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Item 17.3 of the provisional agenda*

GLOBAL STRATEGY FOR PLANT CONSERVATION

Technical review of the targets and analysis of opportunities for their implementation: report of the meeting of technical experts on the Global Plant Conservation Strategy, Gran Canaria, 11-13 February 2002

Addendum

OPPORTUNITIES FOR THE IMPLEMENTATION OF THE GLOBAL STRATEGY FOR PLANT CONSERVATION THROUGH THE THEMATIC AND CROSS-CUTTING PROGRAMMES OF WORK OF THE CONVENTION ON BIOLOGICAL DIVERSITY

I. BACKGROUND

a) *The origins of the proposed strategy*

1. Concerned that as many as two-thirds of the world's plant species are in danger of extinction in nature during the course of the twenty-first century, and recognizing that this threatens our need for and expectation of using plant diversity to build sustainable, healthy and better lives for the future, taking note of the proposal contained in the Gran Canaria Declaration (UNEP/CBD/COP/5/INF/32) and recognizing the important role of other existing initiatives, the Conference of the Parties, at its fifth meeting, held in Nairobi in May 2000, decided to consider the establishment of a global strategy for plant conservation at the sixth meeting (decision V/10). In line with this decision, the Conference of the Parties also requested the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) to make recommendations on the subject at its sixth meeting.

2. In preparation for consideration of the proposed strategy by SBSTTA and in line with decision V/10, the Executive Secretary solicited the views of Parties and liaised with relevant organizations to gather relevant information. The following Parties and other Governments provided views on the matter: Belgium, Costa Rica; Guyana, Islamic Republic of Iran; Kiribati; New Zealand; Pakistan, Poland,

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Republic of Palau; Spain; and Thailand. Resolutions, or other submissions, were also provided by the World Conservation Congress (resolutions 25 and 68), Planta Europa; the “Gran Canaria Group”, and the World Wide Fund for Nature (WWF). The Executive Secretary also convened an informal consultation on the matter with relevant organizations on the margins of the sixth meeting of SBSTTA in March 2001. A second consultation with these organizations and additional experts was organized in collaboration with Botanic Gardens Conservation International (BGCI) on behalf of the Gran Canaria Group in London on 17-18 May 2001. Participants included representatives of the Plants Committee of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the Commonwealth Secretariat, BGCI, the Food and Agriculture Organization of the United Nations (FAO), the International Association of Botanic Gardens, the International Institute for Plant Genetic Resources (on behalf of the Consultative Group on International Agricultural Research (CGIAR)), IUCN, Planta Europa, the United Nations Educational, Scientific and Cultural Organization (UNESCO), the World Conservation Monitoring Centre (WCMC) of the United Nations Environment Programme (UNEP), and WWF, and of botanical or other biodiversity-related institutions from Australia, Brazil, Canada, Colombia, Germany, Kenya, Indonesia, South Africa, Spain, the United Kingdom and the United States of America.

3. Participants at the first consultation agreed that in order to stem the continued unacceptable loss of plant diversity worldwide, there was need for the development of a Global Plant Conservation Strategy, which should be bold, imaginative, innovative, practical and flexible. They suggested that it would draw upon existing initiatives and not seek to replace or duplicate them. Participants agreed that the proposed strategy should include targets for plant conservation that are measurable, achievable and quantifiable. They considered that such targets should relate to ultimate outcomes of the strategy, such as the level of plant diversity documented and conserved, and thus they would be complementary to the existing targets set under the various work programmes of the Convention. At the second consultation, participants developed 14 draft targets for the strategy. It was emphasized that the targets should be clearly understood and limited in number. The targets were refined through subsequent consultation between the participants.

b) Existing relevant Initiatives

4. A number of decisions by the Conference of the Parties established programmes of work and initiatives that could contribute to the proposed strategy, including the major thematic areas of agricultural, forest, dry and sub-humid land, marine and coastal biological diversity, inland water biological diversity, and several relevant cross-cutting issues, including the Global Taxonomy Initiative, the ecosystem approach, sustainable use, protected areas, and invasive alien species, as well as work on biosafety, access to genetic resources and benefit-sharing, and the implementation of Article 8(j) and related provisions. It is envisaged that the Global Strategy for Plant Conservation would be integrated into programmes of work of the Convention.

5. As indicated in decision V/10, there is also a range of existing international initiatives that address various aspects of plant conservation, including, for example:

- (a) For plant genetic resources for food and agriculture, the FAO Global Plan of Action for Plant Genetic Resources for Food and Agriculture, and the International Undertaking on Plant Genetic Resources for Food and Agriculture, currently under revision to bring it into harmony with the Convention;
- (b) For plants endangered by international trade, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES);
- (c) For ecosystem management and scientific research, the UNESCO Mand and Biosphere (MAB) programme;
- (d) For botanic gardens, the International Agenda for Botanic Gardens in Conservation;
- (e) For endangered plants, the IUCN Species Survival Commission’s Plant Conservation Programme;

- (f) To address the threats posed by invasive alien species, the International Plant Protection Convention (IPPC), and the Global Invasive Species Programme (GISP).

6. Several other international instruments, such as the United Nations Framework Convention on Climate Change, the Convention to Combat Desertification, the Ramsar Convention on Wetlands and others have also established commitments and programmes of work on issues closely linked to plant conservation and can make an invaluable contribution to the development, coordination and implementation of the proposed strategy. Other relevant international initiatives include the People and Plants Programme of WWF, UNESCO and the Royal Botanic Gardens, Kew.

7. There are also efforts at the regional level. For example, regional strategies for plant conservation are being developed for Europe under the auspices of the Council of Europe and Planta Europa, and for Southern Africa by the Southern African Botanical Diversity Network (SABONET). Sectoral efforts in plant conservation are also being made at regional levels, such as Conservation Action Plans for botanic gardens in Europe and the Caribbean.

8. A number of efforts to develop practical actions to safeguard plant diversity and to use it sustainably are also being undertaken by national Governments, public and private institutions and local and indigenous communities.

c) *Consideration of the strategy by SBSTTA at its seventh meeting*

9. Based on the conclusions of the Informal Consultations on the Global Strategy for Plant Conservation and the views provided by the Parties, a draft Strategy was prepared, contained in document UNEP/CBD/SBSTTA/7/10. This document was considered by SBSTTA during its seventh meeting held in Montreal from 12-16 November 2001.

10. In preparation for consideration of the draft Global Strategy for Plant Conservation by the Conference of the Parties at its sixth meeting, SBSTTA recommendation VII/8 paragraph 2, requests the Executive Secretary “to prepare an analysis of the opportunities for implementation of the strategy through the thematic and cross-cutting programmes of work of the Convention, including in particular the Ecosystem Approach and the Global Taxonomy Initiative, as well as through existing relevant international, regional and national initiatives, and of any gaps in these programmes and initiatives”.

11. The present note provides the background information related to the analysis of opportunities for implementation of the strategy through the thematic and cross-cutting programme of work of the Convention (recommendation VII/8, paragraph 3). It is based on a background document entitled “An analysis of opportunities for the implementation of the global strategy for plant conservation through the thematic and cross-cutting programmes of work of the Convention on Biological Diversity” prepared for the technical expert meeting held in Gran Canaria, Spain, 11-13 February 2002. It has been finalized by the Secretariat in the light of revisions of the targets agreed by the meeting of technical experts, the comments expressed at that meeting, and the views received from the Parties.

12. Accordingly, this paper provides an analysis of a review of the Decisions of the Conference of the Parties (as well as SBSTTA recommendations) to highlight areas of priority concern or relevance to plant conservation, and specifically to the proposed Global Strategy for Plant Conservation. The paper demonstrates linkages between the targets and the programmes of work. It focuses on highlighting existing and proposed measures under the current work programmes of the Convention that address each one of the 16 draft targets included in Annex 1 of Decision VII of SBSTTA VII. The present paper also suggests how each of the 16 proposed draft targets relates to specific article of the Convention.

13. The five thematic work programmes included in the review address marine and coastal biodiversity, agricultural biodiversity, forest biodiversity, the biodiversity of inland waters, and dry and

sub-humid lands. As each thematic programme establishes a vision for, and basic principles to guide future work; sets out key issues for consideration; identifies potential outputs; and suggests a timetable and means for achieving these outputs, these provide a valuable basis on which to consider how each of the 16 proposed draft targets for a strategy can be met. A similar analysis was undertaken for cross-cutting issues. The cross-cutting issues addressed are:

- Ecosystem Approach
- Identification, monitoring and assessment, and indicators
- Alien species that threaten ecosystems, habitats and species
- Global Taxonomy Initiative
- Scientific and technical cooperation and the clearing-house mechanism
- Article 8(j) and related provisions – indigenous, traditional and local knowledge
- Education and Public Awareness
- Impact Assessment, liability and redress
- National Reporting
- Sustainable use of biodiversity
- Biological Diversity and Tourism
- Access to genetic resources

14. Other issues considered are Trade and Incentive measures, Innovations and Practices, Climate Change and Biodiversity Economics and Protected Areas.

15. Although the scope of the analysis of opportunities was not sufficient to undertake an extensive review of apparent gaps (i.e. particular targets that are not adequately covered by any existing thematic work programme or cross-cutting issue), some indications of major gaps identified are reviewed. It is recognised however, that, although some gaps may be apparent in the existing work programme of the Convention and its current activities, some of these may be addressed through other initiatives being taken at national, regional and international levels by a range of other bodies (such as other conventions, UN agencies and sectoral networks and initiatives of a range of scientists, botanic gardens, universities and other organisations and institutions).

d) Objectives of the Strategy

16. The aim of the proposed Strategy would be to halt the current and continuing unacceptable loss of plant diversity. The strategy aims to improve the long-term conservation, management and restoration of plant diversity and plant communities, and the associated habitats and ecosystems, and where necessary to complement *in situ* measures, with *ex situ* actions, preferably in the country of origin. The strategy, with its 16 targets, will be a tool to enhance the ecosystem approach to the conservation and sustainable use of biodiversity, will focus on the vital role of plants in the structure and functioning of ecological systems, and will assure provision of the goods and services that these systems provide.

17. The draft Global Strategy for Plant Conservation, as proposed, contains the following five major elements. The objectives of each element are presented in document UNEP/CBD/SBSTTA/7/8.

- I. Understanding and Documenting Plant Diversity
- II. Conserving Plant Diversity
- III. Using Plant Diversity Sustainably
- IV. Promoting Education and Awareness about Plant Diversity
- V. Building Capacity for the Conservation of Plant Diversity

e) Proposed draft targets for 2010

18. A series of 16 draft targets were refined during the Expert Meeting; the revised targets proposed to be included in the draft Strategy to address different aspects of each of these elements are presented in the following point.

f) *Contributions of the Global Strategy for Plant Conservation to the achievement of the objectives of the Convention*

19. The following are the main contributions that the Strategy can make to the achievement of the objectives of the Convention. The main articles that would be addressed by each of the 16 individual targets are highlighted. Articles of primary relevance are in bold.

I. UNDERSTANDING AND DOCUMENTING PLANT DIVERSITY

Target 1: A widely accessible working list of known plant species, as a step towards a complete world flora.

Article 7. Identification and Monitoring

Article 9. *Ex situ* Conservation

Article 12. Research and Training

Article 17. Exchange of Information

Article 18. Technical and Scientific Cooperation

Target 2: A preliminary assessment of the conservation status of all known plant species, at national, regional and international levels.

Article 6. General Measures for Conservation and Sustainable Use

Article 7. Identification and Monitoring

Article 9. *Ex situ* Conservation

Article 12. Research and Training

Article 17. Exchange of Information

Article 18. Technical and Scientific Cooperation

Target 3: Development of models with protocols for plant conservation and sustainable use, based on research and practical experience.

Article 6. General Measures for Conservation and Sustainable Use

Article 7. Identification and Monitoring

Article 8. *In situ* Conservation

Article 9. *Ex situ* Conservation

Article 12. Research and Training

Article 17. Exchange of Information

Article 18. Technical and Scientific Cooperation

II. CONSERVING PLANT DIVERSITY

Target 4: At least 10 per cent of each of the world's ecological regions effectively conserved.

Article 6. General Measures for Conservation and Sustainable Use

Article 7. Identification and Monitoring

Article 8. *In situ* Conservation

Article 15. Access to Genetic Resources

Article 16. Access to and Transfer of Technology

Target 5: Protection of 50 per cent of the most important areas for plant diversity assured.

Article 6. General Measures for Conservation and Sustainable Use

Article 7. Identification and Monitoring

Article 8. *In situ* Conservation

Article 15. Access to Genetic Resources

Article 16. Access to and Transfer of Technology

Target 6: At least 30 per cent of production lands managed consistent with the conservation of plant diversity.

Article 6. General Measures for Conservation and Sustainable Use

Article 8. In situ Conservation

Article 10. Sustainable Use of Components of Biological Diversity

Article 11. Incentive Measures

Article 15. Access to Genetic Resources

Article 16. Access to and Transfer of Technology

Target 7: 60 per cent of the world's threatened species conserved *in situ*.

Article 8. In situ Conservation

Article 15. Access to Genetic Resources

Article 16. Access to and Transfer of Technology

Target 8: 60 per cent of threatened plant species in accessible *ex situ* collections, preferable in the country of origin, and 10 per cent of them included in recovery and restoration programmes.

Article 8. In-situ Conservation

Article 9. Ex situ Conservation

Article 15. Access to Genetic Resources

Article 16. Access to and Transfer of Technology

Target 9: 70 per cent of the genetic diversity of crops and other major socio-economically valuable plant species conserved, and associated local and indigenous knowledge maintained.

Article 8. In situ Conservation

Article 9. Ex situ Conservation

Article 10. Sustainable Use of Components of Biological Diversity

Article 11. Incentive Measures

Article 15. Access to Genetic Resources

Article 16. Access to and Transfer of Technology

Target 10: Management plans in place for at least 100 major alien species that threaten plants, plant communities and associated habitats and ecosystems.

Article 8. In situ Conservation

Article 14. Impact Assessment and Minimizing Adverse Impacts

III. USING PLANT DIVERSITY SUSTAINABLY

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

Article 7. Identification and Monitoring

Article 9. Ex situ Conservation

Article 10. Sustainable Use of Components of Biological Diversity

Article 11. Incentive Measures

Article 15. Access to Genetic Resources

Target 12: 30 per cent of plant-based products derived from sources that are sustainably managed.

Article 10. Sustainable Use of Components of Biological Diversity

Article 11. Incentive Measures

Article 15. Access to Genetic Resources

Article 16. Access to and Transfer of Technology

Target 13: The decline of plant resources, and associated local and indigenous knowledge innovations and practices, that support sustainable livelihoods, local food security and health care, halted.

