Annex I

RECOMMENDATIONS ADOPTED BY THE SUBSIDIARY BODY ON SCIENTIFIC, TECHNICAL AND TECHNOLOGICAL ADVICE AT ITS TENTH MEETING

X/1. Island biodiversity

The Subsidiary Body on Scientific, Technical and Technological Advice

1. *Welcomes* the report of the Ad Hoc Technical Expert Group on Island Biological Diversity (UNEP/CBD/SBSTTA/10/INF/1);

2. *Also welcomes* the report of the liaison group on island biodiversity (UNEP/CBD/SBSTTA/10/INF/26);

3. *Expresses its appreciation* to:

(a) The Government of Spain for its financial support to the work of the Ad Hoc Technical Expert Group on Island Biological Diversity;

(b) Other Governments and organizations for the participation of their representatives;

(c) The Chair and participants in the Ad Hoc Technical Expert Group;

(d) The Chair and participants in the liaison group;

4. *Welcomes* the outcome of the Mauritius International Meeting for the Review of the Implementation of the Barbados Programme of Action for Small Island Developing States;

5. *Recommends* that the Conference of the Parties:

(a) Adopts the goals, global targets and timeframes and island-specific priority actions of the programme of work on island biodiversity, as annexed to the present recommendation, and develops and adopts specific activities, taking as basis the activities contained in the report of the Ad Hoc Technical Expert Group, the recommendations of the liaison group and the submissions made at the tenth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice;

(b) Urges Parties, other Governments, international organizations and other relevant organizations to implement the programme of work, and further urges Parties to incorporate the programme of work into their national biodiversity strategies and action plans and to mainstream them into national sustainable development strategies;

[(c) Requests the Global Environment Facility and its implementing agencies to make island biodiversity a priority, particularly in small island developing States;

(d) Requests the Global Environment Facility to apply their rules of access and simplify their disbursement procedures so as to take into account the special circumstances of small island developing States in implementing the programme of work on island biodiversity;

(e) Requests the Global Environment Facility to provide fast-disbursing resources as needed to support country-driven early action, in particular in small island developing States, to implement the programme of work of the Convention on Biological Diversity on protected areas for meeting the 2010 target;

(f) Requests the international community to actively address, during the fourth replenishment of the Global Environment Facility, the financial requirements for the implementation of a programme of work on island biodiversity;

(g) Requests regional development banks and other financial institutions to provide/increase their assistance in particular to small island developing States for the implementation of the programme of work;]

(h) Requests Parties to achieve in island ecosystems targets and sub-targets developed in all programmes of work of the Convention, to use the agreed indicators to assess progress and report in the context of the national reports of the Convention on Biological Diversity. To achieve these targets, the international community is invited to assist small island developing States by implementing the recommendations contained in the Mauritius Strategy for the Further Implementation of the Barbados Programme of Action for the Sustainable Development of Small Island Developing States;

[(i) Urges Parties to increase their official development assistance in support of the implementation of the programme of work on island biodiversity, in particular in small island developing States;]

[(j) Requests the Executive Secretary to develop guidelines for the implementation of the programme of work on island biodiversity, [including legislative aspects, regulatory matters and incentives] [including legislative and regulatory frameworks, and incentive measures];]

(k) Agrees, recognizing the critical values of islands for the conservation of biodiversity and the current alarming rate of loss of island biodiversity, to give priority in the programme of work to activities that could significantly contribute to the conservation of island biodiversity;

(l) Invites Parties to incorporate the programme of work on island biodiversity into the current work on national capacity self-assessment;

(m) Encourages the development of community-based approaches in the implementation of the programme of work;

(n) Invites Parties to implement relevant activities under this programme of work in conjunction with corresponding activities under the Mauritius Strategy;

(o) Encourages Parties to establish national and international island partnerships that bring governments and civil society organizations together to increase political, financial and technical support to accelerate the implementation of the programme of work on island biodiversity;

(p) Invites the United Nations Framework Convention on Climate Change, the Intergovernmental Panel on Climate Change, and the Earth System Science Partnership to collaborate in activities relevant to island biodiversity and climate change;

(q) Invites the United Nations Convention to Combat Desertification to enhance collaboration in activities relevant to land degradation that could negatively impact island biological diversity;

(r) Encourages IUCN to expand its guidelines on the use of IUCN categories and criteria to provide further guidance on addressing specific issues that arise in the listing of island species;

(s) Requests Conservation International to provide information on islands classified as biodiversity hotspots;

(t) Requests Parties to regularly monitor progress in implementing this programme of work and in meeting the global targets and report to the Conference of the Parties, taking into account the special capacity constraints of small island developing States;

(u) Reviews the targets in decision VII/30 and, if necessary, refine them, with a view to achieve consistency among the targets integrated into the programmes of work and the general framework;

6. *Requests* the Executive Secretary to compile those supporting actions for the programme of work on island biodiversity included in the drafts considered by the Subsidiary Body on Scientific, Technical and Technological Advice at its tenth meeting and the suggestions received during that meeting and forward them to the Conference of the Parties at its eighth meeting for its consideration.

Annex

ISLAND BIODIVERSITY: PROPOSED ELEMENTS FOR A PROGRAMME OF WORK

A. Introduction 1/

1. The Earth is home to over 100,000 islands, which host more than 500 million inhabitants. Their combined land and exclusive economic zones (EEZs) cover more than one sixth of the Earth's total area. Islands and their surrounding near-shore marine biodiversity constitute self-contained, bounded ecosystems, each with their own unique, often very limited, assemblage of biodiversity. In terms of island biodiversity inheritances, these range from some of the richest on Earth, with extremely high levels of endemism, to some of the poorest, with little or no endemism. Both are seriously under threat and constitute global conservation priorities

2. In terms of those islands with rich biotas, the isolation of island environments has resulted in the evolution of often endemic and characteristic flora and fauna. A total of 104 of the 218 Endemic Bird Areas are confined entirely to islands, 2/ while 36 of the 143 terrestrial Global 200 Ecoregions 3/ are comprised of islands. Ten of the 34 biodiversity hotspots 4/ wholly comprise islands, and many of the rest also include islands. No less than 218 of the 595 individual sites holding the entire global population of one or more critically threatened species are found on islands. 5/ A recent global gap analysis of the coverage of terrestrial vertebrate species within protected areas 6/ found that of the gaps, most "are montane or insular regions in the tropics."

3. At the other extreme, some of the smaller low-lying islands and atolls are among the Earth's biodiversity "cool spots" in that they have the lowest biodiversity on Earth and few, if any, endemic species. However, despite a disproportionate dependence on biodiversity for almost all forms of economic livelihood on these small islands, a very high percentage of their terrestrial biodiversity is threatened and in need of some form of protection. 7/

4. The significance of marine biodiversity within islands has been well recognized 8/ with over half of the tropical marine biodiversity found in islands and 12 of the 18 centres of endemism, and seven of the ten coral-reef hotspots surround islands. In terms of cultural diversity, a number of islands are also the home to unique cultures that have developed traditional resource-management methods that have, in many cases, enabled people to develop and live in harmony with biodiversity.

5. The programme of work offers a particularly unique opportunity for building bridges among all islands and all island nations in efforts to conserve, sustainably use and equitably share island biological diversity.

1/ This section draws on: C. Marin, P. Deda and J.K. Mulongoy , "Island biodiversity – Sustaining life in vulnerable ecosystems", special issue of INSULA, the International Journal on Island Affairs, February/September 2004 the special volume of INSULA, the International Journal of Island Affairs, published in February 2004.

2/ Stattersfield, A.J., Crosby, M.J., Long, A.J. & Wege, D.C. (1998) Endemic Bird Areas of the World: Priorities for Biodiversity Conservation. BirdLife International, Cambridge, UK.

3/ Olson, D.M. & Dinerstein, E. (1998) The Global 200: a representation approach to conserving the earth's most biologically valuable ecoregions. *Conservation Biology* 12: 502–515.

4/ Mittermeier, R.A., Robles Gil, P., Hoffmann, M., Pilgrim, J., Brooks, T., Mittermeier, C.G., Lamoreux, J. & Fonseca, G.A.B. da (2004) *Hotspots: Revisited.* CEMEX, Mexico.

5/ www.zeroextinction.org

6/ Rodrigues, A.S.L., Andelman, S.J., Bakarr, M.I., Boitani, L., Brooks, T.M., Cowling, R.M., Fishpool, L.D.C., Fonseca, G.A.B. da, Gaston, K.J., Hoffmann, M., Long, J.S., Marquet, P.A., Pilgrim, J.D., Pressey, R.L., Schipper, J., Sechrest, W., Stuart, S.N., Underhill, L.G., Waller, R.W., Watts, M.E.J. & Yan, X. (2004) Effectiveness of the global protected area network in representing species diversity. *Nature* 428: 640–643.

7/ Thaman, R.R. 2005. Sinking island arks. Island biodiversity and island living under threat; the uniqueness, threatened status and priority need to conserve island and associated marine biodiversity as the foundation for sustainable island life. Keynote presentation at the tenth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) of the Convention on Biological Diversity, Bangkok, 7-11 February 2005.

8/ Roberts, C.M., McClean, C.J., Veron, J.E.N., Hawkins, J.P., Allen, G.R., McAllister, D.E., Mittermeier, C.G., Schueler, F.W., Spalding, M., Wells, F., Vynne, C. & Werner, T.B. (2002) Marine biodiversity hotspots and conservation priorities for tropical reefs. *Science* 295: 1280–1284.

6. From small islands through to large, from countries that have islands through to countries that entirely comprise islands, and from large continental remnants through to remote atolls, there are opportunities and challenges for the conservation and sustainable use of biodiversity. Islands are self-contained ecosystems with well defined geographical limits that encapsulate fundamental ecological processes and interactions. Islands incorporate all the existing thematic areas considered under the Convention, i.e., forests, inland waters, agricultural land, dry and sub-humid lands, marine and coastal ecosystems, and mountain ecosystems. The connectivity of ecosystems and the interface between marine and terrestrial realms will create specific issues and opportunities for the implementation of the Convention on Biological Diversity.

7. Because of their scale, and the scope for integrated management of biodiversity, small islands are microcosms of their continental counterparts, where strategies, policies and management regimes for sustainable development can be applied, tested and refined; where the components of cause and effect are more readily assessed, outcomes more rapidly seen and results more specifically tangible. Focusing efforts and resources on the conservation and sustainable use of island biodiversity and the fair and equitable sharing of benefits arising from the utilization of island genetic resources can provide rapid progress towards the reduction in the rate of biodiversity loss by 2010 and the achievement of representative systems of protected areas by 2010 in terrestrial and 2012 in marine realms.

