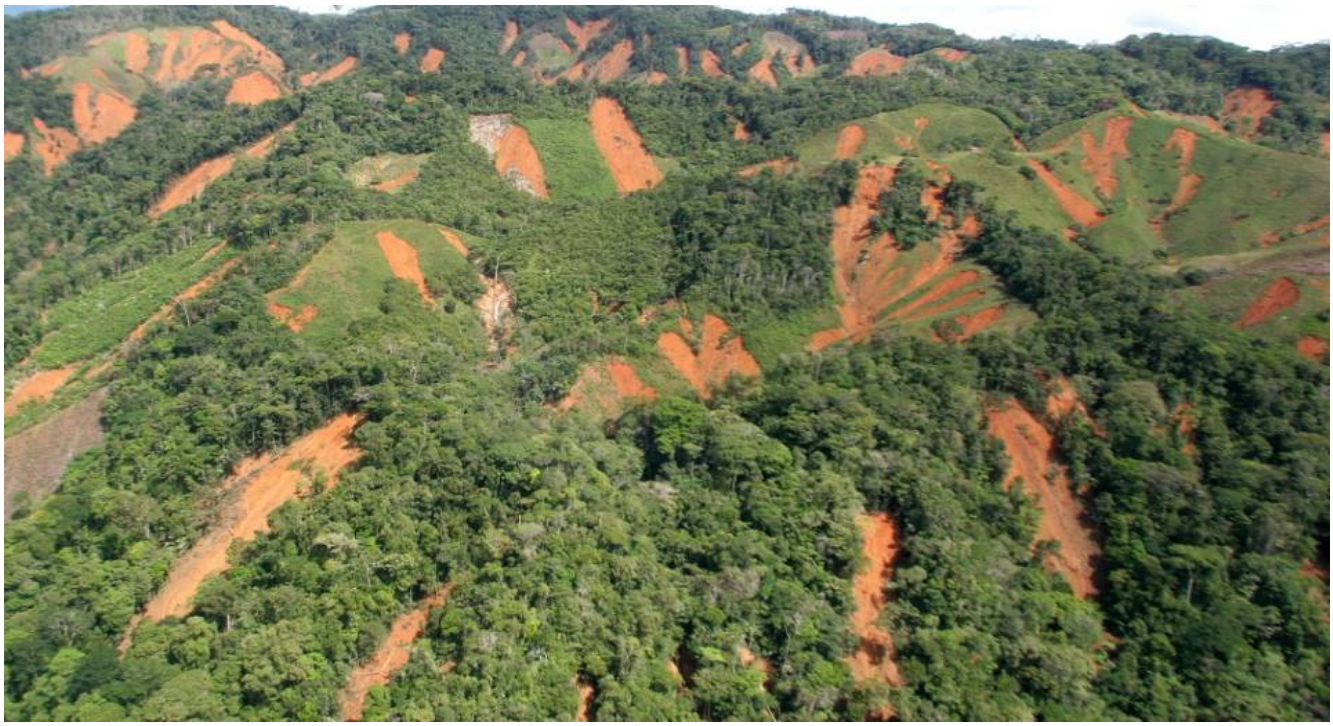
Environmental services

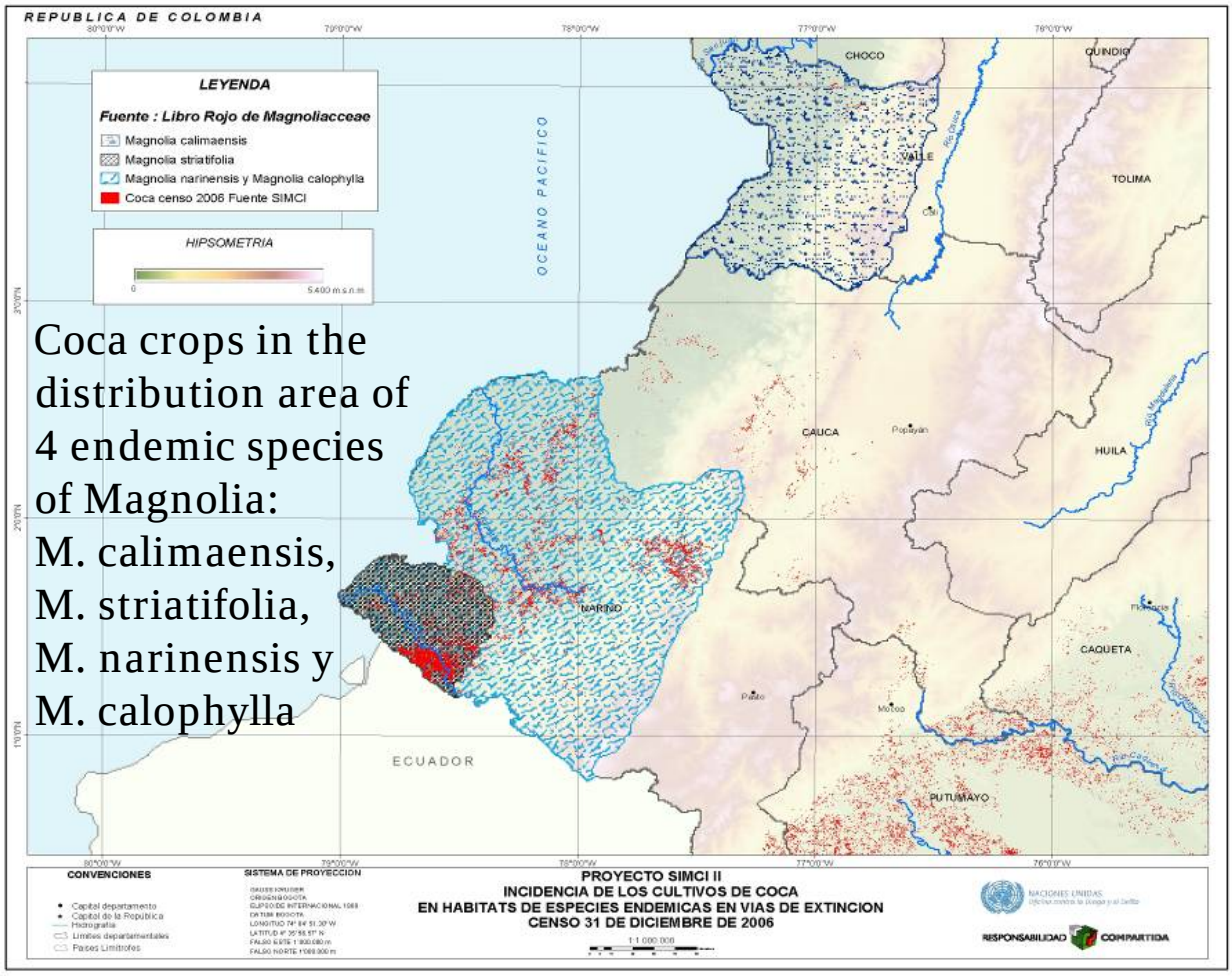
- Food crops
- Fibers and cane
- Fuels
- Waxes, latex and resins
- Weather regulation
- Biological control of plagues
- Water and air purification