Article 10. Sustainable Use of Components of Biological Diversity

Article 11. Incentive Measures
Article 15. Access to Genetic Resources

IV. PROMOTING EDUCATION AND AWARENESS ABOUT PLANT DIVERSITY

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

Article 13. Public Education and Awareness
Article 17. Exchange of Information

V. BUILDING CAPACITY FOR THE CONSERVATION OF PLANT DIVERSITY

Target 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.

Article 12. Research and Training
Article 17. Exchange of Information
Article 18. Technical and Scientific Cooperation
Article 16. Access to and Transfer of Technology
Article 19. Handling of Biotechnology and Distribution of its Benefits

Target 16: Networks for plant conservation activities established or strengthened at national, regional and international levels.

Article 10. Sustainable Use of Components of Biological Diversity
Article 12. Research and Training
Article 17. Exchange of Information
Article 18. Technical and Scientific Cooperation

g) Coverage of plant conservation by the Convention's thematic and cross-cutting programmes of work and identification of apparent gaps

20. The five thematic work programmes cover the majority of the world's biomes, and will contribute to the conservation of plants found in them. Some plant species growing in temperate grasslands, polar and sub-polar regions and selected mountain ecosystems may not be covered at this time. The particular conservation needs and unique nature on many island floras may also require special attention.

21. The Convention has addressed the need for a work programme on the sustainable use of biodiversity. Such a programme would be of very considerable importance for the achievement of Targets 6, 9, 11, 12 and 13, and in particular to ensure that activities in plant conservation related to sustainable use of plant diversity is coordinated with activities being implemented by parties to implement the FAO Global Plan of Action for the Conservation and Sustainable Utilization of Plant Genetic Resources for Food and Agriculture. Special attention may also be required to put in place measures that address the conservation of medicinal plant diversity.

22. The Global Strategy for Plant Conservation provides a framework where contributions of existing programmes of work and agreements related to plant conservation can be promoted. The majority of the targets of the GSPC can be addressed through existing work programmes of the CBD and other international agreements and initiatives, such as those listed later in this document. A separate programme of work under the Convention on Biological Diversity is not needed. Existing programmes of work can be strengthened to enhance their contribution to the GSPC.

23. The existing cross-cutting work programmes adopted and for consideration by the Conference of the Parties can contribute to the implementation of selected targets, especially those on the global taxonomy initiative (GTI), the ecosystem approach, the invasive alien species, education and public awareness, Article 8(j) and related provisions, as per SBSTTA 7/8 recommendation. The targets should

be taken into account when work programmes are being revised in the future, to enhance their overall contribution to the strategy.

II. LIST OF THE THEMATIC AND CROSS-CUTTING PROGRAMMES OF WORK OF THE CONVENTION ON BIOLOGICAL DIVERSITY RELATED TO THE 16 DRAFT TARGETS OF THE GLOBAL STRATEGY FOR PLANT CONSERVATION

26. In the following section, text given in italics represents SBSTTA recommendations not yet approved by the COP. Recommendations VI are in document UNEP/CBD/6/3 and recommendations VII in document UNEP/CBD/6/4. A reference for each item is also given, representing Decisions of the COP, Recommendations of SBSTTA and other significant documents prepared to guide or describe the Convention's programmes of work. Page numbers given refer to the location on the text of COP Decisions and SBSTTA Recommendations in of the Handbook to the Convention (2001 edition), to enable users to refer conveniently to the full text of these documents.

I. UNDERSTANDING AND DOCUMENTING PLANT DIVERSITY

Target 1:

A widely accessible working list of known plant species, as a step towards a complete world flora.

Thematic work programmes

Marine & coastal biodiversity

- Support the Global Taxonomy Initiative in the marine and coastal environment (Decision IV/5, Annex B, 6, p466).

Agricultural biodiversity

- *Activity 3.5: Develop tools and mechanisms for the international and regional exchange of information for the conservation, restoration and sustainable use of pollinators [...]. (Recommendation VII/7,III, p60)*

Forest biodiversity

- The COP requests the Executive Secretary to compile a synthesised report on the information on forest biological diversity [...]. (Decision IV/7 Para.10 p480)
- Taxonomic studies and inventories at the national level which provide for a basic assessment of forest biological diversity. (Decision IV/7 Annex Para.44 p485)
- Calls upon the Global Environmental Facility (GEF) to provide financial support [...] including taxonomic studies and inventories, focusing on forest species, other important components of forest biodiversity and ecosystems under threat. (Decision IV/7 para 6, p479)
- *Objective 2: Develop [...] national forest ecosystem classification systems and maps that include key components of forest biodiversity to be used in assessment reports on forest types including socio-economic and cultural aspects. (Recommendation VII/6 Annex, Programme Element 3, Goal 1 Para.(b) p46) (See Target 2)*

Cross-cutting issues

Alien species

- *Guiding Principle 8: States should assist in the development of an inventory and synthesis of relevant databases, including taxonomic and specimen databases, and the development of information systems and an interoperable distributed network of databases for compilation and dissemination of information [...]. (Recommendation VI/4 Annex, B, para 1, p48) (See also Target 10 and GTI)*
- *Guiding Principle 9: [...] share information on invasive alien species, their potential uneasiness and invasion pathways, with a particular emphasis on cooperation among neighbouring countries,*

between trading partners, and among countries with similar ecosystems and histories of invasion. (Recommendation VI/4 Annex, B, para (a), p48) (See also Target 10)

Global Taxonomy Initiative

- [...] make the information on existing taxonomic knowledge, including about the taxa in worldwide collections, available to countries of origin. (Recommendation II/2 Para.7 p387)
- Taxonomic information to assist capacity-building in taxonomy should be included within the clearing-house mechanism. Taxonomic work [...] needs to be updated and readily accessible [...]. (Recommendation II/2 Para.8 p387)
- [...] Parties to consider instructing the GEF to support the Global Taxonomy Initiative in order to provide funds [...] for making information housed in collections worldwide and taxonomy based on them available to countries of origin (Recommendation II/2 Para.10(c) p388)
- [...] Parties to consider instructing the GEF to support the Global Taxonomy Initiative in order to provide funds [...] for producing and distributing regional taxonomic guides (Recommendation II/2 Para.10(d) p388)
- [...] Parties to consider instructing the GEF to support the Global Taxonomy Initiative in order to provide funds [...] for disseminating taxonomic information worldwide, inter alia, by the clearing-house mechanism. (Recommendation II/2 Para.10(f) p388)
- Parties [...] should utilize information systems to maximum effect in taxonomic institutions [...] taxonomic information, literature and checklists should be put into electronic form. (Decision IV/1 Annex Para.6 p443)
- [...] the clearing-house mechanism should [...] develop protocols and strategies for coordinating access to and distribution of taxonomic information [...]. [It] should establish and update directories of taxonomists and their research and identification expertise. (Decision IV/1 Annex Para.10 p444)
- The Executive Secretary should take decisive action to advance the Global Taxonomy Initiative [...]. (Decision IV/4 Annex I D Para.21 p461) (See also Target 3 and Global Taxonomy Initiative)
- Efforts should be undertaken to support the Global Taxonomy Initiative in the marine and coastal environment [...]. (Decision IV/5 Annex B Para.5 p466) (see thematic area marine and coastal)
- Taxonomic studies and inventories at the national level which provide for a basic assessment of forest biological diversity. (Decision IV/7 Annex Para.44 p485) (also under Thematic area “Marine and coastal”)
- Requests the Executive Secretary to collaborate [...] to assist Parties in the Convention in [...] assessing priorities for taxonomic work [in the context of alien invasive species]. (Decision V/8, para 14(f), p574) (See also Target 10)
- *Planned activity 7: Develop a coordinated global taxonomy information system. (Recommendation VI/6, II B, Operational objective 3, p69)*
- *Planned activities 8-13: Within the major thematic work programmes [...] include key taxonomic objectives to generate information needed for decision-making in conservation and sustainable use of biodiversity and its components [:] forest biological diversity, marine and coastal biological diversity, dry and sub-humid lands biodiversity, inland waters biological diversity, agricultural biological diversity, mountain biological diversity. (Recommendation VI/6, II B, Operational objective 4, p70-77)*
- *Planned activities 14-18: Within the work on cross-cutting issues [...] include key taxonomic objectives to generate information needed for decision-making in conservation and sustainable use of biodiversity and its components [:] access and benefit-sharing, invasive alien species, support in implementation of Article 8(j), ecosystem approach, protected areas. (Recommendation VI/6, II B, Operational objective 5, p77-82)*

Target 2:

A preliminary assessment of the conservation status of all known plant species, at national, regional and international levels.

Thematic work programmes

Marine & coastal biodiversity

- Develop approaches for assessing the vulnerability of coral-reef species to global warming. (Decision V/3, Annex C, Response, Para (a), p544) (See also Climate Change)

Agricultural biodiversity

- Activity 1.5: Develop methods and techniques for assessing and monitoring the status and trends of agricultural biodiversity and other components of biodiversity in agricultural ecosystems [...]. (Decision V/5, Annex B, p557)
- Activity 4.1(b): Support relevant institutions in the conduct of assessments on the status and trends of agricultural biodiversity [...]. (Decision V/5, Annex B, p563)
- Activity 4.2: Support the development or adaptation of relevant systems of information, early warning and communication [...] for the assessment of the state of agricultural biodiversity and threats to it [...], and of appropriate response mechanisms. (Decision V/5, Annex B, p563) (See also Target 9)

Forest biodiversity

- *Objective 2: Determine status and conservation needs of endemic or threatened species and impacts of current forest management practices on these species. (Recommendation VII/6 Annex , Programme Element 1, Goal 3 Para.(a) p37) (See also Target 3)*
- *Objective 4: Provide guidance for countries to assess the state of their forest genetic resources, and to develop and evaluate strategies for their conservation, both in situ and ex situ. (Recommendation VII/6 Annex , Programme Element 1, Goal 4 Para.(d) p40) (See also Target 7 and 8)*
- *Objective 1: [...] carry out thorough analysis of the direct and underlying causes of losses of forest biological diversity. (Recommendation VII/6 Annex, Programme Element 2, Goal 1 Para.(a) p41)*
- *Objective 4: [...] provide information [...] to enable a better comprehension of the effects of illegal logging, exploitation of other forest resources and associated trade, as well as the underlying causes, on forest biodiversity. On the basis [...] of this information countries may decide to take relevant measures [...]. (Recommendation VII/6 Annex, Programme Element 2, Goal 1 Para.(a) p43) (See also Target 2)*
- *Objective 2: Use adapted technology [...] to develop a baseline for assessing levels of deforestation and impacts on biodiversity. (Recommendation VII/6 Annex, Programme Element 3, Goal 1 Para.(c) p46)*
- *Objective 3: Identify and prioritise relevant areas to carry out specific forest ecosystem surveys in priority areas for conservation and sustainable use of forest biodiversity. (Recommendation VII/6 Annex, Programme Element 3, Goal 1 Para.(a) p46)*
- [...] consider [...] the impact of climate change on forest biodiversity. (Decision V/4 Para 11, p548) (See also Climate Change)
- Carry out a review of available information on the status and trends of, and major threats to, forest biodiversity, to identify significant gaps in that information. (Decision V/4 Annex, Para 2(a), p549)
- Identify new measures and ways to improve the conservation of forest biodiversity in and outside protected areas. (Decision V/4 Annex, Para 2(b)(I), p549)
- *Objective 1: Create and improve [...] databases and case-studies on the status of degraded forests, deforested, restored and afforested lands. (Recommendation VII/6 Annex, Programme Element 1, Goal 3 Para.(c) p37)*

Biodiversity of inland waters

- [...] develop an improved picture of inland water biodiversity, its uses and its threats, around the world [...] (Decision IV/4 Annex I, A, Para 8 a), p456)
- Develop and disseminate regional guidelines for rapid assessment of inland water biodiversity for different types of inland water ecosystems. (Decision IV/4 Annex I, A, Para 8 b), p456)

- Identify the most cost-effective approaches and methods to describe the status, trends and threats of inland waters and indicate their condition in functional as well as species terms. (Decision IV/4 Annex I, A, Para 9 e)(i), p457)
- Undertake assessments in such inland water ecosystems which may be regarded as important [...]. Undertake assessments of threatened species and conduct inventories and impact assessments of alien species [...]. (Decision IV/4 Annex I, A, Para 9 e)(iv), p457) (See also Target 10)
- Identify [suitable organisms] as particularly important in the assessment of inland water ecosystems [...]. (Decision IV/4 Annex I, A, Para 15, p460)

Biodiversity of dry and sub-humid lands

- Activity 1: Assessment of the status and trends of the biological diversity of dry and sub-humid lands [...] and the effectiveness of conservation measures. (Decision V/23 Annex I, II, Part A, p635)
- Activity 7: Cooperation with all relevant conventions [...] with respect to, inter alia, the sustainable use of the biodiversity of dry and sub-humid areas, the application of the ecosystem approach, the assessment of the status and trends of this biological diversity as well as to its threats (Decision V/23 Annex I, II, Part B, Para (m), p638) (See also Targets 11 and 12 and Ecosystem Approach)

Cross-cutting issues

Biological diversity and Tourism

- Depletion of local populations [...] (Decision V/25 Annex, Part II A, Para 19, p650) (See also Target 3)

Climate change

- [...] consider [...] the impact of climate change on forest biodiversity. (Decision V/4 Para 11, p548) (See also Forest Biodiversity)

Global Taxonomy Initiative

- Improvement of taxonomic knowledge [is]...fundamental to the development of indicators and assessment. (Decision III/10, para 2, p381)
- *Planned Activity 17: Support for ecosystem approach and work under the Convention on Biological Diversity on assessment including impact assessments, monitoring and indicators. (Recommendation VI/6, II C, Operational Objective 5)*

Target 3:

Development of models with protocols for plant conservation and sustainable use, based on research and practical experiences.