8. However, in no other place is biodiversity *per se* so fragile. The vulnerabilities of small islands require not only special but urgent attention from their inhabitants and the world community. Species that have evolved on islands have done so free from competition with large numbers of other species and are, therefore, susceptible to invasions by alien species. Populations of island fauna and flora tend to be naturally small, and species often become concentrated in special small areas, where they are subject to various natural and anthropogenic pressures that endanger their survival. They have the highest proportion of recorded species extinctions and continue to be significantly threatened by invasive alien species, climate change and variability, natural and environmental disasters, land degradation and land based sources of marine pollution.

9. Islands, in particular small island developing States, constitute a special case for both the environment and development. As articulated in chapter 17 of Agenda 21 and emphasized in the Barbados Programme of Action, as well as in the Plan of Implementation of the World Summit on Sustainable Development, small island developing States rely significantly on the conservation and sustainable use of island biodiversity for their sustainable development and experience even more specific challenges and vulnerabilities. These arise from the interplay of such socio-economic and environmental factors as small populations and economies, weak institutional capacity in both the public and the private sector, remoteness from international markets, susceptibility to natural disasters and climate change (including, in particular, sea-level rise), fragility of land and marine ecosystems (particularly affected by tourism development and unsustainable agriculture and forestry), high cost of transportation, limited diversification in production and exports, dependence on international markets, export concentration, and income volatility and vulnerability to exogenous economic shocks. Traditional resource management and practices relevant to the sustainable use of island ecosystems are at risk of breaking down as a result of modern economic and social pressures, and require actions for revitalization and protection. The Secretary-General of the United Nations has stated that, among developing countries, small island developing States, as a group, are amongst the most vulnerable. The expression of their vulnerabilities often has cumulative effects, further exacerbating the risks to their biodiversity.

10. Although islands are unique environments in their own right, and are deserving of a special programme of work under the Convention they also incorporate the existing programme areas and cross-cutting issues considered under the Convention and implementation of these programmes should continue as appropriate.

11. Information and input from international forums has also been taken into account, including particular: (i) decision VII/30 of the Conference of the Parties to the Convention on Biological Diversity (ii) chapter 17 of Agenda 21; (iii) the Barbados Programme of Action for the Sustainable Development of

Small Island Developing States; (iv) the Mauritius Strategy for the Further Implementation of the Barbados Programme of Action; (v) the Plan of Implementation of the World Summit on Sustainable Development; and (vi) the Millennium Development Goals, in particular goal 7.

12. Although it was considered that potential threats from genetically modified organisms to island biodiversity were extremely important for islands and island States, no reference has been made to these within the programme of work, as these issues would be most appropriately addressed under the Cartagena Protocol on Biosafety.

B. Overall purpose and scope of the programme of work

13. The overall purpose of the programme of work on island biodiversity is the significant reduction of island biodiversity loss by 2010 and beyond at global, regional and national levels, through the implementation of the three main objectives of the Convention, for the benefit of all forms of life on islands and, in particular, as a contribution to poverty alleviation and the sustainable development of small island developing States. The implementation of the programme of work thereby contributes to the objectives of the Strategic Plan of the Convention on Biological Diversity, the Barbados Programme of Action, the Plan of Implementation of the World Summit on Sustainable Development and the Millennium Development Goals.

14. The programme of work recognizes the uniqueness of island ecosystems and focuses on addressing characteristics and problems specific to island biological diversity that make island ecosystems particularly vulnerable to almost all types of natural, technological and human-related threats. It also recognizes that island biodiversity is of global significance and, as such, merits increased attention at the global scale, as its conservation and sustainable use will produce global benefits. Furthermore, it acknowledges that islands are microcosms that offer great scope for the application, testing and refinement of a wide range of conservation tools and approaches, including the ecosystem approach.

15. The programme of work seeks to complement existing thematic work programmes and other existing initiatives of the Convention on Biological Diversity. It acknowledges and identifies issues contained in other programmes of work and cross-cutting issues and notes the rationale for specific activities that are important for the understanding, conservation and sustainable use of island biological diversity. Parties are encouraged to apply, where appropriate, the objectives and activities from these work programmes to the conservation of island biological diversity, the sustainable use of its components, and the equitable sharing of the benefits arising from the utilization of island genetic resources.

16. By identifying synergies between this programme of work and other thematic programmes, conventions and agreements, Parties can strengthen cooperation and partnerships at the national, regional and international levels. Such partnerships should be broad-based and ensure the sharing and exchange of information and relevant trained personnel bearing in mind the necessity for cross-cultural exchange at the regional level and the involvement and participation of all stakeholders, including indigenous and local communities, civil society and the private sector.

17. In addition, this programme of work responds, *inter alia*, to the call made by small island developing States, during their regional and interregional preparatory meetings for the International Meeting to Review the Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States, that island biodiversity should be addressed under the Convention on Biological Diversity in a manner that responds to the unique characteristics of small island developing States, in particular their vulnerabilities, and to the threats related to climate change and land degradation. Consequently, the programme of work is also a contribution to the implementation of the Mauritius Strategy for the Further Implementation of the Barbados Programme of Action for the Sustainable Development of Small Island Developing States.

18. In addition to the achievement of Millennium Development Goal 7, on environmental sustainability, this programme of work will contribute to the achievement of other Millennium Development Goals relating to poverty eradication and health. While the reference to poverty reduction and health is not explicitly stated throughout the programme of work, it is understood that the

conservation and sustainable use of island biodiversity will contribute significantly to food security, sustainable livelihoods, health improvements and human well-being.

19. It is important to note that cultural diversity, the traditional knowledge and practices of indigenous and local communities of many small islands are unique and have special significance for these communities and need special consideration and integration in this programme of work. All aspects of the programme of work should be read and implemented with the full recognition of, and respect for, the rights of indigenous and local communities and their full and effective participation, in accordance with national law and relevant international obligations.

20. The programme of work is intended to assist Parties in establishing national programmes of work with targeted goals, objectives, and actions, with specific actors, timeframes, inputs, and expected measurable outputs. Parties may select from, adapt, and/or add to, the goals, objectives and actions suggested in the current programme of work according to particular national and local conditions, and their level of development. Implementation of this programme of work should take into account the ecosystem approach of the Convention on Biological Diversity as the logical planning and management tool for integral island policies. In determining national programmes of work, Parties are encouraged to pay due regard to the socio-economic, cultural and environmental costs and benefits of various options. In addition, Parties are encouraged to consider the use of appropriate and adaptive technologies, sources of finance, and technical cooperation, and to ensure, through appropriate actions, the means to meet the particular challenges and demands of their island ecosystems.

21. As outlined in the introduction to the programme of work, the scale of islands provides significant opportunities for the integrated management of biodiversity. The goals and targets within the programme of work are therefore closely inter-related. Countries are encouraged to consider implementation of this programme in an integrated manner and in light of existing plans and within existing planning and programming cycles.

C. Working definitions

22. The following terms have been clarified in order to facilitate the understanding and the implementation of this programme of work:

- Global target = desired outcome/results to be achieved within a specific timeframe. These should be measurable and achievable;
- Priority action = major action that must be implemented and will contribute significantly to achieving the target. It answers the question, “What must we do to achieve this target?”.

D. Goals, targets and timeframes, and island specific priority actions for the Parties

TIMEFRAME & GLOBAL TARGETS	ISLAND-SPECIFIC PRIORITY ACTIONS FOR THE PARTIES
GOAL 1: CONSERVATION OF ISLAND BIODIVERSITY	
1. By 2010 at least 10% of each of the island ecological regions effectively conserved.	1.1. Develop and implement integrated policies and measures to conserve key terrestrial and marine ecosystems, habitats important for island biodiversity, societies and economies, taking into account the close ecological links within and between island marine and terrestrial ecosystems. *Rationale: Islands have many endemic species whose habitats are restricted to small areas. Island societies depend very largely on local biodiversity – whether terrestrial, fresh-water or marine.* 1.2. Re-establish components that have been lost from or whose populations have been reduced within natural ecosystems 1.3. Undertake measures to restore at least 15% of degraded island ecosystems
2. By 2010 areas of particular importance to biodiversity are protected	2.1. Identify and establish, as appropriate, comprehensive, representative and effectively managed national and regional systems of protected areas taking into account issues of resilience, ecological and physical connectivity to conserve viable populations of threatened, endemic, and ecologically or culturally important island species. This should be done with the full respect for the rights of indigenous and local communities and relevant stakeholders and their full and effective participation, consistent with national law and applicable international obligations. *Rationale: Many species on islands are often either locally endemic, restricted in range, threatened, or all three, and are not likely to survive without legal protection.*
3. By 2010 reduce the decline of, maintain and restore populations of species of selected taxonomic groups and improve status of threatened species	3.1. Develop and implement conservation measures and policies, including protection, and where needed, recovery of populations of threatened, endemic, or ecologically or culturally important species and recovery plans. *Rationale: Key issue for island biodiversity. Continued loss of island biodiversity is of global importance. Many species have critical ecosystem roles, or are or social or cultural significance to islanders.* 3.2. Compile detailed inventories of island species, assess their conservation status, including the main threat criteria, and develop the taxonomic expertise necessary to facilitate this. *Rationale: Many island species occur in very small populations. The transition from satisfactory conservation status to threatened status can occur with great rapidity.*