But forest is disappearing…

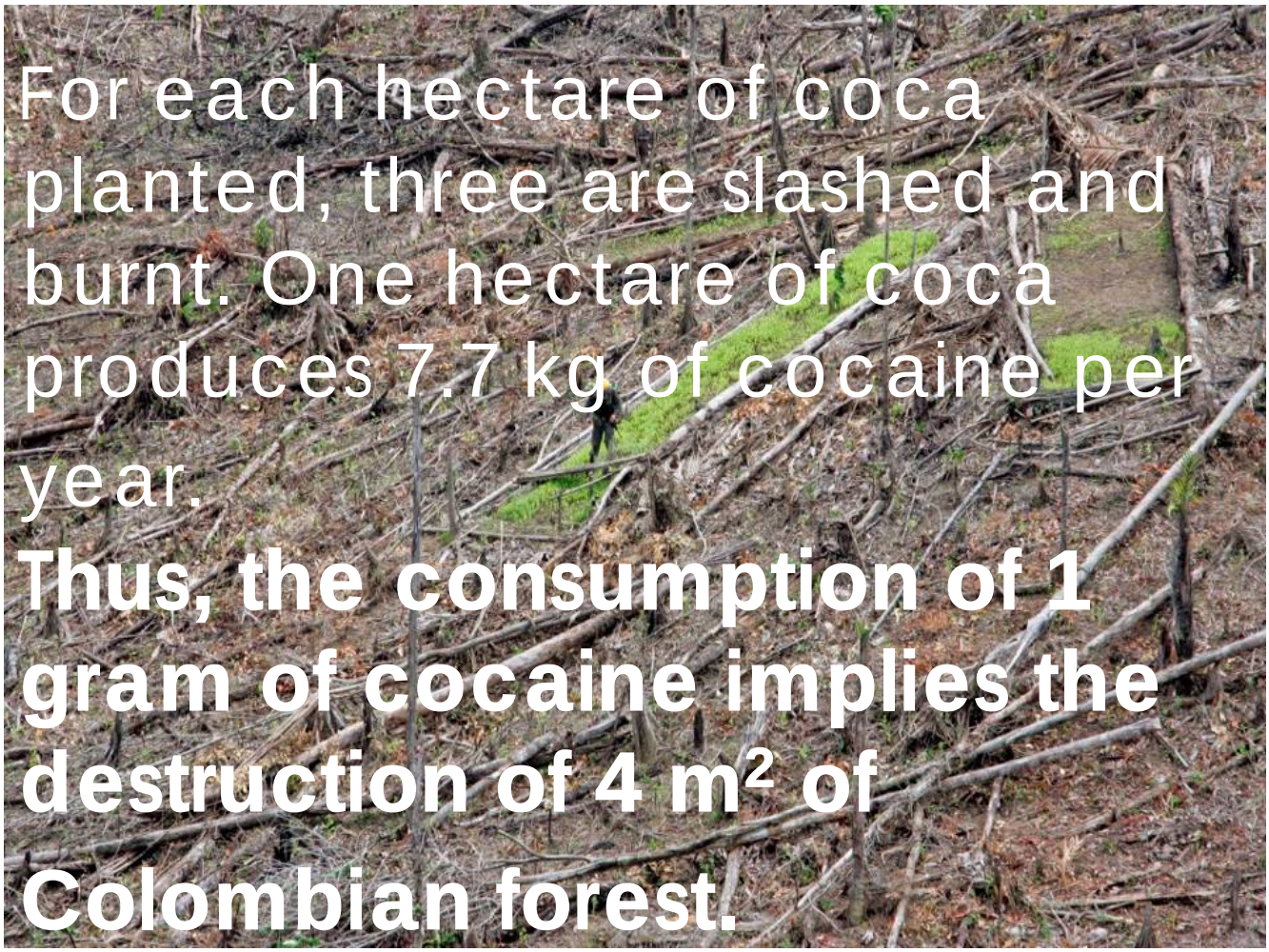
Ecological consequences of coca cropping

In addition to the social and economic costs, coca cultivation and cocaine production, encouraged by cocaine consumption, pose an ominous threat to Colombia's environment.





Coca crops in the distribution area of 4 endemic species of Magnolia: M. calimaensis, M. striatifolia, M. narinensis y M. calophylla



For each hectare of coca planted, three are slashed and burnt. One hectare of coca produces 7.7 kg of cocaine per year.

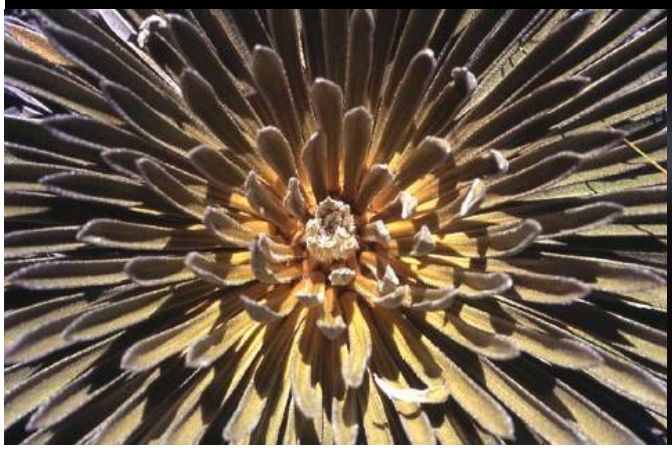
Thus, the consumption of 1 gram of cocaine implies the destruction of 4 m^2 of Colombian forest.

COLOMBIA GSPC FOCAL POINT

Colombia was the first country to have its own National Strategy for Plant Conservation, but its implementation was inefficient mainly because the focal point for the GSPC was assigned to the Colombian Consulate in Montreal, Canada. Later, in 2005, Colombia designated as focal point to the Ecosystems Direction of the Ministry of Environment. But...

Finally in 2008, the Colombian Botanic Gardens Network was designated as focal point.


TOWARDS THE IMPLEMENTATION OF THE GSPC




THE ALEXANDER von HUMBOLDT BIOLOGICAL RESOURCES RESEARCH INSTITUTE

The Alexander von Humboldt Institute is a public organization, attached to the Ministry of Environment and belongs to the Colombian National Environmental System.

The main role of the Institute is to carry out the scientific inventory of the Colombian biota.

The Institute coordinates the National Biodiversity Information System (named SIB in Spanish), created as part of the Environmental Information System, in order to satisfy the information requirements in terms of conservation and sustainable use of the biological patrimony.

WWW.SIAC.NET.CO

COLOMBIAN NATIONAL STRATEGY FOR PLANT CONSERVATION

WEB PORTAL

"WHO IS DOING WHAT"

- Universities
- Botanic Gardens
- Research centers
- Herbaria
- Nurseries
- Private farmers
- General public

Levels of information

- Living collections
- Propagation & Monitoring
- Education

COLOMBIA BIODIVERSITY INFORMATION SYSTEM

ELABORATION OF REGIONAL THEMATIC AGENDAS

Implementation of the GSPC and the Colombian National Strategy for Plant Conservation based in regional priority exercises.