Thematic work programmes

Marine & coastal biodiversity

- Operational objective 1.2: develop guidelines for ecosystem evaluation and assessment, paying attention to the need to identify and select indicators, including social and abiotic indicators, that distinguish between natural and human-induced effects. (Decision IV/5, Annex C, p468)
- Operational objective 3.1: facilitate research and monitoring activities related to the value and the effects of marine and coastal protected areas or similarly restricted management areas on sustainable use of marine and coastal living resources. (Decision IV/5, Annex C, p470)
- Implement and coordinate targeted research programmes [...], that investigate [...], the relationship among large-scale coral-bleaching events, global warming and the more localized threats that already place reefs at risk [...]. (Decision V/3, Annex A, Response, Para (a), p542) (See also Climate Change)

Agricultural biodiversity

- Monitor pollinator decline, its causes and its impacts on pollination services. (Decision V/5, II, Para. 14(a), p552)
- *Activity 1.1: Monitor the status and trends of pollinators [...]. (Recommendation VII/7, III, p56)*
- *Activity 2.2: Identify and promote the dissemination of information on cost-effective practices and technologies, and related policy and incentive measures that enhance the positive and mitigate negative impacts of agriculture on pollinator diversity, productivity and capacity to sustain livelihoods [...]. (Recommendation VII/7,III, p58) (See also Target 13)*
- *Activity 4.2: Support the development or adaptation of relevant systems of information, early warning and communication to enable effective assessment of the state of pollinator diversity and threats to it [...]. (Recommendation VII/7,III, p61)*

Forest biodiversity

- Case-studies from countries in which the ecosystem approach has been applied in sustainable forest management [...]. (Decision IV/7 Annex Para.15 p483) (See Ecosystem Approach)
- [...] improve the identification and prioritisation of research activities related to the influences of human activities [...] on forest biodiversity. (Decision IV/7 Annex Para.33 p484)
- Need for better understanding of the underlying [...] causes of forest biological diversity loss and the improvement of measures for mitigating those causes. (Decision IV/7 Annex Para.51 p486)
- Promoting the development of scientific and technical local approaches to conserve and sustainably manage biological diversity in production forests. (Decision IV/7 Annex Para.55(a) p487) (See also Target 6)
- *Objective 1: [...] Develop understanding of the functional linkages between forest biodiversity and agriculture with the aim to developing practices that could improve the relations between forest management and other land use methods [...]. (Recommendation VII/6 Annex , Programme Element 1, Goal 1 Para.(g) p34) (See also Target 6)*
- *Objective 2: Determine status and conservation needs of endemic or threatened species and impacts of current forest management practices on these species. (Recommendation VII/6 Annex, Programme Element 1, Goal 3 Para.(a) p37) (See also Target 2)*
- *Objective 2: Develop and implement conservation strategies for endemic and threatened species for global or regional application and practical systems of adaptive management at national level. (Recommendation VII/6 Annex , Programme Element 1, Goal 3 Para.(b) p37) (See also Targets 7 and 8)*
- *Objective 4: Select, at a national level, the most threatened forest ecosystems [...] and develop an appropriate action plan in order to protect [them]. (Recommendation VII/6 Annex, Programme Element 1, Goal 4 Para.(b) p40)*
- *Objective 4: Improve understanding of patterns of genetic diversity and its conservation in situ, in relation to forest management, landscape-scale forest change and climate variations. (Recommendation VII/6 Annex , Programme Element 1, Goal 4 Para.(c) p40) (See also Target 7)*
- *Objective 4: Develop a holistic framework for the conservation and management of forest genetic resources at national, sub-regional and global levels. (Recommendation VII/6 Annex, Programme Element 1, Goal 4 Para.(g) p40)*
- *Objective 1: [...] make recommendations based on a thorough analysis of the direct and underlying causes of losses of forest biological diversity. (Recommendation VII/6 Annex, Programme Element 2, Goal 1 Para.(b) p41)*
- *Objective 1: Develop and support research to understand critical thresholds of forest biodiversity loss and change, paying particular attention to threatened and endemic species and habitats [...]. (Recommendation VII/6 Annex, Programme Element 3, Goal 3 Para.(b) p47)*

Biodiversity of dry and sub-humid lands

- Activity 2: Identification of specific areas within dry and sub-humid lands of particular value for biodiversity and/or under particular threat [...]. (Decision V/23 Annex I, II, Part A, p635) (See also Target 2)
- Activity 4: Building knowledge on ecological, physical and social processes that affect biological diversity of dry and sub-humid lands, especially ecosystem structure and functioning. (Decision V/23 Annex I, II, Part A, p635)

Cross-cutting issues

Invasive alien species

- Requests the Executive Secretary to collaborate [...] to assist the Parties to the Convention in ...furthering research on the impact of alien invasive species on biological diversity (Decision V/8, para 14(d) p574)
- Requests the Executive Secretary to collaborate [...] to assist the Parties to the Convention in [...] developing a system for reporting new invasions of alien species and the spread of alien species into new areas. (Decision V/8, para 14(f) p574) (See also Targets 1 and 10)
- *Guiding Principle 5: [...] undertake research on and monitoring of invasive alien species, [...] [including] a baseline taxonomic study of biodiversity [...], both targeted and general surveys [...], a thorough identification of the invasive species [...].(Recommendation VI/4 Annex, A, p47) (See also Target 10 and GTI)*

Biological diversity and tourism

- Potential impact on biodiversity of tourism, taken into account in the use of land resources [...] (Decision V/25 Annex, Part II A, Para 16, p649) (See also Target 3)
- Potential impact on vegetation [...] (Decision V/25 Annex, Part II A, Para 17, p650) (See also Target 3)
- Potential impact on wildlife [...] (Decision V/25 Annex, Part II A, Para 18, p650) (See also Target 3)
- Depletion of local populations [...] (Decision V/25 Annex, Part II A, Para 19, p650) (See also Target 3)
- Potential impacts on mountain systems [...] (Decision V/25 Annex, Part II A, Para 20, p650) (See also Target 13)
- Potential impacts on the marine and coastal environment [...] (Decision V/25 Annex, Part II A, Para 21, p650) (See also Target 13)
- Potential impacts on water resources [...] (Decision V/25 Annex, Part II A, Para 23, p651) (See also Targets 13)

Climate change

- Implement and coordinate targeted research programmes [...], that investigate [...], the relationship among large-scale coral-bleaching events, global warming and the more localized threats that already place reefs at risk [...]. (Decision V/3, Annex A, Response, Para (a), p542) (See also Marine and Coastal Biodiversity)
- *Objective 3: Promote monitoring and research of the impacts of climate change on forest biological diversity and investigate the interface between forest components and the atmosphere. (Recommendation VII/6 Annex, Programme Element 1, Goal 2 Para.(a) p35)*

Education and public awareness

- [...] share experiences on initiatives on public education and awareness and public participation [...] and to make relevant case studies as well as lessons learned in the preparation of national biodiversity policies, strategies and plans available [...]. (Decision IV/10, B, para 2, p495)(See also Target 9)

Global Taxonomy Initiative

- [...] National institutions and regional and subregional networks should be established or strengthened and linkages enhanced with taxonomic institutions [...]. Consideration must be given to the information needs for [...] the sustainable utilisation of biological resources. (Recommendation II/2 Para.1 p386) (See also Targets 11 and 16) (See also Target 12)
- [...] Linkage to the implementation of the CBD, particularly the national identification of areas of high diversity; improving the understanding of ecosystem functioning; giving priority to [...] taxa that are or may be of value to humanity and those with potential use as biological indicators for conservation and sustainable use of biodiversity. (Recommendation II/2 Para.2 p387) (See also Targets 5, 9 and 12).

B. CONSERVING PLANT DIVERSITY

Target 4:

At least 10 per cent of each of the world's ecological regions effectively conserved.

Targets 4 and 5 have been considered together as few aspects of the work programmes of the Convention can be clearly referred to any one or other of these two targets.

Target 5:

Protection of 50 per cent of the most important areas for plant diversity assured.

Thematic work programmes

Marine & coastal biodiversity

- Operational objective 3.2: develop criteria for the establishment of, and for management aspects of, marine and coastal protected areas. (Decision IV/5, Annex C, p471)

Forest biodiversity

- [...] Further development of methods to integrate protected areas into sustainable forest management and analysis of the representativeness and adequacy of the protected areas network. (Decision IV/7 Annex Para.52 p487) (See also Target 6)
- *Objective 3: Assess the comprehensiveness, representativeness and adequacy of protected areas relative to forest types and identify gaps and weaknesses. (Recommendation VII/6 Annex, Programme Element 1, Goal 3 Para.(a) p37)*
- *Objective 3: Establish [...] comprehensive, adequate, biologically and geographically representative and effective networks of protected areas. (Recommendation VII/6 Annex, Programme Element 1, Goal 3 Para.(b) p37)*
- *Objective 3: Revise [...] and ensure the comprehensiveness, adequacy, representativeness and efficacy of existing protected areas networks. (Recommendation VII/6 Annex, Programme Element 1, Goal 3 Para.(d) p38)*
- *Objective 3: Assess the efficacy of protected forest areas for the conservation of biodiversity. (Recommendation VII/6 Annex, Programme Element 1, Goal 3 Para.(e) p38)*
- *Objective 3: Develop appropriate measures and regulations to secure a permanent forest area sufficient to allow for the conservation and sustainable use of forest biological diversity. (Recommendation VII/6 Annex, Programme Element 2, Goal 1 Para.(a) p43) (See also Target 11)*
- *Objective 3: [...] develop mechanisms and processes to work toward good governance to promote conservation and sustainable use of forest biodiversity. (Recommendation VII/6 Annex, Programme Element 2, Goal 1 Para.(g) p43)*

Biodiversity of inland waters

- [...] use of protected areas and their management strategies for conservation and sustainable use of inland water ecosystems. (Decision IV/4 Annex I, A, Para 8 c)(vii), p456)
- ??? iew of the great economic importance of some groups [...] and the large gaps in taxonomic knowledge for many species, the COP considers this to be a specific focus of the capacity-building in taxonomy [...]. (Decision IV/4 Annex I C, para 16, p460) (See also Target 15)

Biodiversity of dry and sub-humid lands

- Activity 7: Use and establishment of additional protected areas and the development of further specific measures for the conservation of biodiversity of dry and sub-humid areas [...]. (Decision V/23 Annex I, II, Part B, Para (a), p637)

Cross-cutting issues

Global Taxonomy Initiative

- [...] Linkage to the implementation of the CBD, particularly the national identification of areas of high diversity; improving the understanding of ecosystem functioning; giving priority to [...] taxa that are or may be of value to humanity and those with potential use as biological indicators for conservation and sustainable use of biodiversity. (Recommendation II/2 Para.2 p387) (See also Targets 3, 9 and 12)

Target 6:
At least 30 per cent of production lands managed consistent with the conservation of plant diversity.

Thematic work programmes

Agricultural biodiversity

- Activity 2.1: Case studies on, *inter alia*, best management practices [...]. (Decision V/5, Annex B, p558)
- Activity 2.3: Promote methods of sustainable agriculture that employ management practices [...] that promote the positive and mitigate the negative effects of agriculture on biodiversity [...]. (Decision V/5, Annex B, p560)
- *Activity 2.3: Promote methods of sustainable agriculture that employ management practices, technologies and policies that promote the positive and mitigate the negative impacts of agriculture on pollinator diversity [...]. (Recommendation VII/7,III, p58) (See also Target 12)*

Forest biodiversity

- Examination of methodologies for [...] integrating forest biodiversity conservation and sustainable use into an holistic approach to sustainable forest management. (Decision IV/7 Annex Para.13 p483)
- [...] Further development of methods to integrate protected areas into sustainable forest management and analysis of the representativeness and adequacy of the protected areas network. (Decision IV/7 Annex Para.52 p487) (See also Target 5)
- Promoting the development of scientific and technical local approaches to conserve and sustainably manage biological diversity in production forests. (Decision IV/7 Annex Para.55(a) p487) (See also Target 3)
- *Objective 1: [...] Develop understanding of the functional linkages between forest biodiversity and agriculture with the aim to developing practices that could improve the relations between forest management and other land use methods [...]. (Recommendation VII/6 Annex, Programme Element 1, Goal 1 Para.(g) p34) (See also Target 3)*
- *Objective 1: Promote activities that minimise the negative impacts of forest fragmentation on forest biodiversity [...] aimed at providing a combination of economic and environmental goods and*

services to stakeholders. (Recommendation VII/6 Annex, Programme Element 1, Goal 1 Para.(g) p34)

- Objective 6: Promote cost-benefit analysis of development projects that might lead to the conversion of forest into other land uses incorporating the impacts on forest biodiversity. (Recommendation VII/6 Annex, Programme Element 1, Goal 2 Para.(c) p37)
- ???Objective 1: Develop and support research on impact of current forest management practices for forest biodiversity within forests and on adjacent land. (Recommendation VII/6 Annex, Programme Element 3, Goal 3 Para.(d) p47)

Biodiversity of dry and sub-humid lands

- Activity 7: The sustainable management of dry and sub-humid land production systems. (Decision V/23 Annex I, II, Part B, Para (d), p637)

Cross-cutting issues

Education and public awareness

- Programme element 1: Establish and manage a global communication, education and public awareness network (UNEP/CBD/COP/6/13/Add.2, operational objective 1, p6)(See also Target 14)

**Target 7:
60 per cent of the world's threatened species conserved *in situ*.**

Thematic work programmes

Forest biodiversity

- Objective 2: Develop and implement conservation strategies for endemic and threatened species for global or regional application and practical systems of adaptive management at national level. (Recommendation VII/6 Annex, Programme Element 1, Goal 3 Para.(b) p37) (See also Targets 3 and 8)
- Objective 4: Improve understanding of patterns of genetic diversity and its conservation *in situ*, in relation to forest management, landscape-scale forest change and climate variations. (Recommendation VII/6 Annex, Programme Element 1, Goal 4 Para.(c) p40) (See also Target 3)
- Objective 4: Provide guidance for countries to assess the state of their forest genetic resources, and to develop and evaluate strategies for their conservation, both *in situ* and *ex situ*. (Recommendation VII/6 Annex, Programme Element 1, Goal 4 Para.(d) p40) (See also Targets 2 and 8)
- Objective 4: Ensure adequate and representative *in situ* conservation of the genetic resources of endangered, overexploited and narrow endemic forest species and complement [...] with adequate *ex situ* conservation of genetic resources [...]. (Recommendation VII/6 Annex, Programme Element 1, Goal 4 Para.(h) p40) (See also Target 8)

Biodiversity of dry and sub-humid lands

- Activity 7: [...] the conservation *in situ*, as well as *ex situ* [...] of the biodiversity of dry and sub-humid lands [...]. (Decision V/23 Annex I, II, Part B, Para (f), p637) (See also Target 8)

**Target 8:
60 per cent of threatened plant species in accessible *ex situ* collections, preferably in the country of origin, and 10 per cent of them included in recovery and restoration programmes.**

Thematic work programmes

Agricultural biodiversity

- Activity 4.4: Promote [...] activities for the conservation, on farm, in situ, and ex situ, in particular, in the countries of origin, of the variability of genetic resources for food and agriculture, including their wild relatives. (Decision V/5, Annex B, p563) (See also Target 9)

Forest biodiversity

- *Objective 2: Develop and implement conservation strategies for endemic and threatened species for global or regional application and practical systems of adaptive management at national level. (Recommendation VII/6 Annex, Programme Element 1, Goal 3 Para.(b) p37) (See also Targets 3 and 7)*
- *Objective 4: Provide guidance for countries to assess the state of their forest genetic resources, and to develop and evaluate strategies for their conservation, both in situ and ex situ. (Recommendation VII/6 Annex, Programme Element 1, Goal 4 Para.(d) p40) (See also Target 2 and 7)*
- *Objective 4: Ensure adequate and representative in situ conservation of the genetic resources of endangered, overexploited and narrow endemic forest species and complement [...] with adequate ex-situ conservation of genetic resources [...]. (Recommendation VII/6 Annex, Programme Element 1, Goal 4 Para.(h) p40) (See also Target 7)*

Biodiversity of inland waters

- Consider the use and/or establishment of gene banks for fish and other species. (Decision IV/4 Annex I, A, Para 9 f)(iv), p458)

Biodiversity of dry and sub-humid lands

- Activity 7: [...] the conservation in situ, as well as ex situ [...] of the biodiversity of dry and sub-humid lands [...]. (Decision V/23 Annex I, II, Part B, Para (f), p637) (See also Target 7)

Cross-cutting issues

Global Taxonomy Initiative

- Parties [...] should invest [...] in the development of appropriate infrastructure for their national collections. As part of the investment, donors [...] should support infrastructural needs of collection-holding institutions in countries where they provide investment support [...] (Decision IV/1 Annex Para.2 p443) (See also Target 15)
- Parties [...] should adopt internationally agreed levels of collection housing [...] that ensure protection of collections and the well-being of all people working on and accessing the collections. (Decision IV/1 Annex Para.4 p443) (See also Target 8)
- There is an urgent need to make the information on existing taxonomic knowledge, including information about the taxa in worldwide collections, available to countries of origin. (Recommendation II/2 Para 7 p387)
- [...] Parties to consider instructing the GEF to support the Global Taxonomy Initiative in order to provide funds [...] for strengthening reference collections in countries of origin, including, where appropriate, the exchange of paratypes on mutually agreed upon terms (Recommendation II/2 Para.10(b) p388)
- [...] Parties to consider instructing the GEF to support the Global Taxonomy Initiative in order to provide funds [...] for making information housed in collections worldwide and the taxonomy based on them available to the countries of origin (Recommendation II/2 Para.10(c) p388)

Target 9:

70 per cent of the genetic diversity of crops and other major socio-economically valuable plant species conserved, and associated local and indigenous knowledge maintained.