TIMEFRAME & GLOBAL TARGETS	ISLAND-SPECIFIC PRIORITY ACTIONS FOR THE PARTIES
4. By 2010 genetic diversity of crops, livestock, and other valuable island species conserved, and associated indigenous and local knowledge maintained.	4.1. Develop and implement measures to strengthen in situ or on-farm conservation of wild plants and animals and traditional crops and associated knowledge of indigenous and local communities, recognizing the widespread use of land-races of crops and stock strains on islands *Rationale: Island communities often have unique human cultures that have considerable knowledge of local biodiversity and have developed a wide range of local crop and domestic stock varieties.* 4.2. Develop national and regional gene-pools and gene-banks for the conservation of genetic material of significance to the islands for food sources and health care enhancement and food security and/or that address threats to the high levels of island endemism *Rationale: Endemism and local land races of island species provide a unique and irreplaceable source of genetic resources.*
GOAL 2: SUSTAINABLE USE OF ISLAND BIODIVERSITY	
5. By 2010, unsustainable consumption of biological resources and its impact upon biodiversity is reduced	5. 1. Adopt measures to ensure sustainable management of coastal and marine biodiversity, with due regard to the conservation of threatened, endemic, ecologically and/or culturally important island species, to prevent, *inter alia*, over-exploitation and destructive practices *Rationale: Island species are often restricted to very small populations that are quickly impacted by unsustainable practices.* 5.2. Adopt measures to promote the sustainable use of terrestrial and freshwater resources in islands *Rationale: Island communities are very largely dependent on local biodiversity.* 5.3. Adopt and apply strategies to sustainably use agroecosystems on islands with biodiversity of importance to the ecological integrity of island societies and economies through efficient and sustainable agricultural production, and ensure food security through diversification of agriculture, alternative use of crops, improved husbandry, integrated crop-pest management, irrigation and water management, and the use of appropriate technologies. *Rationale: Island agroecosystems include many unique varieties and land races. Island communities are very largely dependent on local biodiversity.* 5.4. Develop, adopt and apply strategies appropriate to islands to sustainably use managed forest ecosystems with biodiversity of importance to the ecological integrity of island societies and economies through improved production and harvesting methods, integrated pest management, water management, fire control, non-timber resources and the use of appropriate technologies. *Rationale: Island forests typically contain species and assemblages that are unique, and many of them provide island peoples with food, medicine and fertilizer.* 5.5. Promote implementation of sustainable tourism best practices appropriate to islands. *Rationale: Many island economies are based on tourism.*

TIMEFRAME & GLOBAL TARGETS	ISLAND-SPECIFIC PRIORITY ACTIONS FOR THE PARTIES
6. By 2010, island biodiversity-based products are derived from sources that are sustainably managed, and production areas managed, consistent with the conservation of biodiversity	6. 1. Remove subsidies that encourage unsustainable use of island biodiversity and where livelihoods are resource-based, support the development of sustainable economic activities. *Rationale: Subsidies and other economic incentives may have very wide-reaching and rapid detrimental effects on biodiversity in islands. Island species are often restricted to very small populations that are quickly impacted by unsustainable practices.*
7. By 2010, no species of wild flora and fauna are endangered by international trade	7.1. States not yet parties to accede to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and all States implement that Convention as a vital tool for the conservation and sustainable use of wild flora and fauna found on islands *Rationale: A number of island States are not yet Party to CITES. The economic circumstances of islands, combined with their unique biodiversity, tend to encourage the trade in rare organisms.* 7.2. Develop and enforce measures to stop illegal, unreported and unregulated harvesting and trading of endangered species of wild flora and fauna. *Rationale: The high levels of endemism on islands make species more vulnerable to global extinction through illegal activities. .* 7.3. Manage trade in those species not covered by CITES to ensure that their wild populations are sustained *Rationale: Island species are often not listed in CITES.*
8. By 2010, rate of loss and degradation of natural habitats decreased	8.1. Develop and implement integrated land and water use plans that take into account ecological and physical connectivity and important biodiversity areas. *Rationale: Island ecosystems frequently cover small areas and may be highly fragmented, and connectivity of habitats has become increasingly limited under anthropogenic pressure. Distances from the centre of the island to the ocean are often short, and impacts on biodiversity in one area are often rapidly reflected in nearby ecosystems.* 8.2. Develop and apply environmental and socio-economic impact assessment methods prior to land-use conversion such as for agriculture, human settlements, mining, logging, infrastructure development, and tourism and military activities. *Rationale: Impact assessment is particularly important when large fractions of remaining ecosystems can be affected by infrastructure development or other human activities.*

TIMEFRAME & GLOBAL TARGETS	ISLAND-SPECIFIC PRIORITY ACTIONS FOR THE PARTIES
GOAL 3: ADDRESS THE THREATS TO ISLAND BIOLOGICAL DIVERSITY	
9. By 2010, reduce pollution and its impacts on island biological diversity	9.1. Develop and implement measures to prevent and reduce the impact of pollution and waste, also by developing and implementing pollution and waste management plans, including contingency plans, with special attention to solid and hazardous waste *Rationale: Islands are largely coastal communities, where it is particularly difficult to dispose of wastes without impacting biodiversity. The siting of landfills, the disposal of liquid wastes and the uptake of solid wastes and plastics by marine organisms are all of considerable significance to islands.* 9.2. Develop and implement watershed integrated management to prevent siltation and run-off on island coastal ecosystems 9.3. Implement measures to prevent eutrophication of island coastal ecosystems caused by, *inter alia*, wastewater and agricultural run-off and infiltration
10. By 2010, pathways for major potential alien invasive species controlled	10.1. Establish effective control systems at national island borders and between and within islands to prevent the movement of invasive alien species 10.2. Collaborate to identify and address pathways for movement of invasive alien species at the island, national, regional and global levels 10.3. Develop and implement measures for the early detection and rapid response to the introduction or establishment of invasive alien species in both terrestrial and marine ecosystems *Rationale: This is one of the most important issues for island biodiversity, which needs urgent, concerted and sustained action.*
11. Management plans in place for major alien species that threaten ecosystems, habitats or species	11.1. Develop and implement management plans for long-term management of priority invasive alien species. These plans should include, provisions for the, elimination or control of pathways that lead to the introduction and spread and re-invasion of these species 11.2. Enlist the support and cooperation of all sectors of society for appropriate prevention and management of alien invasive species *Rationale: This is one of the most important issues for island biodiversity, which needs urgent, concerted and sustained action.*
12. By 2010, maintain and enhance resilience of the components of biodiversity to adapt to climate change	12.1. Research and implement adaptation and mitigation measures in land-use and coastal zone planning and strategies to strengthen local-level biodiversity resilience to climate change *Rationale: Island biodiversity is particularly threatened by climate change, which could have a major impact on island ecosystems.* 12.2. Create where feasible viable national systems of protected areas that are resilient to climate change

TIMEFRAME & GLOBAL TARGETS	ISLAND-SPECIFIC PRIORITY ACTIONS FOR THE PARTIES
13. Maintain capacity of island ecosystems to deliver goods and services and biological resources that support sustainable livelihoods, local food security and health care, especially of poor people.	13.1. Develop policies, programmes and actions to ensure the capacity of island ecosystems to deliver goods and services and biological resources that support sustainable livelihoods, local food security and health care, especially of poor people *Rationale: Island communities are largely dependent on local biodiversity for food and livelihoods* 13.2. Mainstream the management of the risks of natural disasters and extreme events to island biodiversity and communities into the national planning process 13.3. Understand and promote the role of island ecosystems and habitats in providing ecosystem services that prevent or mitigate the impacts of natural or anthropogenic disasters and extreme events, and protect islands, island biodiversity and island communities *Rationale: Disasters tend to affect significant fractions of the area of islands, and integrated management can provide mitigation.*
GOAL 4: ACCESS AND BENEFIT-SHARING OF ISLAND GENETIC RESOURCES	
14. By 2010, all transfers of genetic resources are in line with the Convention on Biological Diversity, the International Treaty on Plant Genetic Resources for Food and Agriculture and other applicable agreements.	14.1. Improve the knowledge base of genetic resources *Rationale: Island biodiversity is unique – and the same remark holds for the genetic resources, but in general, very little is known of the genetic diversity of island organisms.* 14.2. Establish administrative, legislative and/or regulatory measures and systems in line with the Convention to ensure access to genetic resources, in particular those endemic to islands, and ensure that benefits arising from their utilization are fairly and equitably shared *Rationale: Island biodiversity is unique – and the same remark holds for the genetic resources, but in general, very little is known of the genetic diversity of island organisms.*
15. By 2010 protect traditional knowledge, innovations and practices and the rights of indigenous and local communities over their traditional knowledge, innovations and practices, including their rights to benefit-sharing	15.1. Recognize and protect island traditional knowledge, innovations and practices which improve the understanding, conservation and sustainable use of biodiversity 15.2. Develop and implement measures and legislation, where appropriate and in keeping with national laws and relevant international obligations, for the respect and protection of indigenous and local communities rights over their traditional knowledge innovations and practices 15.3. Develop and implement ways and means to share in a fair and equitable way with indigenous and local communities the benefits arising from use of their traditional knowledge, innovations and practices *Rationale: Island communities have extensive knowledge of local biodiversity and traditional practices related to its conservation and use, but both knowledge and practices are vulnerable to social change misuse and misappropriation.*

TIMEFRAME & GLOBAL TARGETS	ISLAND-SPECIFIC PRIORITY ACTIONS FOR THE PARTIES
GOAL 5: INCREASING CAPACITIES AND FINANCING FOR THE IMPLEMENTATION OF THE PROGRAMME OF WORK ON ISLAND BIODIVERSITY	
16. By 2010 new and additional financial resources are allocated to all islands, in particular small islands developing States and for developing country Parties, to facilitate the effective implementation of this programme of work and, in general, their commitments under the Convention	16.1. Develop and strengthen partnership at all levels and across sectors to finance the implementation of national biodiversity strategies and action plans and the programme of work 16.2. Provision of additional financial resources from the financial mechanism of the Convention for developing country Parties in accordance with Article 20 16.3. Assess, develop and implement a range of conservation finance mechanisms at the local, national and international levels
17. By 2010 technologies are transferred to developing country Parties, to allow for the effective implementation of this programme of work and, in general, their commitments under the Convention, in accordance with Article 20, paragraph 4	17.1. Identify and develop or transfer knowledge, science and technology appropriate to islands for the conservation and sustainable use of island biodiversity 17.2. Develop island-based technology to support conservation and sustainable use of biodiversity
18. By 2010, capacity of islands to implement this programme of work and all its priority activities is significantly strengthened	18.1. Where appropriate, strengthen the capacity to develop and implement legal and other mechanisms that support this programme of work 18.2. Promote the sharing of best practices within and among islands, and enhance learning opportunities for all relevant groups, including governments, non-governmental organizations and indigenous and local communities, to accelerate effective implementation of this programme of work 18.3. Develop and implement effective communication and public awareness and education programmes at all levels, to promote the programme of work on island biodiversity, taking into account local capacity, language and culture 18.4. Adopt an integrated, inter-disciplinary and participatory approach at all levels of planning, management, inventory, monitoring, and governance involving all stakeholders related to the understanding, conservation and sustainable use of island biodiversity 18.5. Develop the capacity for a national and regional biodiversity monitoring programme 18.6. Strengthen regional cooperation particularly between Small island developing States and developed countries in the same region

X/2. Operational plan of the Subsidiary Body on Scientific, Technical and Technological Advice and scientific assessments