RED BOOKS OF THREATENED PLANT SPECIES

Present updated species information is a valuable tool on the formulation of conservation measures. It gives updated species information being a valuable tool on the formulation of conservation measures.

In the books the degree of threat of the Colombian species is asses giving valuable information in order to develop conservation programs.

These are the Colombian Flora Red books published:

- Bryophytes
- Chrysobalanaceae, Dichapetalaceae and Lecythidaceae
- Palmae, Compositae (Frailejones) and Zamiaceae
- Bromeliaceae, Labiateae and Passifloraceae
- Magnoliaceae, Miristicaceae and Podocarpaceae
- Orchidaceae (first volume)
- Woody species


MANY THANKS

Annex 4

Estrategia Mexicana para la Conservación Vegetal

Mexican Implementation of the Global Strategy for Plant Conservation

September 30th 2009, Chicago

CONABIO

CBD

Mexican Plant Diversity

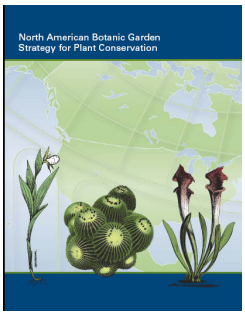
- **Mexico** houses one of the most diverse biotas in the world, and is among the group of "megadiverse" countries.
- Over 23,000 plant species and 2,663 genera representing between 10% and 14% of the total plant richness in the world
- 8% of these genera and
- 50% of these species are endemic

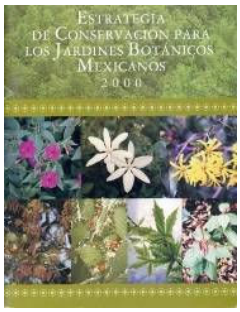
Challenges

- No complete inventory of the flora of Mexico
- Protected areas currently cover approximately 12% of the country's surface, it is necessary to increase conservation efforts for plant diversity especially in mountainous areas - microregions.
- IUCN red list: 314 species of plants found in Mexico (excluding those in the least concern category)
- CITES: 253 plant species in appendix 1 and 1445 in appendix 2
- NOM-059-SEMARNAT-2001: 981 plant species
- 811 exotic species with invasive potential have been identified in Mexico

Background EMCV

- Mexico participated in the Gran Canaria meeting (April, 2000)
- The Mexican Association of Botanic Gardens developed the Conservation Strategy for Mexican Botanic Gardens (2000)
- CONABIO was designated as focal point in Mexico for GSPC (2004)
- Expert Group meeting in Dublin (2006) and Gran Canaria meeting (2006)
- North American Botanic Gardens Strategy for Plant Conservation (2006)
- CONABIO met with the Mexican Association of Botanic Gardens, and agreed to organize a National Comittee to develop and promote the Mexican Strategy for Plant Conservation.





Coordinating Committee

16 representatives from different sectors involved in the conservation and sustainable use of plant diversity.

NGOs	Government	Botanic Gardens	Research Centers	Academics
Pronatura Eduardo Cota **Sociedad Mexicana de Fitogenética** Leobigildo Córdova	**CONABIO** Hesiquio Benítez Patricia Koleff **CONAFOR** Carlos González **DGVS** Omar Rocha **CONANP** Oscar Ramírez **SAGARPA** Enriqueta Molina	**Mexican Association of Botanic Gardens** Teresa Cabrera Javier Caballero	**MEXU-UNAM** Dra. Hilda Flores **INECOL** Miguel Equihua	Patricia Dávila Alejandro de Ávila Martín Ricker Rafael Ortega

1st Meeting of the Coordinating Commitee

Xalapa, Veracruz. September 2007

In order to involve the Botanic Gardens it was decided to have the first Comittee Meeting and presentation of the development of the strategy at the XX National Meeting of Botanic Gardens.

Attended by members of the Committee and 23 observers from botanic gardens

Results:

1. Formal installation of the Coordinating Committee
2. Establishment of an action plan for the development of the strategy and future work of the Committee
3. Signing of the “Xalapa Declaration” in which the Coordinating Committee agrees to participate in the EMCV

1st Meeting of the Coordinating Commitee of the EMCV

For each goal of the GSPC the committee identified:

- National goals (17)
- Achievements and strengths

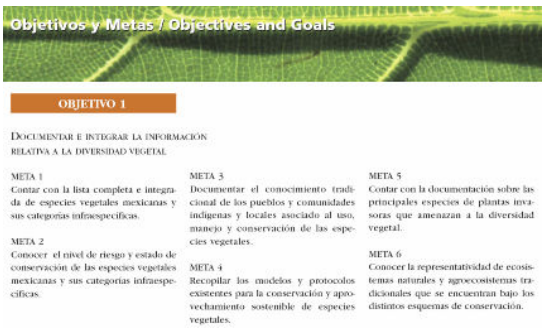
Government Sector

Only 5 government agencies were included in the Coordinating Committee, however meetings are held with other agencies to involve them in the development of the strategy and in its future implementation.

- CONABIO (National Comission for the Knowledge and Use of Biodiversity)
- CONANP (National Commission for Protected Areas) *
- DGVS (General Wildlife Direction)
- INE (National Institute of Ecology)
- CONAFOR (National Forestry Commission)
- SPPA (Environmental Policy and Planning Subsecretariat)
- SNICS (National Service for Seed Inspection and Certification)
- National Institute of Forestry, Agriculture and Fisheries Research
- UCPAST (Coordinating Unit of Social Participation and Transparency)
- CDI (National Comission for the Development of Indigenous Communities)
- UCAI (Coordinating Unit of International Affairs)
- PROFEPA (Federal Environmental Protection Agency)

Publication of the Objectives and Goals of the EMCV

- Mision, Vision, Objectives and Goals using the GSPC as a framework
- Published in May 2008
- Presented in CoP 9 in Bonn, Germany where Mexico coordinated a workshop on the national implementation of the GSPC



Funding

Botanic Gardens Conservation International supported the participation of some of the participants in the 1st Meeting of the Coordinating Committee as well as the printing of the publication of Objectives and Goals of the EMCV.

Since then the National Commission of Protected Areas (CONANP) has funded the Committee meetings and has offered financing for the final publication.