The matic work programmes

Agricultural biodiversity

- Assess the economic value of pollination and the economic impact of the decline of pollination services. (Decision V/5, II, Para. 14(c), p552)
- Activity 1.3: Carry out an assessment of the knowledge, innovations and practices of farmers and indigenous and local communities in sustaining agricultural biodiversity and agro-ecosystem services [...].(Decision V/5, Annex B, p557)
- Activity 4.4: Promote [...] activities for the conservation, on farm, in situ, and ex situ, in particular, in the countries of origin, of the variability of genetic resources for food and agriculture, including their wild relatives. (Decision V/5, Annex B, p563) (See also Target 8)
- *Activity 1.3: Assess the state of scientific and indigenous knowledge on pollinator conservation, in order to identify gaps in knowledge and opportunities for application of knowledge; including taxonomic knowledge; and the knowledge, innovations and practices of farmers and indigenous and local communities [...] for and in support of food production and food security . (Recommendation VII/7,III, p56) (See also Target 13 and GTI)*
- *Activity 1.2: Assess the economic value of pollinators [...] for optimal use of pollinators in sustainable agricultural systems [...]. (Recommendation VII/7,III, p56)*

Forest biodiversity

- *Objective 1: Improve forest management and planning practices that incorporate socio-economic and cultural values to support and facilitate sustainable use. (Recommendation VII/6 Annex, Programme Element 1, Goal 4 Para.(d) p38*
- *Objective 3: Encourage the conservation and sustainable use of forest biological diversity by indigenous and local communities through their development of adaptive management practices. (Recommendation VII/6 Annex, Programme Element 1, Goal 4 Para.(c) p40) (See also Target 13)*
- *Objective 1: Develop, test and disseminate methods for valuing forest biological diversity and other forest ecosystem goods and services and for incorporating these values into forest planning and management [...]. (Recommendation VII/6 Annex, Programme Element 2, Goal 2 Para.(b) p44)*
- *Objective 1: Increase knowledge on monetary and non-monetary cost-benefit accounting for forest biodiversity evaluation. (Recommendation VII/6 Annex, Programme Element 2, Goal 2 Para.(i) p44)*
- Improve dissemination of research results and synthesis of reports of the best available scientific and traditional knowledge on key forest biodiversity issues. (Decision IV/7 Annex Para.34 p484) (See also Target 14)

Biodiversity of inland waters

- Develop methods and techniques for the valuation of goods and services of inland water ecosystems [...], and the understanding of ecosystem function. (Decision IV/4 Annex I, A, Para 8 d), p456) (See also Ecosystem Approach)
- Initiate studies on ecological functions and services [...]. (Decision IV/4 Annex I, A, Para 9 e)(iii), p457)
- Encourage valuation of inland water biodiversity. (Decision IV/4 Annex I, A, Para 9 f)(i), p458)

Biodiversity of dry and sub-humid lands

- Activity 5: Identification of the local and global benefits [...] derived from the biodiversity of dry and sub-humid lands, assessment of the socio-economic impacts of its loss [...]. (Decision V/23 Annex I, II, Part A, p635) (See also Target 2)
- Activity 6: Identification and dissemination of best management practices, including knowledge, innovations and practices of indigenous and local communities that can be broadly applied [...]. (Decision V/23 Annex I, II, Part A, p635) (See also Target 13)
- Activity 7: The economic valuation of the biodiversity of dry and sub-humid lands [...]. (Decision V/23 Annex I, II, Part B, Para (g), p637)

Cross-cutting issues

Education and public awareness

- [...] share experiences on initiatives on public education and awareness and public participation [...] and to make relevant case studies as well as lessons learned in the preparation of national biodiversity policies, strategies and plans available [...]. (Decision IV/10, B, para 2, p495)(See also Target 3)

Global Taxonomy Initiative

- [...] Linkage to the implementation of the CBD, particularly the national identification of areas of high diversity; improving the understanding of ecosystem functioning; giving priority to [...] taxa that are may be of value to humanity and those with potential use as biological indicators for conservation and sustainable use of biodiversity. (Recommendation II/2 Para.2 p387) (See also Targets 3, 5 and 12)
- [...] the need to consider indigenous and traditional knowledge as an important existing information source that should be taken into account, and made available through appropriate mechanisms (Decision IV/1 D, para 8, p443)
- *Planned Activity 16: Traditional knowledge systems include taxonomic information, which if used in combination with Linnaean taxonomies could support the GTI. Access to and use of traditional knowledge must have the prior informed consent of the holders of that knowledge and be based on mutually agreed terms. [Produce] regional and subregional guides based on ethical research practices and developed with full and effective participation of indigenous and local communities. (Recommendation VI/6)*

Target 10:

Management plans in place for at least 100 major alien species that threaten plants, plant communities and associated habitats and ecosystems.

Thematic work programmes**Marine & coastal biodiversity**

- Operational objective 5.1: achieve better understanding of the causes of the introduction of alien species and genotypes and the impact of such introductions on biological diversity. (Decision IV/5, Annex C, p472) (See also Alien Species)
- Operational objective 5.2: identify gaps in existing or proposed legal instruments, guidelines and procedures to counteract the introduction of and the adverse effects exerted by alien species and genotypes [...]; collect information on national and international actions to address these problems, with a view to prepare [...] a scientifically-based global strategy for [...] the prevention, control and eradication of those alien species [...]. (Decision IV/5, Annex C, p472) (See also Alien Species)
- Operational objective 5.3: establish an “incident list” on introduction of alien species and genotypes through the national reporting process or any other appropriate means. (Decision IV/5, Annex C, p473) (See also Alien Species)

Forest biodiversity

- Case-studies on assessing impacts of [...] alien species on forest biodiversity and their influences on the management of forest ecosystems and savannahs. (Decision IV/7 Annex Para.35 p484) (See also Alien Species and Ecosystem Approach)
- *Objective 1: [...] prevent and mitigate the impacts of invasive alien species that threaten ecosystems [...]. (Recommendation VII/6 Annex, Programme Element 1, Goal 2 Para.(a) p34) (See also Ecosystem Approach)*
- *Objective 1: Improve the knowledge of the impacts of invasive alien species on forest ecosystems and adjacent ecosystems. (Recommendation VII/6 Annex, Programme Element 1, Goal 2 Para.(a) p34) (See also Ecosystem Approach)*

Biodiversity of inland waters

- [...] develop examples of the impacts of invasive alien species and of programmes used to control their introduction [...]. (Decision IV/4 Annex I, A, Para 8 c)(vi), p456) (See also Alien Species)
- Undertake assessments in such inland water ecosystems which may be regarded as important [...]. Under take assessments of threatened species and conduct inventories and impact assessments of alien species [...]. (Decision IV/4 Annex I, A, Para 9 e)(iv), p457) (See also Target 2)
- Raise awareness of the possible problems and costs associated with the deliberate or accidental introduction of alien species [...]. (Decision IV/4 Annex I, A, Para 9 h), p458) (See also Target 14 and Alien Species)

Biodiversity of dry and sub-humid lands

- Activity 7: The management of invasive alien species. (Decision V/23 Annex I, II, Part B, Para (c), p637)

Cross-cutting issues

Invasive alien species

- Requests the Executive Secretary to collaborate [...] to assist Parties in the Convention in [...] assessing priorities for taxonomic work [in the context of alien invasive species]. (Decision V/8, para 14(f), p574) (See also Target 10)
- *Guiding Principle 1: Precautionary approach. (Recommendation VI/4 Annex, A, p46)*
- *Guiding Principle 2: [...] Priority should be given to preventing the introduction of invasive alien species. If [...] introduced, early detection and rapid action are crucial. The preferred response is often to eradicate [...] as soon as possible [...]. [If] this is not feasible [...], containment [...] and long-term control measures should be implemented. Any examination of benefits and costs [...] should be done on a long-term basis. (Recommendation VI/4 Annex, A, p46)*
- *Guiding Principle 3: Measures to deal with invasive alien species should, as appropriate, be based on the ecosystem approach [...].(Recommendation VI/4 Annex, A, p46) (See also Ecosystem Approach)*
- *Guiding Principle 4: State rights and responsibilities (version 1) / State responsibility (version 2).(Recommendation VI/4 Annex, A, p47)*
- *Guiding Principle 5: [...] undertake research on and monitoring of invasive alien species, [...] [including] a baseline taxonomic study of biodiversity [...], both targeted and general surveys [...], a thorough identification of the invasive species [...].(Recommendation VI/4 Annex, A, p47) (See also Target 3 and GTI)*
- *Guiding Principle 6: [...] promote education and public awareness of the causes of invasion and the risks associated with the introduction of alien species. When mitigation measures are required [...] engage local communities and appropriate sector groups in support of such measures.(Recommendation VI/4 Annex, A, p47) (See also Target 14)*
- *Guiding Principle 7: States should implement border controls and quarantine measures, [...] based on an assessment of the risks posed by alien species and their potential pathways of entry [...]. (Recommendation VI/4 Annex, B, p48)*
- *Guiding Principle 8: States should assist in the development of an inventory and synthesis of relevant databases, including taxonomic and specimen databases, and the development of information systems and an interoperable distributed network of databases for compilation and dissemination of information [...]. (Recommendation VI/4 Annex, B, para 1, p48) (See also Target 1 and GTI)*
- *Guiding Principle 8: States should provide all relevant information on their specific import requirements for alien species [...] and make this information available to other States. (Recommendation VI/4 Annex, B, para 2, p48)*
- *Guiding Principle 9: [...] share information on invasive alien species, their potential uneasiness and invasion pathways, with a particular emphasis on cooperation among neighbouring countries,*

- between trading partners, and among countries with similar ecosystems and histories of invasion. (Recommendation VI/4 Annex, B, para (a), p48) (See also Target 1)*
- *Guiding Principle 9: [Development] of agreements between countries [...] to regulate trade in certain alien species, with a focus on particularly damaging invasive species. (Recommendation VI/4 Annex, B, para (b), p49)*
 - *Guiding Principle 9: Support for capacity-building programmes [...] to assess and reduce the risks and to mitigate the effects when introduction of alien species has taken place. [It] may involve technology transfer and [...] training programmes. (Recommendation VI/4 Annex, B, para (c), p49) (See also Target 15)*
 - *Guiding Principle 9: Cooperative research [...] and funding efforts toward the identification, prevention, early detection, monitoring and control of invasive alien species. (Recommendation VI/4 Annex, B, para (d), p49) (See also Target 16)*
 - *Guiding Principle 10: Intentional introduction. (Recommendation VI/4 Annex, C, p49)*
 - *Guiding Principle 11: [...] have in place provisions to address unintentional introductions [...]. (Recommendation VI/4 Annex, C, para 1, p50)*
 - *Guiding Principle 11: [Identification] of common pathways leading to unintentional introductions and appropriate provisions to minimise such introductions should be in place [...]. (Recommendation VI/4 Annex, C, para 2, p50)*
 - *Guiding Principle 12: Once the establishment of an invasive alien species has been detected, State [...] should take appropriate steps to mitigate adverse effects [...]. (Recommendation VI/4 Annex, D, p50)*
 - *Guiding Principle 13: [Eradication] in the early stages of invasion [...]. (Recommendation VI/4 Annex, D, p50)*
 - *Guiding Principle 14: [Limiting the spread (containment) of invasive alien species, when eradication is not appropriate [...]. (Recommendation VI/4 Annex, D, p50)*
 - *Guiding Principle 15: Control measures [...] reducing the damage caused as well as reducing the number of the invasive alien species [...]. (Recommendation VI/4 Annex, D, p50)*
 - *Case-studies on assessing impacts of [...] alien species on forest biodiversity and their influences on the management of forest ecosystems and savannahs. (Decision IV/7 Annex Para.35 p484) (See also Forest Biodiversity and Ecosystem Approach)*
 - *[...] develop examples of the impacts of invasive alien species and of programmes used to control their introduction [...]. (Decision IV/4 Annex I, A, Para 8 c)(vi), p456) (See also Biodiversity of Inland Waters)*
 - *Raise awareness of the possible problems and costs associated with the deliberate or accidental introduction of alien species [...]. (Decision IV/4 Annex I, A, Para 9 h), p458) (See also Target 14 and Alien Species)*
 - *Operational objective 5.1: achieve better understanding of the causes of the introduction of alien species and genotypes and the impact of such introductions on biological diversity. (Decision IV/5, Annex C, p472) (See also Marine and Coastal biodiversity)*
 - *Operational objective 5.2: identify gaps in existing or proposed legal instruments, guidelines and procedures to counteract the introduction of and the adverse effects exerted by alien species and genotypes [...]; collect information on national and international actions to address these problems, with a view to prepare [...] a scientifically-based global strategy for [...] the prevention, control and eradication of those alien species [...]. (Decision IV/5, Annex C, p472) (See also Marine and Coastal biodiversity)*
 - *Operational objective 5.3: establish an “incident list” on introduction of alien species and genotypes through the national reporting process or any other appropriate means. (Decision IV/5, Annex C, p473) (See also Marine and Coastal biodiversity)*