The Subsidiary Body on Scientific, Technical and Technological Advice,

Recalling Article 25 of the Convention, which establishes a Subsidiary Body on Scientific, Technical and Technological Advice,

Recognizing the key role of the Subsidiary Body on Scientific, Technical and Technological Advice in providing a link between the scientific community and decision-making processes,

Acknowledging the importance of a strategic approach for achieving the objectives of the Convention and, in particular, the goals of the Strategic Plan of the Convention, including its target to achieve by 2010 a significant reduction of the current rate of biodiversity loss at the global, regional and national level,

Recognizing the importance of scientific assessments on status and trends of components of biodiversity,

Having considered the draft Operational Plan of the Subsidiary Body on Scientific, Technical and Technological Advice (UNEP/CBD/SBSTTA/10/5) and the note by the Executive Secretary on the review of methods and modalities for assessments and pilot assessments initiated by the Subsidiary Body (UNEP/CBD/SBSTTA/10/7),

Recognizing the need to strengthen the role of the Subsidiary Body on Scientific, Technical and Technological Advice in the implementation of the Convention, particularly at the national level, and the importance of linking scientific assessments to the mobilization of solutions,

1. *Recommends* that the Subsidiary Body on Scientific, Technical and Technological Advice explore innovative approaches to its future operations, such as:

(a) Focusing one working group during its meetings entirely on scientific assessments of biodiversity status and trends related to the Convention's thematic programmes of work, and linking these to solutions such as best practices, state-of-the-art technologies, and effective responses to biodiversity loss;

(b) Continuing to enhance the participation of the scientific community in its meetings, in particular with regard to the working group on scientific assessments, including expert presentations and poster sessions;

(c) Experimenting with alternative approaches to conducting its meetings, such as convening focus groups or round tables on specific issues, and ways of facilitating dialogue between donor and recipient country agencies on capacity-building needs;

2. *Invites* Parties to submit additional written views on the draft Operational Plan of the Subsidiary Body on Scientific, Technical and Technological Advice and on scientific assessments and to submit these to the Secretariat not later than 30 April 2005;

3. *Requests* the Executive Secretary, in collaboration with the Bureau of the Subsidiary Body on Scientific, Technical and Technological Advice, to revise the draft Operational Plan, including methods and modalities for scientific assessments initiated by the Subsidiary Body, on the basis of the views expressed at its tenth meeting and additional written views submitted by Parties and to make this document available for review by focal points for the Subsidiary Body on Scientific, Technical and Technological Advice, with a view to submitting a revised text of the Operational Plan for consideration by the Open-ended Working Group on the Review of Implementation of the Convention and the Conference of the Parties at its eighth meeting.

X/3. *Millennium Ecosystem Assessment: review of the draft reports, in particular the draft synthesis report prepared for the Convention on Biological Diversity*

The Subsidiary Body on Scientific, Technical and Technological Advice,

Recalling decision VII/6, in which the Conference of the Parties, *inter alia*, requested the Subsidiary Body on Scientific, Technical and Technological Advice to review the findings of the Millennium Ecosystem Assessment including the synthesis report on biodiversity, to be taken into account by the Millennium Ecosystem Assessment in finalizing its reports,

1. *Congratulates* the authors of the Millennium Ecosystem Assessment, its Board and Secretariat on the progress made in the Assessment;

2. *Welcomes* the opportunity to review the draft synthesis report on biodiversity and its Summary for Decision Makers;

3. *Requests* the Executive Secretary to transmit to the Secretariat of the Millennium Ecosystem Assessment the comments made by delegations during the tenth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice;

4. *Invites* the writing team of the synthesis report on biodiversity and the Panel of the Millennium Ecosystem Assessment to take into account these comments when finalizing the synthesis report on biodiversity and its Summary for Decision Makers;

5. *Notes* that the final version of the Synthesis Report on Biodiversity will be launched on International Biodiversity Day, 22 May 2005;

6. *Further notes* that the Subsidiary Body on Scientific, Technical and Technological Advice, at its eleventh meeting, will consider the final products of the Millennium Ecosystem Assessment including the synthesis report on biodiversity in order to prepare recommendations to the Conference of the Parties concerning the implications of the findings of the Assessment for the future work of the Convention;

7. *Emphasizes* the need for follow-up communication and public-awareness activities to ensure that the findings of the Assessment are widely and effectively disseminated and used by decision makers.

X/4. ***Global outcome-oriented targets for the implementation of the programmes of work on the biological diversity of inland water ecosystems and marine and coastal biodiversity***

The Subsidiary Body on Scientific, Technical and Technological Advice

1. *Welcomes* the report of the Expert Group on Outcome-Oriented Targets (UNEP/CBD/SBSTTA/10/INF/6);

2. *Expresses its appreciation* to:

(a) The Governments of the Netherlands and the United Kingdom of Great Britain and Northern Ireland for their financial support to the Expert Group meeting;

(b) Other Governments and organizations for the participation of their representatives;

(c) The Co-Chairs and all the members of the Expert Group for their contributions; and

(d) Other experts who have contributed their inputs into the overall process;

3. *Notes with appreciation* the progress made on indicators by the Scientific and Technical Review Panel of the Ramsar Convention on Wetlands, and *invites* the Panel, for areas within its mandate and in line with the role of the Ramsar Convention established by decision III/21 as the lead implementation partner on wetlands for the Convention on Biological Diversity, to further develop the targets annexed to the present recommendation, as appropriate, through *inter alia*, their quantification and application to specific wetland types and biogeographic regions, and to link those targets with the indicators currently being developed;

4. *Recommends* that the Conference of the Parties, at its eighth meeting:

(a) Endorses the integration of the outcome-oriented targets into the programmes of work on marine and coastal biodiversity and biodiversity of inland water ecosystems as listed in the annex to the present recommendation, noting the relationship between these targets and those of the Johannesburg Plan of Implementation of the World Summit on Sustainable Development and the Millennium Development Goals;

(b) Takes note of the elaborated technical rationales in annex II and III of the report of the Expert Group (UNEP/CBD/SBSTTA10/INF/6) as providing additional guidance for application of the targets to the programmes of work on marine and coastal biodiversity and the biological diversity of inland water ecosystems;

(c) Emphasizes that the targets, as applied to the programmes of work on marine and coastal biodiversity and biological diversity of inland water ecosystems, should be viewed as a flexible framework within which national and/or regional targets may be developed, according to national priorities and capacities, and taking into account differences in diversity between countries;

(d) Invites Parties and other Governments to develop national and/or regional goals and targets, and, as appropriate, to incorporate them into relevant plans, programmes and initiatives, including national biodiversity strategies and action plans;

(e) Emphasizes the need for capacity-building, and adequate financial resources especially for developing countries, in particular the least developed countries and the small island developing States among them, and countries with economies in transition, in order to enable them to implement activities to achieve and monitor progress towards the goals and targets;

(f) Invites the Conference of the Parties to the Ramsar Convention, for areas within its mandate and in line with the role of the Ramsar Convention established by decision III/21 as the lead implementation partner on wetlands for the Convention on Biological Diversity, to contribute to the implementation of the targets, to monitoring progress towards them, and to developing the targets further for specific application to wetlands;

(g) Invites the regional seas conventions and action plans, and large marine ecosystem projects, to take note of the outcome-oriented targets for the programme of work on marine and coastal biological diversity, and to contribute to the implementation of these targets at the regional level as appropriate, and to monitor progress towards them; and

(h) Considers the need for additional guidance to facilitate implementation of targets 5.1, 6.1 and 7.1.

5. *Further recommends* that the Conference of the Parties reviews, and if necessary further refines, the targets in decision VII/30 with a view to achieve consistency between the targets integrated into the programmes of work and the general framework;

6. *Recommends* that, when applying outcome-oriented targets to other programmes of work, full account be taken of the impacts of management practices in forests, dry and sub-humid lands, mountains and, especially, agricultural lands on the biodiversity of marine and coastal areas and of inland waters, in particular in relation to the downstream impacts of water use and water pollution;

7. *Requests* the Executive Secretary to prepare, for the information of the Subsidiary Body at its eleventh meeting:

(a) An overview of the goals and targets contained in the Strategic Plan (decision VI/26), the framework for evaluating progress towards the 2010 target (decision VII/30), and those integrated into the various programmes of work of the Convention, showing the relationship among them;

(b) A matrix relating the goals and targets of the programmes of work on marine and coastal biodiversity and biodiversity of inland water ecosystems (see the annex to the present recommendation) to the activities of the these programmes of work (decisions VII/5 and VII/4);

(c) A glossary of terms used in the framework of goals and targets adopted in decision VII/30 to clarify the terms used and to facilitate the application of the framework of goals and targets to all programmes of work in a consistent manner, taking into account the terms used in other biodiversity-related multilateral environmental agreements.

Annex

APPLICATION OF THE TARGETS TO THE PROGRAMMES OF WORK ON THE BIODIVERSITY OF INLAND WATER ECOSYSTEMS AND MARINE AND COASTAL BIODIVERSITY

Goals and targets as per the framework (decision VII/30, annex II)	***Application of the targets to the programme of work on marine and coastal biodiversity***	***Application of the targets to the programme of work on inland waters biodiversity***
Protect the components of biodiversity		
Goal 1. Promote the conservation of the biological diversity of ecosystems, habitats and biomes		
Target 1.1: At least 10% of each of the world's ecological regions effectively conserved.	At least 10% of each of the world's marine and coastal ecological regions effectively conserved.	At least 10% of known inland water ecosystem area effectively conserved and under integrated river or lake basin management.
Target 1.2: Areas of particular importance to biodiversity protected.	Particularly vulnerable marine and coastal habitats and ecosystems, such as tropical and cold water coral reefs, seamounts, hydrothermal vents mangroves, seagrasses, spawning grounds and other vulnerable areas in marine habitats effectively protected.	275 million hectares of wetlands of particular importance to biodiversity protected, including representation and equitable distribution of areas of different wetland types across the range of biogeographic zones.
Goal 2. Promote the conservation of species diversity		
Target 2.1: Restore, maintain or reduce the decline of populations of species of selected taxonomic groups.	Reduce the decline of, maintain or restore populations of species of selected marine and coastal taxonomic groups.	Reduce the decline of, maintain or restore populations of species of selected taxonomic groups dependent upon inland water ecosystems.
Target 2.2: Status of threatened species improved.	Known globally threatened and endangered marine and coastal species, with particular attention to migratory and transboundary species and populations, effectively conserved.	The world's known threatened inland water ecosystem dependent species of plants and animals conserved, with particular attention to migratory, transboundary and endemic species and populations.
Goal 3. Promote the conservation of genetic diversity		
Target 3.1: Genetic diversity of crops, livestock, and of harvested species of trees, fish and wildlife and other valuable species conserved, and associated indigenous and local knowledge maintained.	Further losses of known genetic diversity of exploited wild fish and other wild and cultured marine and coastal species prevented, and associated indigenous and local knowledge maintained.	Known genetic diversity of crops, livestock, and of harvested species of trees, fish and wildlife and other valuable species dependent upon inland water ecosystems is conserved, and associated indigenous and local knowledge is maintained.