BGCI
Plants for the Planet

Comision Nacional de Areas Naturales Protegidas

Strategic Planning Workshop

Jardín Botánico Regional de Cadereyta,Cadereyta, Qro Septiembre 2008

The Coordinating Committe met in order to reorganize the Objectives and Goals document into a logical framework, to identify:

- Work programmes
- Projects
- Indicators
- Means of verification

EMCV Structure

- Mision
- Vision
- 6 Objectives
- 9 Programmes or initiatives
- 33 Projects or activities each with:
  - Goals for 2030
  - Indicators
  - Means of verification

EMCV

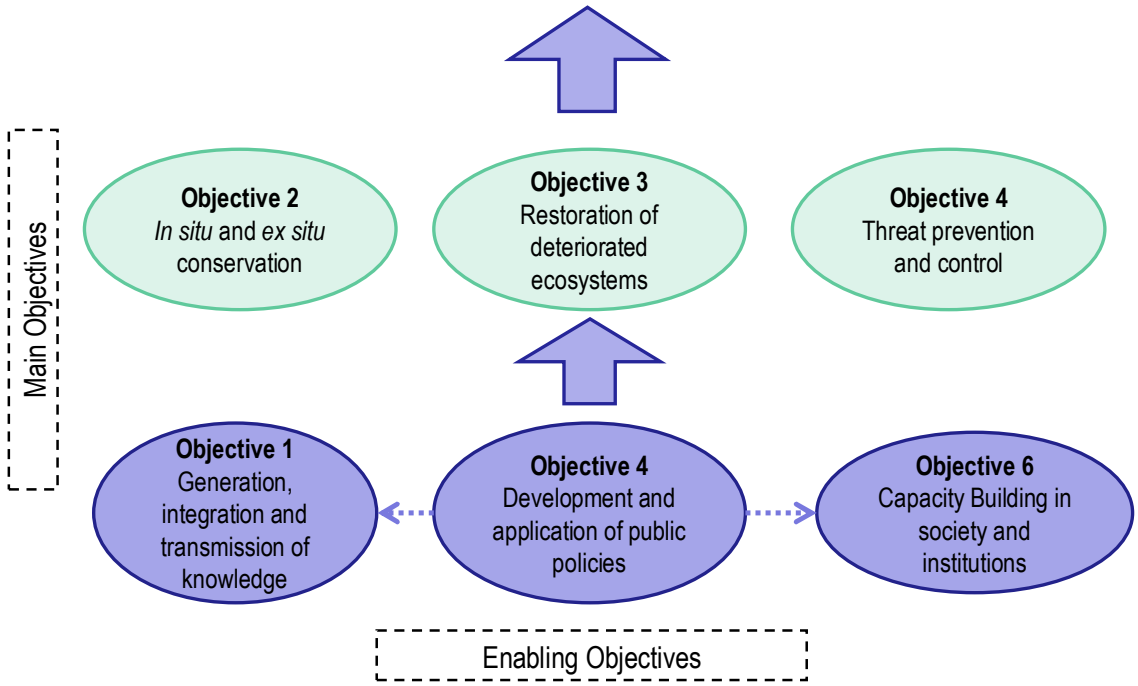
Mision

To establish the directives and actions for the conservation and sustainable use of plant diversity in Mexico as well as the fair and equitable sharing of the benefits derived from its use through the development and effective application of legal, administrative, economic and social initiatives based on knowledge.

Vision

By 2030 Mexico will have adequate mechanisms for the conservation and sustainable use of Mexican Plant Diversity as well as the fair and equitable sharing of the benefits derived from its use.

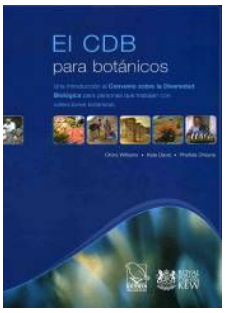
VISION



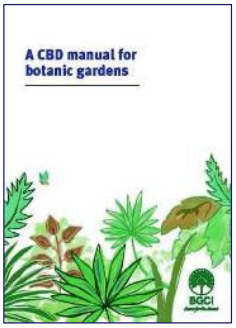
Example - Objective 2

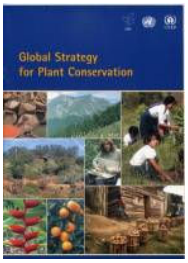
Programmes/ initiatives	Projects/ activities	Goals (2030)	Indicators (definition, periodicity, sources of information)	Means of verification
Objetive 2: *In situ* and *ex situ* conservation of plant diversity.				
2.2 *Ex situ* conservation	2.2.1 Conservation in botanic gardens	2.2.1.1 At least 90% of species of mexican plants in a risk category under NOM-059 are found in national botanic gardens. 2.2.1.2 At least 60% of threatened and endangered species (NOM-059) and in Appendix I are found in two or more botanic gardens.	% of species in NOM-059 represented in botanic gardens and collections. % of species in the "threatened" and "endangered" categories in NOM-059 represented in two or more botanic gardens.	Databases of botanic gardens Data of mexican gardens in global databases (BGCI) CITES species database NOM-059-SEMARNAT-2001

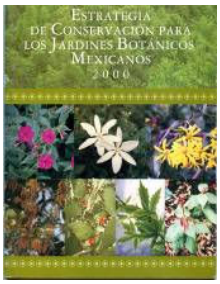
Related documents available in the CONABIO webpage



Nuevas

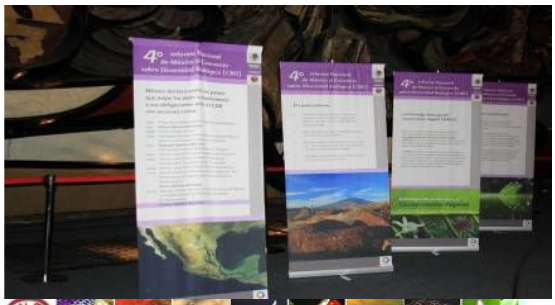






Other Activities

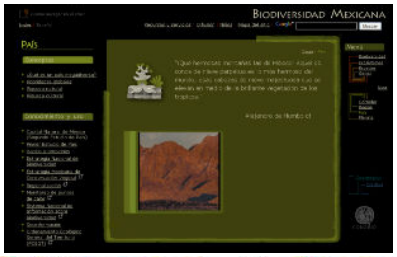
- Participation in the meetings of the Mexican Association of Botanic Gardens.
- Presentation in the 1st Regional forum for the Conservation of Mexican orchids, September 2009.
- Regional cooperation with the Instituto Regional de Biodiversidad de Honduras, they are working on the Central American Strategy for arboreal and epyphite plants.



- Banner in the event of the presentation of the Fourth National Report.

Future Activities

- Establish a specific webpage for the EMCV
- Final revision by the Coordinating Committe
- Public consultation with different sectors for comments to the final version
- Identification of actors for the different projects and activities
- Official presentation of the strategy by the Minister of Environment



Muchas Gracias!

ASOCIACIÓN MEXICANA DE JARDINES BOTÁNICOS, A.C.

CBD

CONABIO

Annex 5

NATIONAL CENTER ON FLORA CONSERVATION CNCFLORA

The project of the Rio de Janeiro Botanic Garden Research Institute for the

NATIONAL BIODIVERSITY MAINSTREAMING AND INSTITUTIONAL CONSOLIDATION PROJECT

granted by the
GLOBAL ENVIRONMENT FACILITY TRUST FUND

NATIONAL CENTER ON FLORA CONSERVATION CNCFLORA

NEGOTIATIONS

2005-2007

- World Bank / GEF / Brazilian Government / Ministry of Environment

2007-2008

- Mandates / legal acts
- National scope
- Scientific authority for plants (scientific information provider)
- Incorporated in the institutional structure

2009

- CNCFlora start operation

NATIONAL CENTER ON FLORA CONSERVATION CNCFLORA

Context of JBRJ

- 200 years since foundation.
- During the past decade, became a sub-division of the Ministry of Environment.
- Short-cut science – decision making.