C. USING PLANT DIVERSITY SUSTAINABLY

Target 11:

No species of wild flora endangered by international trade.**Thematic work programmes****Marine & coastal biodiversity**

- Operational objective 1.2: promote development and implementation of integrated coastal and marine area management at the local, national and regional level (Decision IV/5, Annex C, p468) (See also Targets 12 and 13)
- Operational objective 2.1: promote ecosystem approaches to the sustainable use of marine and coastal living resources, including the identification of key variables or interactions, for the purpose of assessing and monitoring [...], the sustainable use of such components [...]. (Decision IV/5, Annex C, p469) (See also Targets 12 and 13)

Forest biodiversity

- *Objective 4: [...] provide information [...] to enable a better comprehension of the effects of illegal logging, exploitation of other forest resources and associated trade, as well as the underlying causes, on forest biodiversity. On the basis [...] of this information countries may decide to take relevant measures [...]. (Recommendation VII/6 Annex, Programme Element 2, Goal 1 Para.(a) p43) (See also Target 2)*
- *Objective 4: [...] develop and forward to the Secretariat case-studies and research on the impacts of illegal exploitation and trade in timber and non-timber forest products. (Recommendation VII/6 Annex, Programme Element 2, Goal 1 Para.(c) p44) (See also Target 12)*
- *Objective 1: Seek to promote national laws and policies and international trade regulations [that] are compatible with conservation and sustainable use of forest biodiversity. (Recommendation VII/6 Annex, Programme Element 2, Goal 2 Para.(h) p44).*

Biodiversity of inland waters

- Produce and promote guidance on the sustainable use of inland waters to maintain biodiversity. (Decision IV/4 Annex I, A, Para 9 f)(ii), p458) (See also Target 12)

Biodiversity of dry and sub-humid lands

- Activity 7: Cooperation with all relevant conventions [...] with respect to, inter alia, the sustainable use of the biodiversity of dry and sub-humid areas, the application of the ecosystem approach, the assessment of the status and trends of this biological diversity as well as to its threats (Decision V/23 Annex I, II, Part B, Para (m), p638) (See also Targets 2 and 12 and Ecosystem Approach)

Cross-cutting issues**Climate change**

- [...] ensure that future activities of the UNFCCC, including forest and carbon sequestration, are consistent with and supportive of the conservation and sustainable use of biological diversity. (Decision V/4 Para 16, p548) (See also Target 6)

Global Taxonomy Initiative

- [...] National institutions and regional and subregional networks should be established or strengthened and linkages enhanced with taxonomic institutions [...]. Consideration must be given to the information needs for [...] the sustainable utilisation of biological resources. (Recommendation II/2 Para.1 p386) (See also Targets 12 and 16)

Target 12:
30 per cent of plant-based products derived from sources that are sustainably managed.

Thematic work programmes

Marine & coastal biodiversity

- Operational objective 1.2: promote development and implementation of integrated coastal and marine area management at the local, national and regional level (Decision IV/5, Annex C, p468) (See also Targets 11 and 13)
- Operational objective 2.1: promote ecosystem approaches to the sustainable use of marine and coastal living resources, including the identification of key variables or interactions, for the purpose of assessing and monitoring [...], the sustainable use of such components [...]. (Decision IV/5, Annex C, p469) (See also Targets 11 and 13)

Agricultural biodiversity

- *Activity 2.3: Promote methods of sustainable agriculture that employ management practices, technologies and policies that promote the positive and mitigate the negative impacts of agriculture on pollinator diversity [...]. (Recommendation VII/7,III, p58) (See also Target 6)*

Forest biodiversity

- *Objective 1: Develop, support and promote programmes and initiatives that address the sustainable use of timber and non-timber forest products. (Recommendation VII/6 Annex Goal 4 Para.(b) p38*
- *Objective 1: Support regional cooperation and work on sustainable use of timber and non-timber forest products and services, including through technology transfer and capacity building [...]. (Recommendation VII/6 Annex, Programme Element 1, Goal 4 Para.(c) p38 (See also Target 15)*
- *Objective 2: Establish a liaison group with an associated workshop to facilitate development of joint work plan with relevant members of the Collaborative Partnership on Forests to bring harvesting of non-timber forest products [...] to sustainable levels [...].(Recommendation VII/6 Annex, Programme Element 1, Goal 4 Para.(a) p39) (See also Target 16)*
- *Objective 3: Strengthen the capacity of, and provide incentives for, indigenous and local communities to generate opportunities for sustainable use of forest biodiversity and access to markets.(Recommendation VII/6 Annex, Programme Element 1, Goal 4 Para.(a) p39) (See also Targets 13 and 15)*
- *Objective 2: Develop strategies for effective enforcement of sustainable forest management and protected area regulations, including adequate resourcing and involvement of indigenous and local communities. (Recommendation VII/6 Annex, Programme Element 2, Goal 1 Para.(f) p42) (See also Target 13)*
- *Objective 4: Develop codes of conduct for sustainable forest practices in logging companies and the wood-processing sector [...]. (Recommendation VII/6 Annex, Programme Element 2, Goal 1 Para.(d) p44)*
- *Objective 4: Encourage and support the development and implementation of tracking and chain-of-custody systems for forest products [...]. (Recommendation VII/6 Annex, Programme Element 2, Goal 1 Para.(e) p44)*
- *Objective 4: [...] develop and forward to the Secretariat case-studies and research on the impacts of illegal exploitation and trade in timber and non-timber forest products. (Recommendation VII/6 Annex, Programme Element 2, Goal 1 Para.(c) p44) (See also Target 11)*
- *Objective 1: Develop and disseminate analyses of the compatibility of current and predicted production and consumption patterns with respect to the limits of forest ecosystem functions and production. (Recommendation VII/6 Annex, Programme Element 2, Goal 2 Para.(g) p44)*
- *Objective 1: Promote consumer awareness about sustainably produced forest products. (Recommendation VII/6 Annex, Programme Element 2, Goal 3 Para.(b) p45) (See also Target 14)*

Biodiversity of inland waters

- Encourage the development of preventive strategies such as cleaner production [...], product stewardship and environmentally sound technologies to avoid degradation and promote restoration of inland water ecosystems. (Decision IV/4 Annex I, A, Para 9 b)(ii), p457)
- Produce and promote guidance on the sustainable use of inland waters to maintain biodiversity. (Decision IV/4 Annex I, A, Para 9 f)(ii), p458) (See also Target 11)

Biodiversity of dry and sub-humid lands

- Activity 7: The sustainable use or husbandry of plant and animal biomass [...]. (Decision V/23 Annex I, II, Part B, Para (h), p637)
- Activity 7: Cooperation with all relevant conventions [...] with respect to, inter alia, the sustainable use of the biodiversity of dry and sub-humid areas, the application of the ecosystem approach, the assessment of the status and trends of this biological diversity as well as to its threats (Decision V/23 Annex I, II, Part B, Para (m), p638) (See also Targets 3 and 11 and Ecosystem Approach)
- Activity 9: Promoting sustainable harvesting [...]. (Decision V/23 Annex I, II, Part B, Para (b), p638)
- Activity 9: Developing markets for products derived from the sustainable use of biodiversity of dry and sub-humid lands [...](Decision V/23 Annex I, II, Part B, Para (d), p638)

Cross-cutting issues

Global Taxonomy Initiative

- [...] National institutions and regional and subregional networks should be established or strengthened and linkages enhanced with taxonomic institutions [...]. Consideration must be given to the information needs for [...] the sustainable utilisation of biological resources. (Recommendation II/2 Para.1 p386) (See also Targets 11 and 16) (See also Target 3)
- [...] Linkage to the implementation of the CBD, particularly the national identification of areas of high diversity; improving the understanding of ecosystem functioning; giving priority to [...] taxa that are or may be of value to humanity and those with potential use as biological indicators for conservation and sustainable use of biodiversity. (Recommendation II/2 Para.2 p387) (See also Targets 3, 5 and 9)

Target 13:

The decline of plant resources, and associated local and indigenous knowledge, innovations and practices, that support sustainable livelihoods, local food security and health care , halted.

Thematic work programmes

Marine & coastal biodiversity

- Operational objective 1.2: promote development and implementation of integrated coastal and marine area management at the local, national and regional level (Decision IV/5, Annex C, p468) (See also Targets 11 and 12)
- Operational objective 2.1: promote ecosystem approaches to the sustainable use of marine and coastal living resources, including the identification of key variable or interactions, for the purpose of assessing and monitoring [...], the sustainable use of such components [...]. (Decision IV/5, Annex C, p469) (See also Targets 11 and 12)

Agricultural biodiversity

- *Activity 1.3: Assess the state of scientific and indigenous knowledge on pollinator conservation, in order to identify gaps in knowledge and opportunities for application of knowledge; including taxonomic knowledge; and the knowledge, innovations and practices of farmers and indigenous and local communities [...] for and in support of food production and food security. (Recommendation VII/7,III, p56) (See also Target 9 and GTI)*

- *Activity 2.2: Identify and promote the dissemination of information on cost-effective practices and technologies, and related policy and incentive measures that enhance the positive and mitigate negative impacts of agriculture on pollinator diversity, productivity and capacity to sustain livelihoods [...]. (Recommendation VII/7,III, p58) (See also Target 3)*

Forest biodiversity

- Development of methodologies to advance the integration of traditional forest-related knowledge into sustainable forest management. (Decision IV/7 Annex Para.14 p483)
- Promoting the development of scientific and technical local approaches to enrich indigenous biodiversity in forest plantations. (Decision IV/7 Annex Para.55(c) p487)
- Identify strategies for enhancement of collaborative management with local and indigenous communities. (Decision V/4 Annex, Para 2(b)(v), p549)
- *Objective 1: Support activities of indigenous and local communities involving the use of traditional forest-related knowledge in biodiversity management. (Recommendation VII/6 Annex, Programme Element 1, Goal 4 Para.(a) p38) (See also Target 16)*
- *Objective 3: Strengthen the capacity of, and provide incentives for, indigenous and local communities to generate opportunities for sustainable use of forest biodiversity and access to markets.(Recommendation VII/6 Annex, Programme Element 1, Goal 4 Para.(a) p39) (See also Target 12 and 15)*
- *Objective 3: Strengthen the capacity of indigenous and local communities to resolve land rights and land use disputes in order to sustainably manage forest biodiversity.(Recommendation VII/6 Annex, Programme Element 1, Goal 4 Para.(b) p40) (See also Target 15)*
- *Objective 3: Encourage the conservation and sustainable use of forest biological diversity by indigenous and local communities through their development of adaptive management practices. (Recommendation VII/6 Annex, Programme Element 1, Goal 4 Para.(c) p40) (See also Target 9)*
- *Objective 3: Develop and implement education and awareness programmes on traditional uses of forest biodiversity [...]. (Recommendation VII/6 Annex, Programme Element 1, Goal 4 Para.(e) p40) (See also Target 14)*
- *Objective 3: Create an environment that [...] preserves and maintains traditional knowledge related to forest biodiversity, innovations and practices of indigenous and local communities. (Recommendation VII/6 Annex, Programme Element 1, Goal 4 Para.(f) p40)*
- *Objective 2: Develop strategies for effective enforcement of sustainable forest management and protected area regulations, including adequate resourcing and involvement of indigenous and local communities. (Recommendation VII/6 Annex, Programme Element 2, Goal 1 Para.(f) p42) (See also Target 12)*
- *Objective 3: Implement effective measures to protect traditional knowledge and values in forest laws and planning tools. (Recommendation VII/6 Annex, Programme Element 2, Goal 1 Para.(e) p43)*
- *Objective 1: Increase awareness amongst stakeholders of the potential contribution of traditional forest-related knowledge to conservation and sustainable use of forest biodiversity. (Recommendation VII/6 Annex, Programme Element 2, Goal 3 Para.(c) p45) (See also Target 14)*
- *Objective 1: Implement effective measures to recognize, respect, protect and maintain traditional forest-related knowledge and values in forest-related laws and forest planning tools [...].(Recommendation VII/6 Annex, Programme Element 2, Goal 3 Para.(f) p45)*
- *Objective 2: Donor bodies and other financial institutions to incorporate forest biological diversity and sustainable use principles and targets into forest and related programmes [...]. (Recommendation VII/6 Annex, Programme Element 2, Goal 1 Para.(c) p42) (See also Target 6 and 11)*

Biodiversity of inland waters

- Involve [...] local and indigenous communities in the development of management plans and in projects that may affect inland water biodiversity. (Decision IV/4 Annex I, A, Para 9 l)(i), p459)

- Implement Article 8 (j) as related to inland water biodiversity. (Decision IV/4 Annex I, A, Para 9 l(ii), p459)

Biodiversity of dry and sub-humid lands

- Activity 6: Identification and dissemination of best management practices, including knowledge, innovations and practices of indigenous and local communities that can be broadly applied [...]. (Decision V/23 Annex I, II, Part A, p635) (See also Target 13)
- Activity 8: Strengthening of appropriate local institutional structures for resource management, supporting indigenous and local techniques of resource use [...], and/or combining appropriate existing institutions and techniques [...]. (Decision V/23 Annex I, II, Part B, Para (am), p638) (See also Targets 15)

Cross-cutting issues

Biological diversity and tourism

- Providing alternative and supplementary ways for communities to receive revenue from biodiversity [...]. (Decision V/25 Annex, Part I C, Para 12(d), p648)
- Generating incomes for low-input and small-scale agricultural activities [...]. (Decision V/25 Annex, Part I C, Para 12(e), p648)
- Providing funds for development or maintenance of sustainable practices [...]. (Decision V/25 Annex, Part I C, Para 12(c), p648)

D. PROMOTING EDUCATION AND AWARENESS ABOUT PLANT DIVERSITY

Target 14:

The importance of plant diversity and the need for its conservation incorporated into communication, educational and public awareness programmes.