Goals and targets as per the framework (decision VII/30, annex II)	*Application of the targets to the programme of work on marine and coastal biodiversity*	*Application of the targets to the programme of work on inland waters biodiversity*
Promote sustainable use		
Goal 4. Promote sustainable use and consumption		
Target 4.1: Biodiversity-based products derived from sources that are sustainably managed, and production areas managed consistent with the conservation of biodiversity.	Target 4.1.1: All exploited fisheries products derived from sources that are sustainably managed, and unsustainable uses of other marine and coastal species minimized. Target 4.1.2: All mariculture facilities operated consistent with the conservation of biodiversity and social equity.	Target 4.1.1: Products from inland water ecosystem biological diversity derived from sustainable sources. Target 4.1.2: Aquaculture areas in inland water ecosystems managed consistent with the conservation of inland water biological diversity.
Target 4.2 Unsustainable consumption, of biological resources, or that impacts upon biodiversity, reduced.	Some aspects of this target are addressed under target 4.1.	Some aspects of this target are addressed under target 4.1.
Target 4.3: No species of wild flora or fauna endangered by international trade.	No species of wild marine and coastal flora and fauna endangered by international trade.	No species of wild flora or fauna dependent upon inland water ecosystems endangered by international trade.
Address threats to biodiversity		
Goal 5. Pressures from habitat loss, land-use change and degradation, and unsustainable water use, reduced		
Target 5.1: Rate of loss and degradation of natural habitats decreased.	Rate of loss and degradation of natural marine and coastal habitats, in particular mangroves, seagrasses, tropical and cold water coral reefs, seamounts, hydrothermal vents and other important habitats, decreased.	Rate of loss and degradation of inland water ecosystem biological diversity, especially through unsustainable water use, are decreased.
Goal 6. Control threats from invasive alien species		
Target 6.1: Pathways for major potential alien invasive species controlled.	Pathways for major potential invasive alien species in marine and coastal ecosystems controlled.	Pathways for major potential invasive alien species in inland water ecosystems controlled.
Target 6. 2: Management plans in place for major alien species that threaten ecosystems, habitats or species.	Management plans in place and implemented for invasive alien species that are considered to present the greatest threat to marine and coastal ecosystems, habitats or species.	Management plans in place and implemented for invasive alien species that are considered to present the greatest threat to inland water ecosystems, habitats or species.

Goals and targets as per the framework (decision VII/30, annex II)	***Application of the targets to the programme of work on marine and coastal biodiversity***	***Application of the targets to the programme of work on inland waters biodiversity***
Goal 7. Address challenges to biodiversity from climate change, and pollution		
Target 7.1: Maintain and enhance resilience of the components of biodiversity to adapt to climate change.	Maintain and enhance resilience of the components of marine and coastal biodiversity to adapt to climate change.	Maintain and enhance resilience of the components of inland water ecosystem biodiversity to adapt to climate change.
Target 7.2: Reduce pollution and its impacts on biodiversity.	Substantially reduce land-based and seabased sources of marine pollution and their impacts on biodiversity.	Substantially reduce pollution and its impacts on inland water ecosystem biodiversity.
Maintain goods and services from biodiversity to support human well-being		
Goal 8. Maintain capacity of ecosystems to deliver goods and services and support livelihoods		
Target 8.1: Capacity of ecosystems to deliver goods and services maintained.	Capacity of marine and coastal ecosystems to deliver goods and services maintained or enhanced.	Capacity of inland water ecosystems to deliver goods and services maintained or enhanced.
Target 8.2: biological resources that support sustainable livelihoods, local food security and health care, especially of poor people, maintained.	Marine and coastal biological resources that support sustainable livelihoods, local food security and health care, especially of poor people, maintained and, where depleted, restored.	Inland water biological resources that support sustainable livelihoods, local food security and health care, especially of poor people, maintained and, where depleted, restored.
Protect traditional knowledge, innovations and practices		
Goal 9. Maintain socio-cultural diversity of indigenous and local communities		
Target 9.1. Protect traditional knowledge, innovations and practices.	Measures to protect traditional knowledge, innovations and practices associated with marine and coastal biological diversity implemented, and the participation of indigenous and local communities in activities aimed at this promoted and facilitated.*	Measures to protect traditional knowledge, innovations and practices associated with the biological diversity of inland water ecosystems implemented, and the participation of indigenous and local communities in activities aimed at this promoted and facilitated.*

Goals and targets as per the framework (decision VII/30, annex II)	*Application of the targets to the programme of work on marine and coastal biodiversity*	*Application of the targets to the programme of work on inland waters biodiversity*
Target 9.2: Protect the rights of indigenous and local communities over their traditional knowledge, innovations and practices, including their rights to benefit sharing.	Traditional knowledge, innovations and practices regarding marine and coastal biodiversity respected, preserved and maintained, the wider application of such knowledge, innovations and practices promoted with the prior informed consent and involvement of the indigenous and local communities providing such traditional knowledge, innovations and practices, and the benefits arising from such knowledge, innovations and practices equitably shared. *	Traditional knowledge, innovations and practices regarding biological diversity of inland water ecosystems respected, preserved and maintained, the wider application of such knowledge, innovations and practices promoted with the prior informed consent and involvement of the indigenous and local communities providing such traditional knowledge, innovations and practices, and the benefits arising from such knowledge, innovations and practices equitably shared. *
Ensure the fair and equitable sharing of benefits arising out of the use of genetic resources		
Goal 10. Ensure the fair and equitable sharing of benefits arising out of the use of genetic resources		
Target 10.1: All transfers of genetic resources are in line with the Convention on Biological Diversity, the International Treaty on Plant Genetic Resources for Food and Agriculture and other applicable agreements	All access to genetic resources derived from marine and coastal biological diversity is in line with the Convention on Biological Diversity **	All access to genetic resources derived from inland water ecosystems is in line with the Convention on Biological Diversity, **
Target 10.2: Benefits arising from the commercial and other utilization of genetic resources shared with the countries providing such resources.	Benefits arising from the commercial and other utilization of genetic resources derived from marine and coastal biological diversity shared with the countries providing such resources **	Benefits arising from the commercial and other utilization of genetic resources derived from inland water ecosystems shared with the countries providing such resources, **

Ensure provision of adequate resources		
Goal 11: Parties have improved financial, human, scientific, technical and technological capacity to implement the Convention		
Target 11.1: New and additional financial resources are transferred to developing country Parties, to allow for the effective implementation of their commitments under the Convention, in accordance with Article 20.	New and additional financial resources are transferred to developing country Parties, to allow for the effective implementation of their commitments for the programme of work on marine and coastal biological diversity under the Convention, in accordance with Article 20.	New and additional financial resources are transferred to developing country Parties, to allow for the effective implementation of their commitments for the programme of work on the biological diversity of inland water ecosystems under the Convention, in accordance with Article 20.
Target 11.2: Technology is transferred to developing country Parties, to allow for the effective implementation of their commitments under the Convention, in accordance with its Article 20, paragraph 4.	Technology is transferred to developing country Parties, to allow for the effective implementation of their commitments for the programme of work on marine and coastal biological diversity under the Convention, in accordance with its Article 20, paragraph 4.	Technology is transferred to developing country Parties, to allow for the effective implementation of their commitments for the programme of work on the biological diversity of inland water ecosystems under the Convention, in accordance with its Article 20, paragraph 4.

* These targets will be further reviewed following consideration by the Ad Hoc Open-ended Working Group on Article 8(j) and Related Provisions of the Convention on Biological Diversity.

** These targets will be further reviewed following consideration by the Ad Hoc Open-ended Working Group on Access and Benefit-sharing.

X/5. Indicators for assessing progress towards, and communicating, the 2010 target at the global level

The Subsidiary Body on Scientific, Technical and Technological Advice,

Recalling the guidance provided in decision VII/30 on the identification, development and use of indicators and ways of communicating progress towards the 2010 biodiversity target,

Emphasizing the value of indicators to evaluate achievements and progress in the implementation of the three objectives of the Convention and the achievement by 2010 of a significant reduction in the current rate of loss of biological diversity,

Aware of the need for strengthening national capacities, especially in developing countries, in particular the least developed and small island developing States among them, and countries with economies in transition, to enable them to contribute to the indicators used for assessing progress towards the 2010 target and, where so desired by Parties, to use the same indicators at the regional, subregional, national and local levels as tools for the implementation of the Convention and of national biodiversity strategies and action plans,

1. *Welcomes* the report of the Ad Hoc Technical Expert Group on Indicators for Assessing Progress Towards the 2010 Biodiversity Target (UNEP/CBD/SBSTTA/10/INF/7);

2. *Expresses its appreciation* to*:*

(a) The Governments of the Netherlands, the United Kingdom of Great Britain and Northern Ireland, and the United States of America for their financial support of the meeting;

(b) Other Governments and organizations for the participation of their representatives;

(c) The Co-Chairs and all the members of the Group for their contributions;

3. *Confirms* the suitability of those indicators considered by the Conference of the Parties as ready for immediate testing and use;

4. *Considers* the following indicators ready for immediate testing, while recognizing that data availability and/or indicator methodology may require improvement prior to 2010:

(a) Change in status of threatened species;

(b) Trends in genetic diversity of domesticated animals, cultivated plants, and fish species of major socio-economic importance;

(c) Area of forest, agricultural and aquaculture ecosystems under sustainable management;

(d) Trends in invasive alien species; 9/

(e) Connectivity/fragmentation of ecosystems;

5. In respect to the indicators mentioned in paragraph 4 above, given the broad nature of these indicators, *recommends* that various sources of data could be used, including, but not limited to, the following:

(a) The application of the Red List Index approach, developed by the Red List Consortium (IUCN, BirdLife International, Conservation International and NatureServe), to selected taxonomic and ecological/functional groups for which data exist, as an indicator of *Change in status of threatened species*;

9/ SBSTTA recommends a rewording of the title of this indicator from that contained in decision VII/30 (Numbers and cost of alien invasions).