NATIONAL CENTER ON FLORA CONSERVATION CNCFLORA

DOCUMENTS RELATED

- Convention of Biological Diversity – CBD
- **Global Strategy for Plant Conservation – GSPC**
- **Mountain Biological Diversity Program**
- Botanic Gardens Conservation Strategy
- International Rules for Conservation in Botanic Gardens
- International Agenda for Conservation in Botanic Gardens
- Brazilian National Policy for Biodiversity
- Brazilian National Program for Biodiversity
- Brazilian National Research Program of Biodiversity –PPBIO/MCT
- National Biodiversity Mainstreaming and Institutional Consolidation Project – GEF (Loan agreement n. 7227-BR)
- Ministry of Environment decisions and mandates
- JBRJ mission
- Action plan of Scientific Research Department of JBRJ

NATIONAL CENTER ON FLORA CONSERVATION CNCFLORA

Traditional attributions of JBRJ
:

- **Produce botanical knowledge regarding the Brazilian flora;**
- **Coordinate collections of botanical material;**
- **Creation of new botanical gardens in the country.**

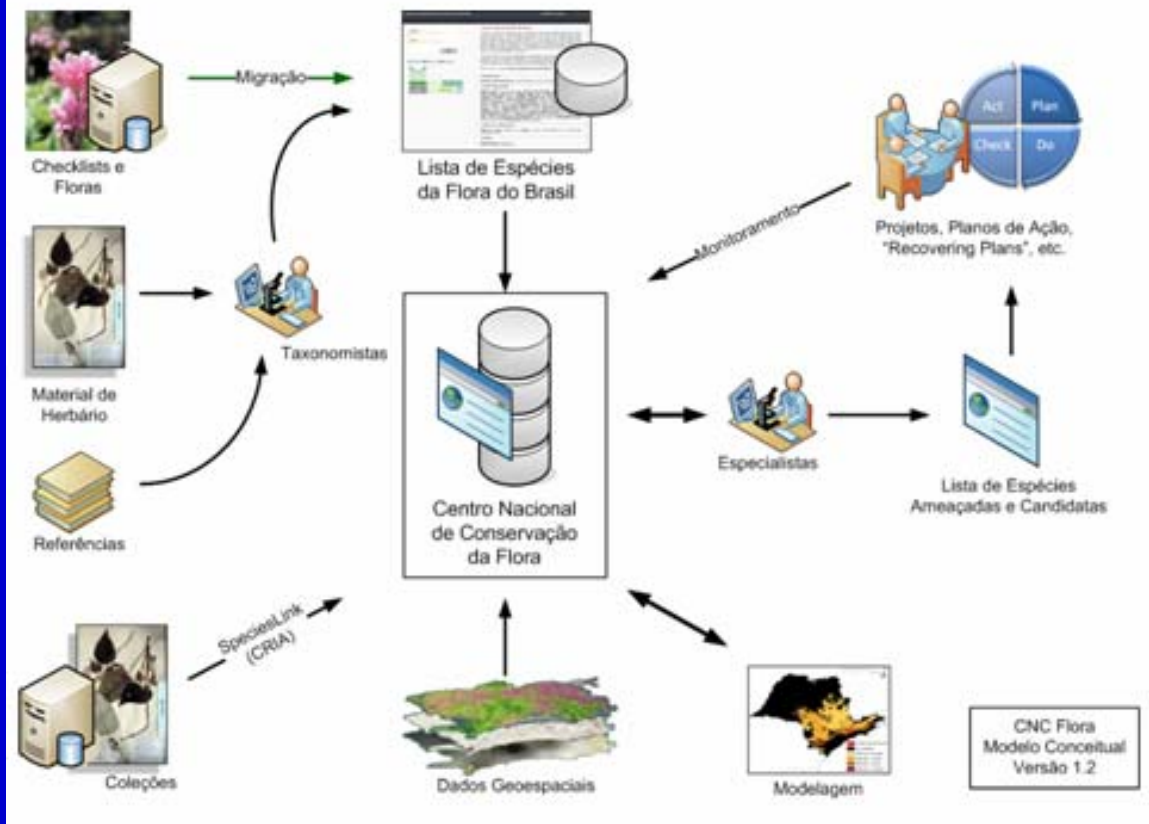
New attributions of JBRJ through of the CNCFlora:

- **Produce the list of species of the Brazilian flora.**
- **Coordinate the list of species of the Brazilian flora threatened with extinction (Official Brazilian List).**
- **Coordinate ex-situ conservation efforts on plant species.**
- **Produce action plans for threatened species of the Brazilian flora.**
- **Develop National Strategy for Plant Conservation**
- **Produce a national program on mountain biodiversity.**

NATIONAL CENTER ON FLORA CONSERVATION CNCFLORA

ATTRIBUTIONS OF CNCFlora AND GSPC TARGETS

- Integrated system of databases and protocols of plants biodiversity (2009) – GSPC target .
- List Brazilian plant species (2010) - GSPC target 1.
- Update of the threatened species list (2010) - GSPC target 2.
- Action plan for at least 20% of such species (2011) – GSPC target 8.
- National Strategy for Plant Conservation (2011) – GSPC target 3.
- National program for research and conservation on mountain biodiversity (2010)
- Training and post-graduation in conservation of plants in the Post- Graduate Program of JBRJ / National School of Tropical Botany – ENBT (2012) – GSPC target 15.
- Partnerships in plant conservation (2011) – GSPC target 16.



CENTRO NACIONAL DE CONSERVAÇÃO DA FLORA CNCFlora

- CNCFlora 6 MONTHS RESULTS

- Design of integrated system of databases: first version prepared, final version in 2010.
- Checklist of Brazilian Flora: prototype working, 42.232 species now listed, contribution of 370 taxonomist, Species2000 protocol, on-line in December 2009.
- Brazilian Official List of Endangered Species (472 spp.): 3 recovery plans prepared, 6 in preparation, 92 endangered species in ex situ collection of JBRJ, revision and re-assessment of the List, Red Data Book of Endangered Species of Flora published in 2010.