Thematic work programmes

Marine & coastal biodiversity

- Build stakeholder partnerships, community participation programmes and public education campaigns and information products that address the causes and consequences of coral bleaching. (Decision V/3, Annex B, Response, p543) (See also Target 16 and Climate Change)

Agricultural biodiversity

- Activity 3.5: Promote awareness about the value of agricultural biodiversity [...] amongst producer organisations, agricultural cooperatives and enterprises, and consumers, with a view to promoting responsible practices. (Decision V/5, Annex B, p561)
- Activity 4.3: Promote public awareness of [...] the value and importance of [agricultural biodiversity] for agriculture and society in general. (Decision V/5, Annex B, p563)
- *Activity 3.1: Promote awareness about the value of pollinator diversity [...] amongst producer organisations, agricultural cooperatives and enterprises, and consumers, with a view to promoting responsible practices. (Recommendation VII/7,III, p59)*
- *Activity 4.4: Include considerations of pollinator diversity [...] in formal educational programmes at all levels [...]. (Recommendation VII/7,III, p61)*

Forest biodiversity

- Improve dissemination of research results and synthesis of reports of the best available scientific and traditional knowledge on key forest biodiversity issues. (Decision IV/7 Annex Para.34 p484) (See also Target 9)

- *Objective 3: Develop and implement education and awareness programmes on traditional uses of forest biodiversity [...]. (Recommendation VII/6 Annex, Programme Element 1, Goal 4 Para.(e) p40) (See also Target 13)*
- *Objective 2: Increase emphasis on capacity-building, research and training, public education and awareness [...], with focus on capacities required to address forest biodiversity-related issues. (Recommendation VII/6 Annex, Programme Element 2, Goal 1 Para.(i) p42) (See also Target 15)*
- *Objective 1: Increase broad-based awareness of the value of forest biodiversity through international, national and local public awareness campaigns. (Recommendation VII/6 Annex, Programme Element 2, Goal 3 Para.(a) p45)*
- *Objective 1: Promote consumer awareness about sustainably produced forest products. (Recommendation VII/6 Annex, Programme Element 2, Goal 3 Para.(b) p45) (See also Target 12)*
- *Objective 1: Increase awareness amongst stakeholders of the potential contribution of traditional forest-related knowledge to conservation and sustainable use of forest biodiversity. (Recommendation VII/6 Annex, Programme Element 2, Goal 3 Para.(c) p45) (See also Target 13)*
- *Objective 1: Develop awareness of the impact of forest-related production and consumption patterns on the loss of forest biodiversity and the goods and services it provides. (Recommendation VII/6 Annex, Programme Element 2, Goal 3 Para.(d) p45)*
- *Objective 1: Increase awareness of the value of forest biological diversity amongst public authorities and decision makers through specific information and training actions. (Recommendation VII/6 Annex, Programme Element 2, Goal 3 Para.(e) p45)*
- *Objective 1: Develop awareness of the value of forest biodiversity among forestry workers, owners of forest land, logging contractors, and consulting firms. (Recommendation VII/6 Annex, Programme Element 2, Goal 3 Para.(g) p45)*
- *Objective 1: Promote dissemination of information about benefit-sharing experiences through the clearing-house mechanism and appropriate means at the local level. (Recommendation VII/6 Annex, Programme Element 1, Goal 5 Para.(c) p41) (See also Access and Benefit-Sharing)*
- *Objective 1: Hold workshops to train and familiarise decision makers and managers with the foundations, principles and modalities of the ecosystem approach. (Recommendation VII/6 Annex, Programme Element 1, Goal 1 Para.(g) p34)*

Biodiversity of inland waters

- Raise awareness of the possible problems and costs associated with the deliberate or accidental introduction of alien species [...]. (Decision IV/4 Annex I, A, Para 9 h), p458) (See also Target 10)
- Environmental education should be built into school curricula and should emphasize integration using inland waters as a model subject to teach problem-solving. (Decision IV/4 Annex I, A, Para 9 i), p458)

Biodiversity of dry and sub-humid lands

- Activity 7: The establishment and promotion of training, education and public awareness. (Decision V/23 Annex I, II, Part B, Para (i), p637) (See also Target 15)

Cross-cutting issues

Invasive alien species

- *Guiding Principle 6: [...] promote education and public awareness of the causes of invasion and the risks associated with the introduction of alien species. When mitigation measures are required [...] engage local communities and appropriate sector groups in support of such measures. (Recommendation VI/4 Annex, A, p47) (See also Target 10)*

Education and public awareness

- Promote education on biodiversity through relevant institutions, including NGOs. (Decision IV/10, B, para 1(b), p495)

- Allocate appropriate resources for the strategic use of education and communication instruments at each phase of policy formulation, planning, implementation and evaluation, including the identification of relevant target groups seeking to provide these with [...] information. (Decision IV/10, B, para 1(c), p495)
- Integrate biological diversity concerns into education strategies, recognising the particular needs of indigenous and local communities, (Decision IV/10, B, para 1(d), p495)
- Support initiative by major groups that foster stakeholder participation in biodiversity conservation biodiversity conservation matters into their practices and educational programmes. (Decision IV/10, B, para 1(e), p495)
- [...] make use of the media [...] to promote public education and awareness about the importance and methods for the conservation and sustainable use of biodiversity. (Decision IV/10, B, para 3, p496)
- [...] illustrate and translate the provisions of the Convention into the respective local languages [...]. (Decision IV/10, B, para 4, p496)
- [...] support local, national, subregional and regional public education and awareness initiatives. (Decision IV/10, B, para 8, p496)
- [...] when requesting for assistance through the financial mechanism of the Convention, to propose projects which promote [...] public education and awareness. (Decision IV/10, B, para 9, p496)
- [...] convene [in cooperation with UNESCO], a consultative working group of experts, including UNEP, the World Bank, the United Nations Institute for Training and Research, the Commission for Education and Communication of IUCN, WWF, representatives of Parties and other relevant bodies to further advance and [...] to identify priority activities for the proposed global initiative on biodiversity education and public awareness. (Decision V/17, B, para 2, p611)
- *Programme element 1: Establish and manage a global communication, education and public awareness network (UNEP/CBD/COP/6/13/Add.2, operational objective 1, p6) (See also Target 6)*
- *Programme element 1: Stimulate the creation of national, sub-regional and regional communication, education and public awareness networks. (UNEP/CBD/COP/6/13/Add.2, operational objective 2, p6)*
- *Programme element 1: Create synergy between existing networks relevant to communication, education and public awareness. (UNEP/CBD/COP/6/13/Add.2, operational objective 3, p6)*
- *Programme element 2: Enhance exchange of knowledge and expertise among professionals, enhancing development and innovation on communication, education and public awareness; (UNEP/CBD/COP/6/13/Add.2, operational objective 1, p8)*
- *Programme element 2: Meet knowledge needs of Parties and other stakeholders for Article 13. (UNEP/CBD/COP/6/13/Add.2, operational objective 2, p8)*
- *Programme element 3: Develop capacity of the Parties to market biodiversity to other sectors, and mainstream biodiversity into the work of other sectors; (UNEP/CBD/COP/6/13/Add.2, operational objective 1, p8)*
- *Programme element 3: Develop professional capacity of educators and communicators; (UNEP/CBD/COP/6/13/Add.2, operational objective 1, p8) (See also Target 15)*
- *Programme element 3: Enhance stakeholder participation and community development through communication, education and public awareness. (UNEP/CBD/COP/6/13/Add.2, operational objective 1, p9)*

Global Taxonomy Initiative

- [...] promote awareness of the Global Taxonomy Initiative in the relevant activities of the GEF, and to facilitate capacity-building in taxonomy (D V/13 Para.2(k) p588)
- *Planned activity 4: Public awareness and education. (Recommendation VI/6, II A, Operational objective 1, p64)*

E. BUILDING CAPACITY FOR THE CONSERVATION OF PLANT DIVERSITY

Target 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.

Thematic work programmes**Marine & coastal biodiversity**

- Support capacity-building measures, including training of and career opportunities for marine taxonomists, ecologists and members of other relevant disciplines, particularly at the national level (Decision V/3, I, para 6(e), p540)
- Support the training of and career opportunities for marine taxonomists, ecologists, and members of other relevant disciplines, particularly at the national and regional level. (Decision V/3, Annex B, Response, p543) (See also Climate Change)

Agricultural biodiversity

- Activity 3.2: Enhance the capacity of indigenous and local communities for the development of strategies and methodologies for in situ conservation, sustainable use and management of agricultural biodiversity, building on indigenous knowledge systems. (Decision V/5, Annex B, p561)
- Activity 4.1(b): Development of [...] training materials, and support for capacity-building initiatives [...] in agricultural and environmental forums for the development, implementation, monitoring and evaluation of policies, programmes and actions for the conservation and sustainable use of agricultural biodiversity. (Decision V/5, Annex B, p563)
- *Activity 3.4: Build taxonomic capacity to carry out inventories of the pollinator diversity and distribution in order to optimise their management, through, inter alia, the training of taxonomists and parataxonomists of bees and other pollinators. (Recommendation VII/7,III, p60) (See also GTI)*
- *Activity 4.3: Strengthen national institutions to support taxonomy of bees and other pollinators [...]. (R VII/7,III, p61) (See also GTI)*

Forest biodiversity

- The COP calls upon the GEF to provide financial support [...] for activities and capacity-building for the implementation of the work programme for forest biological diversity and the use of the clearing-house mechanism [...]. (Decision IV/7 Para.6 p479)
- *Objective 1: Support regional cooperation and work on sustainable use of timber and non-timber forest products and services, including through technology transfer and capacity building [...]. (Recommendation VII/6 Annex, Programme Element 1, Goal 4 Para.(c) p38 (See also Target 12)*
- *Objective 3: Strengthen the capacity of, and provide incentives for, indigenous and local communities to generate opportunities for sustainable use of forest biodiversity and access to markets.(Recommendation VII/6 Annex, Programme Element 1, Goal 4 Para.(a) p39) (See also Targets 12 and 13)*
- *Objective 3: Strengthen the capacity of indigenous and local communities to resolve land rights and land use disputes in order to sustainably manage forest biodiversity.(Recommendation VII/6 Annex, Programme Element 1, Goal 4 Para.(b) p40) (See also Target 13)*
- *???Objective 1: Strengthen capacity of indigenous and local communities to negotiate benefit-sharing arrangements. (Recommendation VII/6 Annex, Programme Element 1, Goal 5 Para.(b) p41)*
- *Objective 2: Increase emphasis on capacity-building, research and training, public education and awareness [...], with focus on capacities required to address forest biodiversity-related issues. (Recommendation VII/6 Annex, Programme Element 2, Goal 1 Para.(i) p42) (See also Target 14)*
- *Objective 4: Develop methods and build capacity for effective law enforcement. (R VII/6 Annex, Programme Element 2, Goal 1 Para.(c) p44)*
- *Objective 1: Develop and implement a strategy and plan of action and facilitate transfer of technology to provide infrastructure and training in developing countries, in order to monitor forest*

biodiversity and develop associated databases. (Recommendation VII/6 Annex, Programme Element 3, Goal 4 Para.(a) p47)

- *Objective 1: Hold workshops to train and familiarise decision makers and managers with the foundations, principles and modalities of the ecosystem approach. (Recommendation VII/6 Annex, Programme Element 1, Goal 1 Para.(g) p34)*
- *Objective 2: Donor bodies and other financial institutions to incorporate forest biological diversity and sustainable use principles and targets into forest and related programmes [...]. (Recommendation VII/6 Annex, Programme Element 2, Goal 1 Para.(c) p42) (See also Target 6 and 11)*

Biodiversity of inland waters

- Develop the policy research capacity needed to inform the decision-making process in a multidisciplinary and sectorally integrated manner. (Decision IV/4 Annex I, A, Para 9 m)(iv), p459)
- In view of the great economic importance of some groups [...] and the large gaps in taxonomic knowledge for many species, the COP considers this to be a specific focus of the capacity-building in taxonomy [...]. (Decision IV/4 Annex I C, para 16, p460) (See also Target 5)

Biodiversity of dry and sub-humid lands

- Activity 7: The establishment and promotion of research and development programmes with a focus on, inter alia, building local capacity for effective conservation and sustainable use of the biodiversity of dry and sub-humid lands. (Decision V/23 Annex I, II, Part B, Para (k), p637)
- Activity 7: The establishment and promotion of training, education and public awareness. (Decision V/23 Annex I, II, Part B, Para (i), p637) (See also Target 14)
- Activity 8: Strengthening of appropriate local institutional structures for resource management, supporting indigenous and local techniques of resource use [...], and/or combining appropriate existing institutions and techniques [...]. (Decision V/23 Annex I, II, Part B, Para (a), p638) (See also Target 13)
- Activity 8: Creating or strengthening appropriate institutions for land tenure and conflict resolution. (Decision V/23 Annex I, II, Part B, Para (c), p638)

Cross-cutting issues

Invasive alien species

- Requests the Executive Secretary to collaborate [...] to assist the Parties to the Convention in ...developing means to enhance the capacity of ecosystems to resist or recover from alien species invasions (Decision V/8, para 14(e) p574)
- *Guiding Principle 9: Support for capacity-building programmes [...] to assess and reduce the risks and to mitigate the effects when introduction of alien species has taken place. [It] may involve technology transfer and [...] training programmes. (Recommendation VI/4 Annex, B, para (c), p48) (See also Target 10)*

Climate Change

- Support the training of and career opportunities for marine taxonomists, ecologists, and members of other relevant disciplines, particularly at the national and regional level. (Decision V/3, Annex B, Response, p543) (See also Marine and Coastal Biodiversity)

Education and public awareness

- *Programme element 3: Develop professional capacity of educators and communicators; (UNEP/CBD/COP/6/13/Add.2, operational objective 1, p8) (See also Target 15)*

Global Taxonomy Initiative

- Development of guidelines and priorities for funding [...], recognising the need for adequate, long-term housing of collections, records and long-term research. (Recommendation II/2 Para.3 p387)
- [...] provide employment opportunities for new taxonomists [...]. (Recommendation II/2 Para.4 p387)
- [...] Attention should be given to the training of specialists, parataxonomists, and technicians in this field. [Taxonomy] must be integrated with [other] training activities [...]. (Recommendation II/2 Para.6 p387)
- [...] Parties to consider instructing the GEF to support the Global Taxonomy Initiative in order to provide funds [...] for developing national, regional and subregional training programmes (Recommendation II/2 Para.10(a) p388)
- [...] Parties to consider instructing the GEF to support the Global Taxonomy Initiative in order to provide funds [...] for the [...] transfer of modern technologies for taxonomic research and capacity-building (Recommendation II/2 Para.10(e) p388)
- [...] develop bilateral and multilateral training and employment opportunities for taxonomists, particularly for those dealing with poorly known organisms. (Decision IV/1 D Para.7 p442)
- Parties [...] should invest [...] in the development of appropriate infrastructure for their national collections. As part of the investment, donors [...] should support infrastructural needs of collection-holding institutions in countries where they provide investment support [...] (Decision IV/1 D Annex,Para.2 p443) (See also Target 8)
- Parties and international donors should encourage partnerships between institutions [...]. Such collaboration should include the development of national, subregional, regional and global training initiatives. [...] (Decision IV/1 D Annex Para.3 p443) (See also Target 16)
- Parties and international donors should provide training programmes, at different educational levels, relevant to the needs of the individual countries [...]. (Decision IV/1 D Annex Para.5 p443)
- Parties should ensure that institutions [...] are [...] stable, so as to have potential for continued and growing training and employment opportunities. (Decision IV/1 D Annex Para.11(a) p444)
- Parties should select or use centres of expertise at different geographical levels, capable of offering training programmes [...]. (Decision IV/1 D Annex Para.11(c) p444)
- Parties should give special attention to international funding of fellowships for specialist training abroad or for attracting international experts to national or regional courses. [...] (Decision IV/1 D Annex Para.11(d) p444)
- Parties should provide programmes for re-training of qualified professional moving into taxonomy-related fields. (Decision IV/1 D Annex Para.11(e) p444)
- Parties should adapt training methods to the particular technical or academic backgrounds and experience of candidates. [...] (Decision IV/1 D Annex Para.11(f) p444)
- Parties should ensure that training programmes address gaps in knowledge and the need for specialists in given taxonomic groups, and offer a comprehensive view of biodiversity issues [...]. (Decision IV/1 D Annex Para.11(g) p444)
- Parties should provide business management training [...] for managers of biological-diversity institutions [...]. (Decision IV/1 D Annex Para.11(h) p445)
- Parties should develop and maintain a register of practising taxonomists, areas of expertise and description of collections [...] available on the Internet. (Decision IV/1 D Annex Para.11(i) p445)
- [...] The work under [programme element 3 for forest biological diversity] could also include, inter alia, capacity-building on taxonomy and inventories, taking note of the work under the Global Taxonomy Initiative (Decision IV/7 D Annex Para.42 p485)
- *Planned activities 1-3: Assess taxonomic needs and capacities at national, regional and global levels for the implementation of the Convention. (Recommendation VI/6, II A, Operational objective 1, p61)*
- *Planned activity 5: Global and regional capacity-building to support access to and generation of taxonomic information. (Recommendation VI/6, II B, Operational objective 2, p66)*

Target 16:

Networks for plant conservation activities established or strengthened at national, regional and international levels.