(b) The use of suitable data on both *in situ* and *ex situ* conservation, including genetic diversity of tree species of socio-economic importance, as an indicator of *Trends in genetic diversity of domesticated animals, cultivated plants, and fish species of major socio-economic importance*;

(c) The use of a range of parameters, including, where appropriate, but not limited to, the area under certified production systems, biological corridors, and areas under community management, as an indicator of *Area of forest, agricultural and aquaculture ecosystems under sustainable management*;

(d) Recognizing the limited global data on invasive alien species and the lack of a consistent approach towards calculating cost of alien invasions, to draw on the information available at the national level and data available through the Global Invasive Species Information Network (GISIN);

(e) The initial application of the indicator on *Connectivity/fragmentation of ecosystems* to forest and inland water ecosystems;

6. *Further recommends* the urgent development of the indicators identified by the Conference of the Parties and the Subsidiary Body on Scientific, Technical and Technological Advice at its tenth meeting as requiring further work;

7. *Reaffirms* the importance for the relevant open-ended working groups to develop global headline indicators on the *Status of traditional knowledge, innovations and practices* and on the *Status of access and benefit-sharing*;

8. *Invites* the organizations listed in annex I to this recommendation to contribute the data and analysis required for the delivery of the indicators, and the Parties and other Governments to facilitate this task, including by collecting and sharing information relevant to each indicator, *inter alia* by contributing such information to relevant databases;

9. *Invites* Parties, other Governments, and national, regional and international organizations that have data sets relevant to assessing progress towards the 2010 target to contribute pro-actively through the provision of relevant information to the realization of the second edition of the Global Biodiversity Outlook;

10. *Notes* that the indicators can be used to assess progress towards the goals and sub-targets adopted in decision VII/30 as set out in annex II to this recommendation;

11. *Calls for* urgent increased capacity-building efforts and financial support to developing countries, in particular the least developed and small island developing States among them, and countries with economies in transition, to the organizations listed in annex I to the present recommendation to facilitate their contributions to the use, testing and further development of the indicators relevant to the 2010 target.

12. *Requests* the Executive Secretary to:

(a) Develop an overall delivery plan for the indicators, data and analyses, taking into account the timetable for developing the Global Biodiversity Outlook, clarifying the arrangements and responsibilities for development and delivery of the indicators, setting out the roles of the Secretariat, the World Conservation Monitoring Centre of the United Nations Environment Programme (UNEP-WCMC), and other relevant international organizations, taking into account information provided through national reports, voluntary reports, indicators in use by Parties, other Governments and relevant organizations;

(b) Prepare a full characterization of the methods, technical limitations and the availability of data sources for the calculation of the indicators, and the validity of making global estimates;

(c) Report on progress made in the development of the indicators listed in annex I to this recommendation at the eleventh meeting of the Subsidiary Body on Scientific, Technical and Technological Advice, and, if necessary, and subject to the availability of resources, convene another meeting of an ad hoc technical expert group to facilitate this task and provide additional scientific advice to the Subsidiary Body;

(d) Develop and submit, for consideration by the Conference of the Parties at its eighth meeting, an information strategy to ensure that the indicators, data and analyses are periodically available over the coming years to support policy intervention and communication with respect to the 2010 target;

(e) Explore options for reporting on the impact of climate change on biological diversity, using the framework of indicators relevant to the 2010 target and report thereon to the Subsidiary Body on Scientific, Technical and Technological Advice at its eleventh meeting;

(f) Explore options for the identification of process indicators for the four global goals for the Strategic Plan of the Convention, and report thereon to the Open-ended Working Group on the Review of Implementation of the Convention on Biological Diversity and to the Subsidiary Body on Scientific, Technical and Technological Advice at its eleventh meeting.

13. *Invites* the Open-ended Working Group on the Review of Implementation of the Convention on Biological Diversity to consider the linkages between the process for assessing progress towards the 2010 target, including the use of indicators, and national reporting, with a view to streamlining future national reporting.

Annex I

SUMMARY OF INDICATOR STATUS AND WORK THAT NEEDS TO BE CARRIED OUT

Headline Indicator 10/	**Status 11/**	**Potential Measures**	**Data available now?**	**Method-ology available now?**	**Possible sources of data**	**Organizations to coordinate delivery of indicator**
Trends in extent of selected biomes, ecosystems, and habitats 12/	B	Forests, and forest types (e.g. mangroves)	Yes	Yes	FRA (FAO); EU-JRC, NASA Modland; Corine land cover (see appendix 2 to the AHTEG report)	UNEP-WCMC (with FAO, NASA-NGO Conservation Working Group and other relevant partners)
		Peatlands	Yes	Yes	Various national datasets and remote-sensing (see appendix 2 to the AHTEG report)	
		Coral reefs	Yes	Yes	GCRMN/Reefcheck	
		Croplands	Yes	Yes	National regional datasets and remote-sensing (see appendix 2 to the AHTEG report), MA	
		(Natural) grasslands	Yes	Yes	Remote-sensing (see appendix 2 to the AHTEG report), MA	
		Polar/ice	Yes	Yes	Remote-sensing(see appendix 2 to the AHTEG report), MA	
		Inland wetlands	No	No	Remote-sensing (see appendix 2 to the AHTEG report), MA	
		Tidal flats/estuaries	No	No	Remote-sensing (see appendix 2 to the AHTEG report), MA	
		Seagrasses	No	No	Seagrass Atlas, MA	
		Dry and sub-humid lands	No	No	LADA, Remote-sensing (see appendix 2), MA	

10/ **Bold = Indicator considered ready for immediate testing and use (column B in decision VII/30)**; ***Bold italic = Indicator considered ready for immediate testing and use and therefore recommended for upgrading from column C to column B;*** Regular = Indicator confirmed as requiring more work (to remain in column C)

11/ B = Indicator is considered ready for immediate testing and use; C = Indicator requires further work

12/ Based on current and short-term future availability of trend information, the following major ecosystem types are recommended for immediate indicator implementation: (i) forests (including different forest types, notably mangroves), (ii) peatlands (probably for certain geographic areas only by 2010), (iii) coral reefs, (iv) croplands, (v) grasslands/savannahs, (vi) polar/ice. Efforts should also be made to apply the indicator to the following ecosystem types, for which suitable global datasets need to be gathered, to ensure coverage of all thematic areas recognized by the Convention: (i) inland wetlands, (ii) tidal flats/estuaries, (iii) seagrass beds, (iv) dry and sub-humid lands, and (v) urban.

Headline Indicator 10/	Status 11/	Potential Measures	Data available now?	Method-ology available now?	Possible sources of data	Organizations to coordinate delivery of indicator
		Urban	No	No	Remote-sensing (see appendix 2), MA	
Trends in abundance and distribution of selected species	B	Living Planet Index	Yes	Yes	WWF	UNEP-WCMC (WWF, Birdlife International and others, encouraged to review and refine methodology for calculation of index; These groups and IUCN encouraged to compare and share data with that used for the Red List Index.) Indices could be developed from data disaggregated (e.g.: migratory species, wetland species))
		Various species assemblage-trends indices	Yes	Yes	Birdlife International and partners, others	
Coverage of protected areas	B	Coverage according to World List of Protected areas.	Yes	Yes	WCMC/WCPA	UNEP-WCMC/IUCN-WCPA
		Ecological networks and corridors	Yes	Could be developed	MBC, PEEN etc.	
		Overlays with areas of key importance to biodiversity	Yes	Yes	WCMC, WCPA, BirdLife International	
		Inclusion on community and private protected areas	No	No		
		Management effectiveness	No	No		
Change in status of threatened species	B	Red List Index (IUCN-SSC)	Yes	Yes	Red List Consortium	Red List Consortium (Methodological refinements requested)

Headline Indicator 10/	**Status 11/**	**Potential Measures**	**Data available now?**	**Method-ology available now?**	**Possible sources of data**	**Organizations to coordinate delivery of indicator**
Trends in genetic diversity of domesticated animals, cultivated plants, and fish species of major socioeconomic importance	B	*Ex situ* crop collections	Yes	Could be developed	FAO (SOW, WIEWS); IPGRI (CGIAR-SINGER); Fishbase	FAO with IPGRI on behalf of CGIAR
		Livestock genetic resources	Yes	Could be developed	FAO (DADIS)	
		Fish genetic resources	Yes	Could be developed	FAO; Fishbase	
		Tree genetic resources	Some	Could be developed	REFORGEN database of FAO; OECD	
		Varieties on-farm	Some	Could be developed	FAO, IPGRI, OECD	
Area of forest, agricultural and aquaculture ecosystems under sustainable management	B	Existing data sets for measuring sustainability of agriculture, aquaculture and forestry, including FAO reports, Certification, and Ecological corridors and community-based management areas, and wildlife sustainable management schemes	Yes	Yes	FAO reports; Certification bodies (e.g., FSC, MSC, ISO, PEFC, CSA, SFI, LEI); MBC; Parties	UNEP-WCMC with FAO
Proportion of products derived from sustainable sources	C		No	No	Equilibrium/WWF/World Bank/TNC intend to propose some indicators	SCBD

Headline Indicator 10/	**Status 11/**	**Potential Measures**	**Data available now?**	**Method-ology available now?**	**Possible sources of data**	**Organizations to coordinate delivery of indicator**
Ecological footprint and related concepts	C 13/	Ecological footprint	Yes	Yes,	FAO, IAE, IPCC, UNEP-WCMC	Ecological Footprint network
		Other measures of the area of land and sea needed to support production of goods and deliver services	Some	Some		SCBD and UNEP-WCMC
Nitrogen deposition	B		Yes	Yes	Available (INI) models for 2010 could be developed with additional effort	INI with UNEP-WCMC
Trends in invasive alien species 14/	B	Numbers and cost of alien invasive species	Yes – some areas	Yes	Various, particularly national data sets	GISP
		Other measures to be identified and developed	Some	No		
Marine Trophic Index	B		Yes	Yes	Available (UBC)	UBC
Water quality of freshwater ecosystems	B	Indicator of biological oxygen demand (BOD), nitrates and sediments/ turbidity	Yes	Yes	UNEP-GEMS/Water Programme	UNEP-GEMS/Water Programme
Trophic integrity of other ecosystems	C		No	No		SCBD to assemble available information

13/ New indicator recommended by SBSTTA at its tenth meeting.

14 / SBSTTA recommends a rewording of the title of this indicator from that contained in decision VII/30 (Numbers and cost of alien invasions).