CENTRO NACIONAL DE CONSERVAÇÃO DA FLORA CNCFlora

CHALLENGES

1. Megadiversity
2. Data quality
3. National debates
4. Coordination strategies
5. Capacities and resources

Annex 6

PCA National Framework	Global Strategy for Plant Conservation (GSPC)
Grow Partnerships & Resources	
A. Build partnerships to cooperatively share resources & talents	15. Increase trained plant conservation staff, facilities 16. Strengthen plant conservation networks (national, regional, international)
Connect People & Plants	
B. Raise awareness about the importance of plant diversity & the need to conserve it	14. Promote education & awareness about plant diversity, need for conservation
Conserve Natural Resources	
C. Promote ecosystem management to conserve & restore native plant communities	4. World's ecological regions conserved (10%) 5. High plant diversity areas protected (50%) 7. Threatened species conserved *in situ* (60%) 8. Threatened species in *ex situ* (60%) & recovery programs (10%) 10. Manage major invasive species
Encourage Research	
D. Encourage scientific research & technological development	3. Develop research & experience-based models for plant conservation & sustainable use
Promote Sustainability	
E. Determine & encourage appropriate & sustainable use of native plants. Document indigenous knowledge.	6. Production lands managed sustainably (30%) 9. Maintain genetic diversity of valuable species 11. No endangerment from international trade 12. Plant-based products produced sustainably (30%) 13. Halt loss of plant resources, indigenous knowledge
Gather, Maintain & Share Data	
F. Coordinate & promote datasharing & compatible, economical & efficient databases	1. Working list of all known species towards world flora 2. Preliminary conservation assessment – all species

PLANT CONSERVATION ALLIANCE

NATIONAL FRAMEWORK FOR PROGRESS

May 23, 1995

WHY PROTECT NATIVE PLANTS?

A spectacular array of native plants grace the landscapes of our nation. Together, these plants form diverse communities and ecosystems that directly support our economic prosperity and quality of life. No matter how small, all plants play a valuable role in our lives:

Ecological Values: Native plants convert the sun's energy into food; thus they are the source of all food to the animal kingdom. Plants cycle and clean fresh water upon which terrestrial animals depend, and ensure soil stability for ecosystems. We depend on plants to provide the oxygen that all living organisms require.

Economic Values: Plants are sources of genetic and raw materials that are used to expand or diversify agricultural and industrial products, including foods and medicine. Native plants provide a storehouse of genetic diversity for future exploration, discovery, and use, to meet human needs.

Aesthetic Values: The beauty of wildflowers is just one of the many aesthetic values of native plants. The presence of plants in their native habitats and in cultivation enhances our world in many ways. Native plant communities and natural areas provide opportunities for people to experience nature.

North American ecosystems are home to an estimated 20,000 native plant species. These native plants are found in a wide range of environments from boreal forests, alpine tundra, and prairie grasslands to interior deserts, coastal salt marshes, and tropical rainforests. Conservation of native plants in many of these habitats is threatened by a complex array of factors associated with human population growth and development. Mirroring world-wide trends in declining diversity, native plants are being lost at an alarming rate. According to scientists in the United States, more than 200 plants have become extinct since the early 1800's and nearly 5,000 native species are "at risk." Yet only 526 of these plant species have been offered protection under the U.S. Endangered Species Act.

Many plant species remain unknown to us and new plant species continue to be discovered. In California, more than 200 new species have been discovered in the last 25 years. Fifty new plant species have been discovered in Utah and Nevada during the past decade. Some of these species are already threatened at the time they are discovered.

It is important that we attempt to maintain the full complement of biological diversity. Ecological research has yielded only limited understanding on the complexities of our ecosystems. Each plant, each component, is essential to maintaining ecosystem integrity. It is impossible to know the full ramifications of the loss of one or more species in this intricate biological web of life.

NEED FOR ACTION

Conserving the biodiversity and health of native plants and ecosystems is essential to sustain the natural resource base upon which we depend for survival. There is an urgent need to develop effective plant conservation programs before more species and communities become critically endangered. Native plant conservation strategies are not only needed to protect the most imperiled species, but to ensure the long-term survival of all native plant species and plant communities.

Organizations and individuals interested in native plant conservation need to pool resources and combine energies to develop innovative approaches to ensure the continued existence of our plant resources. Most current plant conservation efforts lack focus and are fragmented among Federal agencies, States, conservation groups, botanical gardens, academia, and private individuals.

The national Plant Conservation Alliance provides a framework and strategy for linking resources and expertise in developing a coordinated national approach to plant conservation. The strategy is guided by the following vision:

"For the enduring benefit of the Nation, its ecosystems, and its people, to conserve and protect our native plant heritage by ensuring that to the greatest extent feasible, native plant species and communities are maintained, enhanced, restored, or established on public lands, and that such activities are promoted on private lands."
- Federal Native Plant Conservation Memorandum of Understanding, May 25, 1994

This strategy is intended to be an evolving one that motivates thinking and catalyzes action toward plant conservation. Initially, six broad strategies and supporting goals and actions have been identified to

launch the initiative, and suggested actions and opportunities have been identified to guide efforts for implementing the National Strategy. Different priorities will guide implementation at national, regional, and local levels.

STRATEGY A.

BRING PEOPLE AND ORGANIZATIONS TOGETHER TO SHARE RESOURCES AND TALENTS TO EFFECTIVELY CONSERVE THE NATION'S NATIVE PLANTS.

Problem:
Plant diversity is a universal resource upon which we depend for survival. However, the limited resources available for plant conservation are not being efficiently utilized. Plant conservation efforts are inconsistent, underfunded, and scattered.

Goals:
A1. Establish common goals and priorities.
A2. Promote effective and innovative partnerships that encompass diverse perspectives.
A3. Share expertise among organizations and individuals.
A4. Develop networking tools to facilitate communication and coordination.
A5. Utilize innovative approaches and nontraditional sources to increase funding.
A6. Promote consistent policies for plant conservation.

WHAT YOU CAN DO TO IMPLEMENT THE STRATEGY

- Form a coalition of local, national, and international partners in support of and as advocates for native plants.
- Support development of integrated regional plant programs involving public and private partners.
- Promote partnerships between Federal agencies, States, local governments, Native Americans, neighboring countries, and the private sector to identify, conserve, and restore native plant resources.

- Encourage land management agencies and other organizations to share expertise and resources beyond traditional organizational boundaries.
- Develop collaborative training programs.
- Develop a national directory of native plant conservation contacts.
- Develop an Internet clearinghouse.
- Utilize cost-sharing and grants.
- As appropriate, cultivate relationships with legislators and foundations in order to share information and recommendations.
- Stretch the horizon to locate unique sources of funding.
- Support interagency efforts such as the Federal Memorandum of Understanding on pre-listing and candidate conservation.
- Develop a generic plant conservation policy document that provides broad, scientifically sound policy recommendations that could be modified to meet specific or unique agency requirements.

STRATEGY B.

PROVIDE OPPORTUNITIES FOR PEOPLE TO ENJOY, UNDERSTAND, AND VALUE NATIVE PLANTS AND PLANT COMMUNITIES.

Problem:

Most people do not appreciate and understand how important native plant diversity is to sustaining our world, health, and lifestyles. In addition, many people have not had opportunities to learn about native plants and to enjoy the beauty of wildflowers. Until more people are educated and interested in native plants and their conservation, the constituency necessary to promote programs and conservation actions is lacking.

Goals:

B1. Educate the public, policymakers, and land managers about native plant conservation.
B2. Provide opportunities for the public to participate in hands-on native plant conservation activities.
B3. Broaden participation of national and local educational, conservation, and professional organizations in plant conservation.
B4. Encourage plant appreciation and enjoyment activities.
B5. Encourage creative uses of the media.