Thematic work programmes

Marine & coastal biodiversity

- Operational objective 6.1: assemble a database of initiatives on programme elements through a cooperative approach with relevant organizations and bodies, with special emphasis on integrated marine and coastal areas management. (Decision IV/5, Annex C, p473)
- Operational objective 6.2: develop a database of experts [...] for the development and implementation of national policies on marine and coastal biological diversity, giving full recognition to the importance of taxonomy and following closely the developments of the Global Taxonomy Initiative [...]. Special consideration should be given to [...] the setting up regional centres of taxonomic expertise [...]. (Decision IV/5, Annex C, p474) (See also Global Taxonomy Initiative)

Agricultural biodiversity

- Activity 3.1: [...] maintain, inter alia, local-level forums and promote partnerships among researchers, extension workers, farmers and other stakeholders in R&D programmes for biodiversity conservation and sustainable use of biodiversity. (Decision V/5, Annex B, p561)
- Activity 3.6: Promote networks of farmers and farmers' organisations at regional level for exchange of information and experiences. (Decision V/5, Annex B, p561)
- Activity 4.1(c): Improved consultation, coordination, and information-sharing within countries [...] to promote synergy in the implementation of agreed plans of action and between ongoing assessments and intergovernmental processes. (Decision V/5, Annex B, p563)
- *Activity 3.3: Promote enhanced capabilities to manage pollinator diversity at local level by promoting partnerships among and between farmers, researchers, extension workers and food processors [...]. (Recommendation VII/7,III, p60).*

Forest biodiversity

- *Objective 1: Promote cooperative work on the sustainable use of forest products and services and its relation to biodiversity conservation [...]. (Recommendation VII/6 Annex, Programme Element 1, Goal 4 Para.(e) p38)*
- *Objective 2: Establish a liaison group with an associated workshop to facilitate development of joint work plan with relevant members of the Collaborative Partnership on Forests to bring harvesting of non-timber forest products [...] to sustainable levels [...].(Recommendation VII/6 Annex, Programme Element 1, Goal 4 Para.(a) p39) (See also Target 12)*

Biodiversity of inland waters

- Promote effective collaboration among ecologists, planners, engineers and economists [...] to better integrate inland water biodiversity with water resource development when considering projects likely to have an adverse impact on inland water ecosystems. (Decision IV/4 Annex I, A, Para 9 j), p458)
- Develop and maintain effective cooperation for sustainable management of transboundary watersheds, catchments, river basins and migratory species through appropriate mechanisms [...]. (Decision IV/4 Annex I, A, Para 9 k), p458)

Cross-cutting issues

Invasive alien species

- *Guiding Principle 9: Cooperative research [...] and funding efforts toward the identification, prevention, early detection, monitoring and control of invasive alien species. (Recommendation VI/4 Annex, B, para (d), p48) (See also Target 10)*

Climate change

- Build stakeholder partnerships, community participation programmes and public education campaigns and information products that address the causes and consequences of coral bleaching. (Decision V/3, Annex B, Response, p543) (See also Target 14 and Marine and Coastal Biodiversity)

Global Taxonomy Initiative

- [...] National institutions and regional and subregional networks should be established or strengthened and linkages enhanced with taxonomic institutions [...]. Consideration must be given to the information needs for [...] the sustainable utilisation of biological resources. (Recommendation II/2 Para.1 p386) (See also Targets 11 and 12)
- [...] the urgent need for the further implementation of recommendation II/2 of the Subsidiary Body on Scientific, Technical and Technological Advice concerning capacity-building in all fields of taxonomy to assist in the implementation of the Convention, through the incorporation of targeted actions in its workplan, including promoting regional activities to set regional agendas (Decision IV/1 D para 2, p442)
- [...] implementation of a Global Taxonomy Initiative should occur on the basis of country-driven projects at the national, regional and subregional levels (Decision IV/1 D para 4, p442)
- Parties and international donors should encourage partnerships between institutions [...]. Such collaboration should include the development of national, subregional, regional and global training initiatives. [...] (Decision IV/1 D Annex Para.3 p443) (See also Target 16)
- Institutions [...] should coordinate their efforts to establish and maintain effective mechanisms for the stable naming of biological taxa. (Decision IV/1 D Annex Para.8 p444)
- Parties should assist institutions to establish consortia to conduct regional projects. (Decision IV/1 D Annex Para.11(b) p444)
- Parties should select or use centres of expertise at different geographical levels, capable of offering training programmes individually or in combination, where such centres include universities, museums, herbaria, botanical and zoological gardens, research institutes and international or regional organizations (Decision IV/1 D Annex para 11(c), p. 444)
- Parties should [...] support development of regional taxonomic priorities, including plans to database collections using mutually agreed software, quality control and core-data requirements (Decision IV/1 D Annex, para 11(j), p445)
- [...] identify and, where possible, quantify national and regional-level taxonomic impediments and needs, including the identification of taxonomic tools, facilities and services required at all levels, and mechanisms to establish, support and maintain such tools, facilities and services (Decision V/9, para 2(b) p580)
- Establishment or consolidation of regional and national taxonomic reference centres (Decision V/9, para 1(c) p580)
- *Urges Parties, Governments, international and regional organizations, and other relevant organizations to promote, and, as appropriate, carry out, the programme of work (Recommendation VI/6, Recommendation 1 (b))*
- *Considers capacity development at the national and regional levels as a driving force in implementing the programme of work (Recommendation IV/6, 1d)*
- *Planned activity 6: Strengthening of existing networks for regional cooperation in taxonomy. (Recommendation VI/6, II B, Operational objective 2, p67)*

III. SUMMARY ISSUES

25. A number of decisions by the Conference of the parties established programmes of work and initiatives that could contribute to the propose strategy, including several relevant cross-cutting issues, such as: access and benefit-sharing; ecosystem approach, Global Taxonomy Initiative; Indicators; Article 8(j) and related provisions; sustainable use; impact assessment, liability and redress; economics, trade and incentives, and; protected areas.

Access to genetic resources and benefit-sharing

26. Access to genetic resources and the sharing of benefits necessarily underpin all the targets of the global strategy for plant conservation. Both access and benefit-sharing are essential to understand and document plant diversity, to conserve and use it sustainably and to promote associated capacity-building, education and awareness-raising.

27. The COP has called on Parties to submit to the Secretariat information on national legislative, administrative and policy measures to implement Article 15 (Decision II/11, Para.3 p338 and Decision III/15 Para.1 p 405), as well as additional information such as guidelines and the processes by which these were developed (Decision III/15 Para.1 p 405) and the identity of Competent National Authorities (Decision III/15 Para.6 p 406). COP Decisions have asked the Executive Secretary to compile and disseminate this and related information such as surveys, summaries, case studies and pre-CBD collections (see, for example, Decision II/11.Para 1 p 338; Decision III/15 Para 2(a) p 406; and Decision IV/8 Para 2 p 487). COPV requested Parties to designate a national focal point and one or more competent national authorities. (Decision V/26, Para 1, p653).

28. COP4 decided to establish a Panel of Experts on Access and Benefit-Sharing, which met first in October 1999 (Decision IV/8, Para 3, p 487). The Inter-sessional Meeting on the Operations of the Convention (ISOC) in June 1999 considered options for access and benefit-sharing mechanisms and made recommendations for future work, and provided some advice to guide the Panel. COP5 considered the report of the Panel's first meeting (see UNEP/CBD/COP/5/8) and recommendations from ISOC. COP 5 also decided to establish an Ad Hoc Open-ended Working Group on Access and Benefit-Sharing ('the Working Group') to develop guidelines and other approaches for consideration by COP6 and to assist Parties and stakeholders in addressing a list of elements relevant to access and benefit-sharing (Decision V/26, Para 11 p 654). The Panel met for the second time in March 2001, and its results were considered by the Working Group, which met in Bonn in October 2001. The Working Group developed draft international guidelines on access and benefit-sharing and made recommendations on other approaches, including a draft action plan for capacity-building and a recommendation on the role of intellectual property rights in the implementation of access and benefit-sharing arrangements. (See UNEP/CBD/COP/6/6.)

29. Section I of the draft Bonn Guidelines (general provisions) cover key features, use of terms and scope. Section II covers the role of the national focal point and competent national authority(ies),and responsibilities of Parties and stakeholders that are users and providers. Section III addresses the participation of stakeholders and Section IV, steps in the process of access and benefit-sharing, including prior informed consent and mutually agreed terms. Section V covers other provisions, such as incentives, accountability, monitoring and reporting, verification, disputes and remedies. Appendix I contains suggested elements for Material Transfer Agreements, and Appendix II, monetary and non-monetary benefits.

30. The outcomes from Bonn are applicable to all the targets of the strategy, but some aspects are of particular relevance to individual targets. For example, objective (L) (vii) is particularly relevant to Target 1 of the Guidelines. It provides that 'Taxonomic research, as specified in the Global Taxonomy Initiative, should not be prevented, and providers should facilitate acquisition of material for systematic

use and users should make available all information associated with the specimens thus obtained.' (UNEP/CBD/COP/6/6, Para 9, p16). Also para 14(b) is relevant for taxonomy and thus for Target 1, stating that "special terms and conditions should be established under mutually agreed terms to facilitate taxonomic research for non-commercial purposes". Similarly, the Recommendation on capacity-building is particularly relevant to Targets 15 and 16.

31. In addition to the COP Decisions and the draft Bonn Guidelines, which concern all genetic resources, the International Treaty on Plant Genetic Resources for Food and Agriculture is particularly relevant to plants. Several COP Decisions on access and benefit-sharing (e.g. Decision III/15 Para 7, p406) and on Agricultural biodiversity (eg Decision IV/6 Para 8, p476) refer to the importance of concluding the negotiations to revise the International Undertaking on Plant Genetic Resources for Food and Agriculture, to bring it into harmony with the CBD. The text of the International Treaty on Plant Genetic Resources for Food and Agriculture (IT) was finalised in Rome in November 2001. The IT establishes a multilateral system for access to plant genetic resources; conditions for facilitated access; benefit-sharing, including a commercial benefit-sharing package; Farmers' Rights; financial resources; the involvement of the International Agricultural Research Centres (IARCs) of the CGIAR; and institutional and legal provisions. It covers access to the list of crops in Annex I (35 crop genera and 29 forage species) for the purposes of food and agriculture ('... utilization and conservation in research, breeding and training for food and agriculture, provided that such purpose does not include chemical, pharmaceutical and/or other non-food/feed industrial uses'. In addition, the IARCs are invited to enter into agreements with the Governing Body of the IT concerning not only Annex I materials, but other materials in their collections. (Article 15). Benefit-sharing obligations, through the exchange of information, access to and transfer of technology, capacity building and sharing the benefits of commercialisation, is described in Article 13. (see <ftp://ext-ftp.fao.org/waicent/pub/cgrfa8/iu/ITPGRe.pdf>; or <http://www.fao.org/ag/cgrfa/News.htm>) Reference should also be made to the "International Review of the *Ex Situ* Plant Collections of the Botanic Gardens of the World" prepared by Botanic Gardens Conservation International (BGCI), with the support of the UK Government and the CBD Secretariat.

Ecosystem approach

32. The ecosystem approach is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. It is based on application of appropriate methodologies, focused on levels of biological organisation which encompass the essential structure, processes, functions and interactions among organisms and their environment and recognising that humans are an integral component of many ecosystems. 'Ecosystem' can refer to any functioning unit, from a grain of soil to the entire biosphere. The ecosystem approach requires adaptive management and can integrate a range of other management and conservation approaches, such as biosphere reserves and single-species conservation programmes. COP5 endorsed the description of the ecosystem approach and the operational guidance contained in Decision V/6 Annex, sections A & C, respectively, pp566 [of Handbook] *et seq.*, and recommended the application of the 12 complementary and interlinked principles set out in Decision V/6 Annex, Section B, Para.6 pp567-570. Application of the ecosystem approach would be central to the Global Strategy for Plant Conservation, as a number of examples show.

33. Many of the principles of the ecosystem approach apply to all the strategy's targets. For instance, principles 2 (management should be decentralised to the lowest appropriate level) and 12 (the ecosystem approach should involve all relevant sectors of society and scientific disciplines) are important to ensure appropriate participation and benefit-sharing in activities related to understanding and documenting plant diversity, conserving and using it sustainably as well as to promoting education and capacity-building concerning plant diversity. Similarly, principle 4 (need to understand and manage ecosystems in their economic context) underlies all the strategy's targets. Finally, the strategy as a whole reflects principle 10 (the ecosystem approach should seek the appropriate balance between, and integration of, conservation and use of biological diversity).

34. Other principles, while applicable to the strategy as a whole, are also of specific relevance to particular targets. For example, principle 5 (conservation of ecosystem structure and functioning, in order to maintain ecosystem services, should be a priority target of the ecosystem approach) is particularly relevant to targets 3-7, and principle 11 (the ecosystem approach should consider all forms of relevant information, including scientific and indigenous and local knowledge, innovations and practices) to targets 1-3 and 9.