Headline Indicator 10/	**Status 11/**	**Potential Measures**	**Data available now?**	**Method-ology available now?**	**Possible sources of data**	**Organizations to coordinate delivery of indicator**
Connectivity / fragmentation of ecosystems	B	Patch size distribution of terrestrial habitats (forests and possibly other habitat types)	Yes	Yes	NASA Consortium; CI; WWF-US based on remote sensing data	UNEP-WCMC (with FAO, CI, NASA-NGO Conservation Working Group and USDA-FS)
		Fragmentation of river systems	Yes	Yes	WRI	
Incidence of human-induced ecosystem failure	C	(see notes)	Some	No	SCBD to assemble available information for later consideration	SCBD/UNEP-WCMC
Health and well-being of communities who depend directly on local ecosystem goods and services 15/	C		No	No	To be identified	SCBD
Biodiversity for food and medicine	C		Some	No	FAO, IPGRI, WHO and others	SCBD
Status and trends of linguistic diversity and numbers of speakers of indigenous languages	B		Yes	Under review	UNESCO World Atlas of Endangered Languages; Ethnologue: Languages of the World - Fifteenth Edition	UNESCO with UNEP-WCMC (Smithsonian Institution requested to explore possible application of Red List methodology)
Other indicator of the status of indigenous and traditional knowledge	C		No	No	To be considered by the Working Group on Article 8(j) (possibly including land-tenure of indigenous and local communities)	SCBD
Indicator of access and benefit-sharing	C		No	No	To be considered by the Working Group on Access and Benefit-sharing	SCBD

15/ The indicator from decision VII/30 (Health and well-being of people living in biodiversity-based-resource dependent communities) was reworded to clarify the focus on local dependency.

Headline Indicator 10/	**Status 11/**	**Potential Measures**	**Data available now?**	**Method-ology available now?**	**Possible sources of data**	**Organizations to coordinate delivery of indicator**
Official development assistance provided in support of the Convention	B	Official development assistance as marked	Some	Yes	Donor countries encouraged to mark data	OECD (OECD is working on this for a trial period)
Indicator of technology transfer	C		No	No	Countries invited to submit information. The Expert Group on Technology Transfer may wish to consider this matter.	SCBD

Annex II

INDICATORS RELEVANT TO THE 2010 GOALS AND SUB-TARGETS

Goals and targets	*Relevant headline indicators*
Protect the components of biodiversity	
Goal 1. Promote the conservation of the biological diversity of ecosystems, habitats and biomes	
Target 1.1: At least 10% of each of the world's ecological regions effectively conserved.	Most relevant indicator: • Coverage of protected areas Other relevant indicators: • Trends in extent of selected biomes, ecosystems and habitats • Trends in abundance and distribution of selected species
Target 1.2: Areas of particular importance to biodiversity protected	Relevant indicators: • Trends in extent of selected biomes, ecosystems and habitats • Trends in abundance and distribution of selected species • Coverage of protected areas
Goal 2. Promote the conservation of species diversity	
Target 2.1: Restore, maintain, or reduce the decline of populations of species of selected taxonomic groups.	Most relevant indicator: • Trends in abundance and distribution of selected species Other relevant indicator: • Change in status of threatened species
Target 2.2: Status of threatened species improved.	Most relevant indicator: • Change in status of threatened species Other relevant indicators: • Trends in abundance and distribution of selected species • Coverage of protected areas

Goals and targets	*Relevant headline indicators*
Goal 3. Promote the conservation of genetic diversity	
Target 3.1: Genetic diversity of crops, livestock, and of harvested species of trees, fish and wildlife and other valuable species conserved, and associated indigenous and local knowledge maintained.	Most relevant indicator: • Trends in genetic diversity of domesticated animals, cultivated plants, and fish species of major socio-economic importance Other relevant indicators: • *Biodiversity used in food and medicine (indicator under development)* • Trends in abundance and distribution of selected species
Promote sustainable use	
Goal 4. Promote sustainable use and consumption.	
Target 4.1: Biodiversity-based products derived from sources that are sustainably managed, and Production areas managed consistent with the conservation of biodiversity.	Most relevant indicators: • Area of forest, agricultural and aquaculture ecosystems under sustainable management • *Proportion of products derived from sustainable sources (indicator under development)* Other relevant indicators: • Trends in abundance and distribution of selected species • Marine trophic index • Nitrogen deposition • Water quality in aquatic ecosystems
Target 4.2 Unsustainable consumption, of biological resources, or that impacts upon biodiversity, reduced.	Relevant indicator: • *Ecological footprint and related concepts (indicator under development)*
Target 4.3: No species of wild flora or fauna endangered by international trade.	Most relevant indicator: • Change in status of threatened species
Address threats to biodiversity	
Goal 5. Pressures from habitat loss, land use change and degradation, and unsustainable water use, reduced.	
Target 5.1: Rate of loss and degradation of natural habitats decreased.	Most relevant indicator: • Trends in extent of selected biomes, ecosystems and habitats Other relevant indicators: • Trends in abundance and distribution of selected species • Marine trophic index

Goals and targets	*Relevant headline indicators*
Goal 6. Control threats from invasive alien species	
Target 6.1: Pathways for major potential alien invasive species controlled.	Relevant indicator: • Trends in invasive alien species
Target 6. 2: Management plans in place for major alien species that threaten ecosystems, habitats or species.	Relevant indicator: • Trends in invasive alien species
Goal 7. Address challenges to biodiversity from climate change, and pollution	
Target 7.1: Maintain and enhance resilience of the components of biodiversity to adapt to climate change.	Relevant indicator: • Connectivity/fragmentation of ecosystems
Target 7.2: Reduce pollution and its impacts on biodiversity.	Nitrogen deposition Water quality in aquatic ecosystems
Maintain goods and services from biodiversity to support human well-being	
Goal 8. Maintain capacity of ecosystems to deliver goods and services and support livelihoods	
Target 8.1: Capacity of ecosystems to deliver goods and services maintained.	Relevant indicators: • *Biodiversity used in food and medicine (indicator under development)* • Water quality in aquatic ecosystems • Marine trophic index
Target 8.2: biological resources that support sustainable livelihoods, local food security and health care, especially of poor people maintained.	Most relevant indicator: • Health and well-being of communities who depend directly on local ecosystem goods and services Other relevant indicator: • *Biodiversity used in food and medicine*
Protect traditional knowledge, innovations and practices	
Goal 9 Maintain socio-cultural diversity of indigenous and local communities	
Target 9.1 Protect traditional knowledge, innovations and practices.	Most relevant indicator: • Status and trends of linguistic diversity and numbers of speakers of indigenous languages Other relevant indicator: • *Additional indicators to be developed*
Target 9.2: Protect the rights of indigenous and local communities over their traditional knowledge, innovations and practices, including their rights to benefit-sharing.	*Indicator to be developed*

Goals and targets	*Relevant headline indicators*
Ensure the fair and equitable sharing of benefits arising out of the use of genetic resources	
Goal 10. Ensure the fair and equitable sharing of benefits arising out of the use of genetic resources	
Target 10.1: All transfers of genetic resources are in line with the Convention on Biological Diversity, the International Treaty on Plant Genetic Resources for Food and Agriculture and other applicable agreements.	*Indicator to be developed*
Target 10.2: Benefits arising from the commercial and other utilization of genetic resources shared with the countries providing such resources.	*Indicator to be developed*
Ensure provision of adequate resources	
Goal 11: Parties have improved financial, human, scientific, technical and technological capacity to implement the Convention	
Target 11.1: New and additional financial resources are transferred to developing country Parties, to allow for the effective implementation of their commitments under the Convention, in accordance with Article 20.	Most relevant indicator: • Official development assistance provided in support of the Convention
Target 11.2: Technology is transferred to developing country Parties, to allow for the effective implementation of their commitments under the Convention, in accordance with its Article 20, paragraph.	*Indicator to be developed*

Annex III

LIST OF ACRONYMS AND ABBREVIATIONS

AHTEG	Ad Hoc Technical Expert Group
BOD	Biochemical oxygen demand
CBD	Convention on Biological Diversity
CGIAR	Consultative Group on International Agricultural Research
CI	Conservation International
COP	Conference of the Parties
CSA	Canadian Standards Association
DADIS	Domestic Animal Diversity Information System of FAO
EGTT	Expert Group on Technology Transfer
EU-JRC	Joint Research Centre of the European Union
FAO	Food and Agriculture Organization of the United Nations
FRA	Forest Resources Assessment of FAO
FSC	Forest Stewardship Council
GBO	Global Biodiversity Outlook
GCRMN	Global Coral Reef Monitoring Network
GEMS	Global Environment Monitoring System of UNEP
GISIN	Global Invasive Species Information Network
GISP	Global Invasive Species Programme
ICSU	International Council for Science
IGBP	International Geosphere-Biosphere Programme
INI	International Nitrogen Initiative: a Joint Programme of SCOPE and IGBP
IPGRI	International Plant Genetic Resources Institute
ISO	International Organization for Standardization
IUCN	The World Conservation Union
LADA	Land Degradation Assessment in Drylands, a project of FAO
LEI	Lembaga Ekolabeling Institute
LPI	Living Planet Index
MA	Millennium Ecosystem Assessment
MBC	Meso-American Biological Corridor
MSC	Marine Stewardship Council
NASA	National Aeronautics and Space Administration
NGO	non-governmental organization
ODA	official development assistance
OECD	Organisation for Economic Co-operation and Development
PEEN	Pan-European Ecological Network
PEFC	Programme for the Endorsement of Forest Certification Schemes
PGRFA	plant genetic resources for food and agriculture
REFORGEN	The FAO Global Information System on Forest Genetic Resources
RLI	Red List Index
SBSTTA	Subsidiary Body on Scientific Technical and Technological Advice
SCBD	Secretariat of the Convention on Biological Diversity
SCOPE	ICSU Scientific Committee on Problems of the Environment
SFI	Sustainable Forestry Initiative
SINGER	System-wide Information Network for Genetic Resources (for CGIAR)
SOW1	first report on the State of the World's Plant Genetic Resources for Food and Agriculture. FAO, Rome 1997.
SSC	Species Survival Commission of IUCN
TNC	The Nature Conservancy
UBC	University of British Columbia

UNEP	United Nations Environment Programme
UNEP-WCMC	World Conservation Monitoring Centre of UNEP
UNESCO	United Nations Educational, Scientific and Cultural Organization
USDA	United States Department of Agriculture
WCPA	World Commission on Protected Areas of IUCN
WHO	World Health Organization
WIEWS	World Information and Early Warning System on PGRFA
WRI	World Resources Institute
WWF	World Wide Fund for Nature
WWF-US	World Wildlife Fund United States