WHAT YOU CAN DO TO IMPLEMENT THE STRATEGY

- Incorporate a native plant conservation message into primary, secondary, and adult education curricula.
- Educate land managers about plant conservation and encourage them to support unique and valuable botanical resources for which they are stewards.
- Share interesting stories and success stories about native plants.
- Promote careers in botany and plant ecology.
- Establish volunteer programs to assist with native plant inventories and monitoring.
- Encourage internship programs in native plant conservation.
- Work with national and local environmental education organizations.
- Work with national and local conservation organizations (NGOs).
- Seek professional society participation and support.
- Promote continued development of the *Celebrating Wildflowers* program and other efforts aimed at plant appreciation.
- Provide opportunities for people to observe, view, and appreciate native plants in their native habitats and in cultivation.
- Work with Watchable Wildlife programs to encourage establishment of sites with important or aesthetic plant values.
- Capitalize on the nationwide interest in gardening and encourage appropriate use of native plants for landscaping.
- Encourage participation of the arts community in helping convey the beauty of and appreciation for native plants.
- Seek non-traditional means for conveying plant conservation messages (e.g., grocery bags).
- Utilize public broadcasting system to convey plant conservation messages (e.g., pubic service announcements).
- Encourage participation of celebrities known to be interested in plant conservation to serve as spokespersons for plant conservation.
- Encourage private industries involved with native plant use (e.g., drug manufacturers) to promote native plant conservation through their advertising campaigns.

STRATEGY C.

ENSURE CONSERVATION AND RESTORATION OF NATIVE PLANTS AND NATURAL PLANT COMMUNITIES THROUGH ECOSYSTEM-BASED MANAGEMENT.

Problem:

The Center for Plant Conservation estimates that 200 plant species have gone extinct in the United States since the early 1800's, and

nearly 5,000 native plants are "at risk." Current human population growth and associated development have greatly accelerated degradation of native plants and natural ecosystems. Native plant inventories, monitoring protocols, and management practices are, in many cases, inconsistent and inefficient.

Goals:

C1. Identify and act on extremely urgent plant conservation needs.
C2. Promote coordinated and standardized approaches to classification, inventory, and assessment.
C3. Encourage coordinated plant conservation planning and management.
C4. Seek protection for nationally and regionally significant native plant habitat.
C5. Promote aggressive management practices to prevent, control, and eradicate non-indigenous species that threaten native plant populations.
C6. Develop and implement guidelines and management techniques for collecting, propagating, and utilizing native plants in ecosystem restoration.
C7. Provide for *ex situ* conservation of the highest risk species.
C8. Provide training opportunities for plant conservationists.

WHAT YOU CAN DO TO IMPLEMENT THE STRATEGY

- Promote implementation of existing recovery, restoration, and habitat conservation plans for plants.
- Encourage rapid completion of recovery plans for all listed plants.
- Support efforts to develop a national vegetation classification.
- Promote integrated and coordinated inventories and assessments.
- Coordinate with existing efforts such as the Biological Conservation Database of The Nature Conservancy's Natural Heritage Program, Systematics Agenda 1000, and Flora North America project.
- Conduct inventories of native plants and plant communities, emphasizing imperiled species.
- Expand inventory efforts to include less emphasized groups, including mosses, lichens, fungi, and algae.
- Encourage coordinated development of conservation strategies for all imperiled species and communities.

- Develop a unified national list of plant taxa of range-wide conservation concern (Center for Plant Conservation is working on this.)
- Ensure that ecosystem management initiatives conserve plant biodiversity.
- Encourage development and implementation of management practices which ensure conservation of native plants in their natural habitats.
- Support continued establishment and management of protected areas to protect important genetic resources, representative and unique plant communities, and wild relatives of species of economic importance. (Protected areas include Research Natural Areas, National Parks, National Wildlife Refuges, Wilderness Areas, and Botanical Areas)
- As appropriate, encourage acquisition of significant plant habitat by public agencies and private organizations.
- Support work of the Federal Interagency Committee for the Management of Noxious and Exotic Weeds.
- Identify and inventory aggressive non-indigenous species that are a threat to native vegetation.
- Educate the public on the serious threat of non-indigenous species to native ecosystems.
- Support development and application of appropriate and successful management techniques to prevent, control, and eradicate aggressive non-indigenous species.
- Develop techniques to propagate native plants economically to ensure their availability for revegetation.
- Define "native species" from a regional (geographic) perspective.
- Assemble information on commercial sources for regional native plants.
- Compile information on the role of fire, grazing, species composition, succession, and soils in managing revegetation.
- Develop guide of contacts for assistance in defining regional native species and on obtaining information.
- Develop guidelines for collection of seed and plant propagules for restoration.
- Maintain *ex situ* genetic material using the best storage technology available.
- Develop reintroduction guidelines and policies for rare plants.
- Encourage research on long-term storage techniques for native plant species.
- Publish catalog of training opportunities in plant conservation.
- Sponsor regional training workshops.
- Enlist extension agents to provide training.

STRATEGY D.

ENCOURAGE THE SCIENTIFIC COMMUNITY TO CONDUCT RESEARCH AND TECHNOLOGY DEVELOPMENT IN SUPPORT OF NATIVE PLANT CONSERVATION.

Problem:

Our understanding of most native plants and communities is limited by the lack of applicable ecological research and supporting technology development. Basic information required for effective planning, protection, and management is limited or nonexistent for many plant species. Many plant scientists are not engaged in or rewarded for conservation work.

Goals:

D1. Using adaptive management principles, develop, and implement coordinated monitoring protocols and programs.
D2. Identify and prioritize basic and applied research needs.
D3. Encourage research institutions to staff botanists and plant ecologists and maintain adequate herbaria, oriented toward regional native floras.
D4. Encourage the scientific community to participate in plant conservation and associated education.

WHAT YOU CAN DO TO IMPLEMENT THE STRATEGY

- Develop defensible and objective-driven protocols to monitor native plants and communities.
- Encourage application of adaptive management principles.
- Promote implementation of long-term studies of plant populations and communities that are utilized to revise and improve conservation strategies and recovery plans.
- Develop a coordinated approach to identification and prioritization of basic and applied research needs.
- Encourage research on genetics; systematics; threatened, endangered, and sensitive plant species and communities; patterns of rarity; role of disturbance in maintaining natural ecosystems; control mechanisms for non-indigenous species; and ecosystem restoration.
- Encourage the National Science Foundation to direct research grants toward plant conservation investigations.
- Develop and implement native plant conservation research programs.

- Reverse the nationwide decline in support for herbaria, plant systematists, and botanical programs.
- Encourage the scientific community to share knowledge of native plants, especially in simple, easily understood public forums. Emphasize success stories; help sell plants to the American public.
- Actively seek linkages with existing related efforts such as American Society of Plant Taxonomists, Systematics 2000, and the Sustainable Biosphere Initiative of the Ecological Society of America.