Global Taxonomy Initiative

35. The following objectives and guiding principles of the Global Taxonomy Initiative are related to several draft targets:

- Operational objective 6.2: develop a database of experts [...] for the development and implementation of national policies on marine and coastal biological diversity, giving full recognition to the importance of taxonomy and following closely the developments of the Global Taxonomy Initiative [...]. Special consideration should be given to [...] the setting up regional centres of taxonomic expertise [...]. (Decision IV/5, Annex C, p474) (See also Target 16)
- The Executive Secretary should take decisive action to advance the Global Taxonomy Initiative [...]. (Decision IV/4 Annex I D Para.21 p461) (See also Target 1 and 3)
- *Activity 3.4: Build taxonomic capacity to carry out inventories of the pollinator diversity and distribution in order to optimise their management, through, inter alia, the training of taxonomists and parataxonomists of bees and other pollinators. (Recommendation VII/7,III, p60) (See also Target 15)*
- *Activity 4.3: Strengthen national institutions to support taxonomy of bees and other pollinators [...]. (Recommendation VII/7,III, p61) (See also Target 15)*
- *Guiding Principle 5: [...] undertake research on and monitoring of invasive alien species, [...] [including] a baseline taxonomic study of biodiversity [...], both targeted and general surveys [...], a thorough identification of the invasive species [...].(R VI/4 Annex, A, p47) (See also Target 3 and 10)*
- *Guiding Principle 8: States should assist in the development of an inventory and synthesis of relevant databases, including taxonomic and specimen databases, and the development of information systems and an interoperable distributed network of databases for compilation and dissemination of information [...]. (Recommendation VI/4 Annex, B, para 1, p48) (See also Targets 1 and 10)*

Identification, monitoring and assessment, and indicators

36. Indicators of biodiversity will be helpful to gauge and monitor implementation of all the targets of the GSPC. In decision IV/7 (Decision IV/7, p445) COP 4 approved a two track working programme on indicators of biological diversity. The first track, for immediate implementation, considers existing and tested indicators of state and pressure related to the conservation of biological diversity and to the sustainable use of its components. The second track, for long-term implementation, considers the identification, development and testing of response indicators for the three objectives of the Convention, along with state and pressures indicators for the sharing of benefits. It also aims at further improvement of the state and pressure indicators for the first two objectives of the Convention.

37. Given the widely varying conditions among countries, most national-level indicators will be country-specific. COP 4 requested the Executive Secretary to develop a set of principles for designing national-level monitoring programmes and indicators. This list of indicators covers the ecosystem, species and genetic levels, taking into account the ecosystem approach. It has a section of general indicators and sets of indicators under the thematic programmes of work (UNEP/CBD/SBSTTA/7/12, p.17). Many of these indicators could be applicable to the GSPC targets.

Article 8(j) and related provisions

38. COP 4 adopted the structure of a programme of work on Article 8j in decision IV/9 (Decision IV/9, Annex, p492), establishing also that the mandate of the working-group shall be to:

- a) Provide advice [...] on legal and other appropriate forms of protection for the knowledge, innovations and practices of indigenous and local communities [...];
- b) Advise COP on the implications of Article 8j) [...];
- c) Develop a programme of work [...];

39. At its first meeting, the Ad hoc Open-Ended Inter-sessional Working Group on Article 8j developed this structure (Decision V/16, Annex, p608), detailing 18 tasks and corresponding operational objectives to implement them. The tasks can be summarised as follows:

Task 1. Enhance and strengthen [...] the capacity of indigenous and local communities to be effectively involved in the promotion of the wider application of their knowledge, innovations and practices relevant to the conservation and sustainable use of biological diversity.

Task 2. Develop mechanisms and guidelines to ensure the full participation of indigenous and local communities in decision-making, policy planning and development and implementation of the conservation and sustainable use of biological resources [...], including access and benefit-sharing and the designation and management of protected areas, taking into account the ecosystem approach.

Task 3. Establish a roster of indigenous and local community experts [...].

Task 4. Prepare a composite report on the current status and trends regarding the knowledge, innovations and practices of indigenous and local communities [...].

Task 5. Develop guidelines for the respect, preservation and maintenance of traditional knowledge, innovations and practices and their wider application.

Task 6. Develop a set of guiding principles and standards to strengthen the complementary use of traditional knowledge [...] for the conservation and sustainable use of biological diversity [...].

Task 7. Develop guidelines and proposals for the establishment of national incentive schemes for indigenous and local communities to preserve and maintain their traditional knowledge, innovations and practices and for [its] application [...] in national strategies and programmes for the conservation and sustainable use of biological diversity.

Task 8. Develop guidelines that would facilitate the repatriation of information [...] in order to facilitate the recovery of traditional knowledge of biological diversity.

Task 9. Develop guidelines and mechanisms to ensure that holders of traditional knowledge obtain an equitable share of the benefits arising from the application of their knowledge.

Task 10. Develop mechanisms to facilitate the exchange and dissemination of information on traditional biodiversity-related knowledge, innovations and practices with the full participation and consent of [its] holders/customary owners [...].

Task 11. Identify, compile and analyse [...], existing and customary codes of ethical conduct to guide the development of models for codes of ethical conduct for research, access to, use, exchange and control of information concerning traditional knowledge, innovations and practices [...].

Task 12. Develop strategies to promote public awareness of the importance of traditional knowledge and biological diversity to global sustainability; the role of indigenous and local communities in the maintenance of biological diversity; and the international agreements for their protection and strengthening.

Task 13. Develop [...] criteria and indicators to assist the Parties in assessing their implementation of Article 8(j) and related provisions [...].

Task 14. Develop guidelines and recommendations for the conduct of strategic, environmental, and social impact assessments regarding any development proposed to take place on lands or waters occupied or used by indigenous and local communities [...].

Task 15. Develop internationally applicable standards and guidelines for the reporting and prevention of illicit appropriation of traditional knowledge.

Task 16. Prepare a set of draft guidelines for national legislation regarding the implementation of Article 8(j) and related provisions, and which includes within its definitions an elaboration of key terms and concepts.

Task 17. Establish an inter-agency task force to review and recommend on the development of legal and other appropriate forms of protection for the knowledge, innovations and practices of indigenous and local communities [...].

Task 18. Develop guidelines that will assist States in the establishment of legal frameworks, including sui generis systems that recognize, safeguard and fully guarantee the protection of the cultural heritage, customary laws, innovations and traditional knowledge [...].

40. All of these tasks and operational objectives relate and serve the implementation of the targets of the GSPC. All tasks underline Targets 9 and 13 of the GSPC, some will help particularly with the implementation of other individual targets.

41. For instance, Task 10 (development of mechanisms to facilitate the exchange and dissemination of information on traditional biodiversity-related knowledge) could provide data for Target 1. Task 12 (promoting public awareness of the importance of traditional knowledge) could help with the implementation of Target 14 of the Strategy. Furthermore, Task 1 (enhance and strengthen the capacity of indigenous and local communities) and Task 3 (establish a roster of indigenous and local community experts) reflect the aims of Targets 15 and 16.

Sustainable use

42. Sustainable use of the components of biological diversity is one of the three objectives of the CBD. COP 4 decided to consider sustainable use, including tourism, at COP 5 (Decision IV/16, p507). COP 5 regarded sustainable use as a cross-cutting issue (Decision V/24, p641) and considered the relationship between biodiversity and tourism within the context of sustainable use. References to sustainable use have also been made in each of the thematic work programmes (please see also thematic work programmes under Targets 11-13).

43. COP 5 asked the Executive Secretary to assemble practical principles, operational guidelines and instruments, and guidance specific to sectors and biomes to assist Parties. The synthesis of the practical principles, operational guidance and associated instruments is currently underway and has been laid down in the "Maputo Principles". Of the Guiding Principles contained in the Maputo Principles, many are of relevance to the GSPC Targets. For instance, within the Legal Policy Framework, para 4 (Managerial jurisdictions are matched with the ecological and socio-economic scale of the use) is applicable to Targets 4 to 13. Para 10 (Effective communications [...] between and among stakeholders at the individual, community, sub-national, national, regional and international levels) in the Framework for Management is generally relevant to Targets 4 to 13, but particularly to Target 6. Also para 16 (Contribution and needs of those who live with and are impacted by the use and conservation of biodiversity, in particular indigenous peoples and local communities, are appropriately reflected in the distribution of the benefits from the use of those resources) under Conservation Incentives is relevant for Target 4 to 13.

Impact assessment, liability and redress

44. COP 4 asked for information and a synthesis report on the following issues (Decision IV/10, Part C, para 1, p493):

1. Impact assessments that consider environmental effects and interrelated socio-economic aspects relevant to biological diversity
2. Strategic environmental assessments
3. Reports relating to existing legislation on EIA
4. Reports and case studies relating to EIA in the thematic areas, including in respect of activities with transboundary implications.

45. COP 5 requested SBSTTA to develop guidelines for incorporating biodiversity-related issues in legislation and/or processes on strategic environmental impact assessment with a view to completing this work by COP 6 (Decision V/18, para4, p613). These guidelines have been developed at SBSTTA 7 (Recommendation VII/10, p82), and will be submitted to the sixth meeting of the Conference of the Parties. Of interest to the GSPC is, in particular, the inclusion of criteria for biodiversity screening concerning three levels: genetic diversity, species diversity and ecosystem diversity.

46. Concerning liability and redress, COP 4 invited submissions on national and international measures on: liability and redress applicable to damage to biodiversity; and information on experiences in implementation, as well as information on access by foreign citizens to national courts in cases of transboundary harm (Decision IV/10C, para 8, p496). The call for information was renewed at COP 5, and the Secretariat was asked to update the synthesis report, based on submissions as well as developments in other international fora (Decision V/18, para 6, 7, p614). At its sixth meeting, the COP is due to consider a process for reviewing Article 14(2), including the establishment of an ad hoc technical expert group, asked to conduct analysis on the following issues (UNEP/CBD/COP/6/12/Add.1, p10):

1. Clarifying basic concepts and developing definitions [...];
2. Proposing the possible introduction of elements, as appropriate, to address specifically liability and redress relating to damage to biological diversity into existing liability and redress regimes;
3. Examining the appropriateness of a liability and redress regime under the CBD, as well as exploring issues relating to restoration and compensation;
4. Analysing activities and situations that contribute to damage to biological diversity [...]; and
5. Considering preventive measures on the basis of the responsibility recognized under Article 3 CBD;

[Please note that these are just proposals. The mandate of the technical expert group, if agreed, will be determined in COP6 in April 2002.]

Economics, Trade and Incentives

47. COP 5 decided to establish a programme of work intended to promote the development and implementation of social, economic and legal incentive measures (Decision V/15, p503). The expected results of the work programme include: the assessment of representative existing incentive measures, review of case studies, identification of new opportunities for incentive measures, and dissemination of information, through the clearing-house mechanism and other means, as appropriate; the development of methods to promote information on biodiversity in consumer decisions [...]; the assessment [...] of the values of biodiversity [...]; a consideration of biodiversity concerns in liability schemes and the creation of incentives for integration of biodiversity concerns in all sectors.

48. On the basis of the conclusion of a workshop on the issue, SBSTTA has submitted recommendations for the design and implementation of incentive measures to COP 6 (Recommendation VII/9, annex I, p71). They include the following steps: identification of the problem; design of the measure; provision of capacity and building of support to facilitate implementation; management, monitoring and enforcement; and guidelines for selecting appropriate and complementary measures. Moreover, SBSTTA also suggests recommendations for further cooperation on incentive measures (Recommendation VII/9, annex II, p78)., which revolve around the following elements: information, the involvement of stakeholder including indigenous and local communities, capacity building, valuation, interlinkages between multilateral environmental agreements, linking biodiversity to macro-economic policies, categories of incentive measures, ecosystem focus, pilot projects/case studies/workshops, the role of international organizations and financial support.

49. The way in which incentive measures are implemented and designed is of crucial importance for the implementation of the GCPC. Some of the criteria will particularly help with the implementation of specific targets.

- Target 1: Criteria in the SBSTTA recommendations for the design and implementation of incentive measures that might be useful for the implementation of this target include the identification of underlying causes/threats (Annex I, paras 5 and 6) and the identification of relevant experts and stakeholders (Annex I, para 8).
- Targets 4 to 7: The use of incentive measures may constitute an important ingredient in implementing these targets. For instance, user fees and other incentive measures may be part of the management of protected areas, thus being part of a policy package or a mix of measures, as envisaged in para 24 (Annex I) of the SBSTTA recommendations. Furthermore, the identification and removal of perverse incentives, as envisaged in para 37 (i) of the SBSTTA recommendations (Annex I), may in particular contribute to target 6. It should also be noted that para 10 (Annex I) of the SBSTTA recommendation calls for clear targets and indicators.
- Target 10: the risk assessments that will underlie such management plans may rely on economic valuation tools, whose use is envisaged in para 18 (Annex I) of the SBSTTA recommendations.
- Target 13: Para 22 (Annex I) of the SBSTTA recommendations, which calls for the recognition of the value of biodiversity for local and indigenous communities will be important for the attainment of target 13.
- Target 14: Para 23 (Annex I) of the SBSTTA recommendations, which calls for raising awareness of biodiversity values and services underlines the aims of Target 14.
- Target 15: Target 15 is well in line with the SBSTTA recommendation on the provision of capacity and the building of support (Annex I, paras 28-31) as well as with its recommendation to undertake further steps in cooperation to build appropriate legal and policy frameworks and supporting human capacity (Annex II, paras 9-10)

Protected areas

50. The COP has decided that protected areas should be one of three items for in-depth consideration at COP 7 (Decision IV/16, annex II, p510), and has recommended protected areas as one of four specific themes for the compilation and dissemination of information (Decision III/9, para9, p380). The COP has also emphasized the importance of protected areas in the work programmes of four thematic areas.

51. For Forest biodiversity, the COP has decided that one of the eight objectives of the work programme should be to identify the contribution of networks of protected areas to the conservation and sustainable use of forest biodiversity (Decision IV/7, annex, para 3(h), p481).

52. Marine and coastal protected areas are identified as one of the five key programme elements under the work programme on marine and coastal biodiversity (Decision IV/5, C, Programme element 3, p470). The COP has also established Ad Hoc Technical Expert Groups on Marine and Coastal Protected Areas and on Mariculture (Decision IV/3, para 15, p541).

53. The work plan for inland water biodiversity states that one of the areas where SBSTTA should concentrate its efforts is the use of protected areas and their management strategies for conservation and sustainable use of inland water ecosystems (Decision IV/4, annex I, para 8 (c)(vii), p456).

54. The use and establishment of additional protected areas is identified as one of the necessary targeted actions for the implementation of the work programme on dry and sub-humid lands (Decision V/23, annex I, II, part B, Activity 7 (a), p637).