STRATEGY E.

ENCOURAGE PRACTICES THAT SUPPORT APPROPRIATE AND SUSTAINABLE USES OF BENEFICIAL PLANTS.

Problem:

Demand for botanical products such as medicinals, herbals, florals, landscaping plants, and food is growing rapidly. Land management agencies are actively promoting development of non-traditional economic uses including these botanical products. Unfortunately, limited ecological information exists for these species, hindering development of appropriate management guidelines.

Goals:

E1 Identify and monitor the public demand for and impact on botanical resources.
E2 Promote sustainable and conscientious use of native plants.
E3 Document the indigenous people's knowledge about the ecology and uses of native plants and work with indigenous people to safeguard traditional collecting areas for native plants.

WHAT YOU CAN DO TO IMPLEMENT THE STRATEGY

- Work with the commercial sector in identifying uses of native plants.
- Identify and monitor uses that compromise or threaten the integrity of native plant populations and communities.
- Develop scientifically based policy and guidelines for sustainable use of native plants for medicinal, cultural, aesthetic, and economic purposes.

- Work with commercial interests that utilize native plant materials (e.g., nursery and pharmaceutical industries) to ensure that sound conservation practices are employed.
- Promote plants as a tourism resource (e.g., wildflower viewing). Broaden the definition of Watchable Wildlife programs to include plants.
- Work with commercial and noncommercial interests in promoting the appropriate use of native plants for garden and landscaping use.
- When demand dictates, encourage horticultural development of natives to take pressure off of natural populations.
- Encourage local tribal councils to document and share their knowledge and use of native plants.

STRATEGY F.

PROMOTE THE DEVELOPMENT AND USE OF COORDINATED DATABASES AND INFORMATION-SHARING TO SUPPORT NATIVE PLANT CONSERVATION.

Problem:

Numerous plant databases exist and continue to be developed independently. The lack of common data structures, coordination, and awareness of existing databases has hindered information-sharing and results in duplication of effort.

Goals:

F1. Identify and prioritize data needs for native plant conservation.
F2. Ensure compatibility and economy of existing plant conservation databases.
F3. Promote coordinated development and operation of future plant conservation information systems.
F4. Promote broad use and open exchange (as appropriate) of plant conservation information.

WHAT YOU CAN DO TO IMPLEMENT THE STRATEGY

- Encourage coordinated efforts to identify data and data system needs to support native plant conservation.
- Identify and evaluate existing plant conservation databases.
- Modify existing database structures to allow data exchange.
- Promote electronic database connections between Federal agencies, States, and organizations.

Annex 7

Revised text for the introduction to the:

PROPOSED UPDATED GLOBAL STRATEGY FOR PLANT CONSERVATION 2011-20201

Executive summary

NEED TO ADD A PREAMBLE – keeping it short

Progress made since the previous version of the GSPC
New challenges – climate change, biological invasions, fire, other changes

2. The Global Strategy for Plant Conservation is a catalyst for working together at all levels - local, national, regional and global - to understand, conserve and use sustainably the world's immense wealth of plant diversity whilst promoting awareness and building the necessary capacities for its implementation.

Moved up from line 11 point 2.

A. VISION

Without plants, there is no (human) life. The functioning of the planet, and our survival, depends upon plants.

The Strategy seeks to halt the continuing loss of plant diversity.

1. Our vision is of a positive, sustainable future where human activities celebrate and support the diversity of plant life (including the endurance of plant genetic diversity, survival of plant species and communities and their associated habitats and ecological associations), and where in turn the diversity of plants support and improve our livelihoods and well-being.

2. MOVED TO THE PREAMBLE

3. If the strategy is fully implemented

(a)

REPLACE WITH NUMBER 1 IN KEY MESSAGES FROM THE PLANT CONSERVATION REPORT – importance of plants as components of biodiversity and healthy ecosystems and as providers of natural resources.

(b) Humanity can fully utilize the potential of plants to mitigate climate change and the role of plant diversity in maintaining the resilience of ecosystems and their capacity to adapt to threats from climate change;

(c) No species of plants will be at risk of extinction because of human activities, and the genetic diversity of plants will be safeguarded;

(d) The rich evolutionary legacy of plant diversity will be used sustainably and benefits arising are shared equitably to solve pressing problems, support livelihoods and improve human well being, as the ultimate source of our foods, many medicines, timber, fibre and other materials, and as the structure and underpinnings of habitats for, and as ecological partners of, animals and other organisms;

(e) The knowledge and practices of all local human communities that depend on plant diversity will be secure and recognized as valuable living traditions and ways of life;

(f) People everywhere will be aware of the urgency and understand that plants support their lives and many livelihoods, and that everyone has a role to play in plant conservation.

B. OBJECTIVES

4. The Strategy consists of the following five objectives:

(a) Objective I: Plant diversity is sufficiently understood and documented to enable a

33 sustainable future;
34 (b) Objective II: Plant diversity is urgently and effectively conserved;
35 (c) Objective III: Plant diversity is used in a sustainable and equitable manner;

Page 2
1 (d) Objective IV: Education and awareness about plant diversity, its role in sustainable
2 livelihoods and importance to all life on earth is vital (rephrase it to make it stronger than “promoted”);
3 (e) Objective V: The capacities and public engagement necessary to implement the Strategy have been developed.

C. RATIONALE

6 5. **Highlights importance of plants**
Plants play a key role in maintaining the planet's basic environmental balance and ecosystem stability and provide an irreplaceable component of the habitats for the world's animal life. A recognition that intact forest ecosystems play a major role in climate amelioration and provide a first line of defence against climate change.

.
17 6. **Uses and importance**
In addition to the cultivated plant species used for food, timber and fibres, many thousands of wild plants have great economic and cultural importance and potential, providing food, medicine, fuel, clothing and shelter for billions of people throughout the world. The diversity of plant life is the greatest source of natural capital at humanity's disposal. Furthermore, plant diversity is of special concern to indigenous and local communities

25 7. **Threats**
The growing threats of extinction to plant species, loss of habitat and ecological functions is of urgent concern. Plants are increasingly threatened by climate change, land conversion, over-exploitation, biological invasions, and pollution. The continuing loss of plant diversity poses one of the greatest challenges to the world community. To halt the destruction of the plant diversity that is essential to meeting the present and future needs of humankind, if this loss is not stemmed, countless opportunities to develop new solutions to pressing economic, environmental, medicinal and industrial problems will also be lost.

The goal of the Global Strategy for Plant Conservation is to address the challenges posed by threats to plant diversity.
While the overall purpose of the Strategy is conservation, sustainable use of plant diversity and benefit sharing are equally important to its purpose.

31 8.. Conclusion
Therefore the continuation and refinement of the GSPC is essential to halt the continuing loss of plant diversity

POSSIBILITY TO MOVE THE RATIONALE BEFORE THE VISION

37 D. SCOPE

REFERENCE PLANT CONSERVATION REPORT
ADD ACHIEVEMENTS

38 9.

No further changes suggested