X/6. Second Global Biodiversity Outlook

The Subsidiary Body on Scientific, Technical and Technological Advice,

Recalling the guidance of the Conference of the Parties in decision VII/30 concerning the preparation of the second Global Biodiversity Outlook,

1. *Welcomes* the draft outline of the second edition of the Global Biodiversity Outlook (UNEP/CBD/SBSTTA/10/10) , and *welcomes* the additional advice provided in annex 3 of the Ad Hoc Technical Expert Group on Indicators for Assessing Progress towards the 2010 Biodiversity Target (UNEP/CBD/SBSTTA/INF/10/7);

2. *Agrees* that:

(a) The report should be short, focused, and contain clear and concise messages covering all the focal areas of the framework for assessing progress towards the 2010 target (decision VII/30) and making effective use of the indicators identified in decision VII/30, and recommendation XI/5 of the Subsidiary Body on Scientific, Technical and Technological Advice. It should include a summary for decision makers;

(b) The messages should serve an audience comprising non-technical decision makers (national Governments, international organizations, business and especially those sectors that impact on or use biodiversity), public and the media;

(c) The report should:

(i) Provide a powerful case for the importance of biodiversity to human well-being and a clear presentation of the trends of biodiversity loss;

(ii) Contain a succinct overview of the status of the implementation of the Convention on Biological Diversity, progress towards the 2010 target and contribution to the achievement of the Millennium Development Goals;

(iii) Indicate the key actions required at the individual, institutional and systemic levels to achieve the 2010 target;

(iv) Foster the application of the ecosystem approach;

(v) Demonstrate the shift in emphasis, within the Convention, from policy formulation to implementation;

(vi) Limit the narratives on processes under the Convention on Biological Diversity to those most relevant to the achievement of the 2010 target;

(vii) Draw on the findings of the Millennium Ecosystem Assessment and other relevant assessments to avoid duplication and potential overlaps;

(d) More specifically the report should:

(i) Give a high profile to the headline indicators;

(ii) Focus on an assessment of the current status of progress in achieving the 2010 target and the identification of key drivers influencing progress. The analytical approach should use the framework provided in decision VII/30 It should also provide indicator-based information and highlight methodological limitations and uncertainties as well as the challenges of monitoring progress towards the achievement of the 2010 target;

(iii) Underline the gaps that need to be addressed at policy, institutional and data levels, as well as the priority challenges and efforts necessary to achieve the 2010 target. It does not need to be a comprehensive review of all existing mechanisms but should take into account key global drivers of biodiversity change and important “lessons learned” from national and regional experiences in implementing the Convention;

(iv) Consider the challenges that lie beyond 2010, the level of effort required to overcome these challenges in order to continue reducing and eventually halting biodiversity loss in the longer term. The report should demonstrate, using scenarios and options, the efforts and timescales required to both significantly reduce the rate of and subsequently halt the loss of biodiversity;

3. *Requests* the Executive Secretary:

(a) To ensure, subject to the availability of funds, the timely preparation and production of the Global Biodiversity Outlook in order that a full first draft of the report is available for review by the Subsidiary Body on Scientific, Technical and Technological Advice at its eleventh meeting and that the final report is available at the eighth meeting of the Conference of the Parties, taking into account the above points and a process of peer review;

(b) To develop an effective communication and outreach strategy for wider dissemination of the report findings, drawing on, *inter alia*, the expertise of the informal advisory committee for communication, education and public awareness, and to give due consideration to the style and format of the report and ancillary products;

4. In line with paragraph 7 of decision VII/24 of the Conference of the Parties, *calls on* donor organizations and Parties to contribute and make available urgently the necessary financial support for the preparation, production and communication of the Global Biodiversity Outlook and related ancillary products.

X/7. *Role of the clearing-house mechanism in promoting technical cooperation to achieve the 2010 target and facilitating information exchange on progress made*

The Subsidiary Body on Scientific, Technical and Technological Advice

*Recommend*s that the Conference of the Parties:

1. *Requests* Parties to:

(a) Promote long-term partnerships, including twinning partnerships, among Parties on how to facilitate and stimulate effective scientific cooperation, technology transfer and technical cooperation;

(b) Facilitate the exchange of information by using common formats, protocols and standards to make data and information interoperable;

(c) Make accessible through the clearing-house mechanism:

(i) Links to other relevant existing information on cartographic and remote sensing data and information on geo-referenced data,;

(ii) Information on existing indicators, developed at national, subregional, regional and international levels and priorities related to the use of indicators;

(d) Make available in the public domain, whenever possible and as appropriate, data and information to facilitate exchange and use of such data and information;

(e) Translate technical and scientific information and literature to increase access, to and use by, local and scientific communities and researchers and local communities;

(f) Use the clearing-house mechanism, among other means, to support access to reporting on the use of indicators and information on progress made by Parties in meeting the 2010 target;

2. *Requests* the Executive Secretary, in consultation with the informal advisory committee for the clearing-house mechanism, to:

(a) Propose new ways and means to enhance the role and function of the clearing-house mechanism as a mechanism for cooperation on technology transfer and technical and scientific cooperation;

(b) Explore ways and means to promote long-term partnerships mentioned in paragraph 1 (a) of the present recommendation;

(c) Provide support to regional networking initiatives as part of the clearing-house mechanism;

(d) Provide information through the clearing-house mechanism on new tools to assist Parties and other Governments in assessing progress made in meeting the 2010 target, particularly tools related to geographic information systems, geo-referenced data and models based on that data;

(e) Use the clearing-house mechanism, among other means, to promote and facilitate greater synergies among Parties and other Governments with regard to activities related to the Millennium Development Goals and the 2010 target, especially activities on data and information exchange and assessment of progress made toward the meeting of goals;

(f) Collaborate, to the extent possible, with existing information exchange initiatives such as the Global Biodiversity Information Facility, World Conservation Monitoring Centre of the United Nations Environment Programme and the Global Earth Observation System of Systems (GEOSS), Inter-American Biodiversity Network (IABIN), and the Pacific Basin Biodiversity Information Forum (PBIF), among others, to promote greater interoperability of data, exchange of information and capacity-building initiatives in support of the 2010 target;

(g) Organize technical workshops and provide new training programmes on new information technologies, geographical information systems and data management, to strengthen national capacities with regard to activities related to the 2010 target, especially in developing countries, in particular the

least developed and small island developing States among them, and countries with economies in transition;

(h) Develop a metadata registry of information on national and regional cartographic information (geographic information systems and remote-sensing) from all thematic areas (including maps, satellite images and datasets to facilitate the creation of lists and directories of such information;

(i) Further enhance the clearing-house mechanism with more specific information on formats, protocols and standards to assist with issues related to the interoperability and exchange of data and information;

(j) Make available information on issues related to the repatriation of information;

(k) Explore, in conjunction with indigenous and local communities and other relevant stakeholders, collaboration with the Conservation Commons and other commons initiatives relevant to the conservation and sustainable use of biodiversity;

(l) Make available through the clearing-house mechanism information on existing indicators developed at national, subregional, regional and international levels as appropriate;

(m) Develop an Internet-based portal dedicated to the Global Taxonomy Initiative in collaboration with the Coordination Mechanism of the Initiative.

X/8. Incentive measures: further refinement and consideration of the proposals for the application of ways and means to remove or mitigate perverse incentives

The Subsidiary Body on Scientific, Technical and Technological Advice,

Recalling decision VII/18 of the Conference of the Parties and, in particular, the request expressed therein to further refine and consider, with a view to recommending adoption by the Conference of the Parties, the proposals for the application of ways and means to remove or mitigate perverse incentives, giving adequate time for a substantive and conclusive review of the proposals,

Aware that, at its eleventh meeting, the Subsidiary Body on Scientific, Technical and Technological Advice will consider positive incentives and that incentive measures are on the agenda of the eighth meeting of the Conference of the Parties,

Having further considered the draft proposals for the application of ways and means to remove or mitigate perverse incentives,

Noting that this document (in the annex to the present recommendation) is of a voluntary nature and contains a number of unresolved issues,

Recommends that the Conference of the Parties to the Convention on Biological Diversity at its eighth meeting:

(a) Considers the draft proposals included in the annex to the present recommendation with a view to finalizing them, in conjunction with the outcomes of the consideration of positive incentives by the Subsidiary Body on Scientific, Technical and Technological Advice at its eleventh meeting;

(b) Considers the development of definitions on the basis of suggestions put forward by Parties and relevant organizations before the eighth meeting of the Conference of the Parties.

Annex

PROPOSALS FOR THE APPLICATION OF WAYS AND MEANS TO REMOVE OR MITIGATE PERVERSE INCENTIVES

A. General considerations

1. For the purpose of these indicative guidelines, the term *policy* shall refer to a system of strategies, plans and programmes that spell out, *inter alia*, operational targets, and a related set of legal, administrative and/or economic tools that are implemented by national, sub-national and local governments to attain a set of underlying objectives. The term *practice* shall refer to any activity undertaken by individuals, communities, companies and organizations [that is based on customary law, social norms or cultural traditions].

2. A *perverse incentive* emanates from policies or practices that encourage, either directly or indirectly, resource uses leading to the degradation and loss of biological diversity bearing in mind that perverse incentives include those that negatively affect biodiversity in other countries. The removal of such policies or practices or the mitigation of their perverse effects is therefore an important element or may even be crucial in promoting the conservation and sustainable use of biological diversity.

3. Three phases are suggested in the process of removing such policies or practices or in mitigating their perverse effects on biological diversity, all of which should be implemented with stakeholder participation:

(a) The identification of policies or practices that generate perverse incentives and their impacts;

(b) The design and implementation of appropriate reforms;

(c) The monitoring, enforcement and evaluation of these reforms.

4. The following sections provide indicative guidance, corresponding to these three phases, on the application of ways and means to remove policies or practices generating perverse incentives.

B. Identification of policies or practices that generate perverse incentives

5. *Review of policies and practices.* A thorough study, critical review and evaluation of policies and practices potentially contributing to biodiversity loss, including the assessment of their impact on biodiversity as well as their effectiveness and efficiency, is essential to identify properly and comprehensively any specific policies or practices and their interaction that are responsible for such decline bearing in mind that not every single policy measure and, in particular, not every incentive measure, leads to adverse effects for biodiversity. The study should also consider that the removal or mitigation of such policies and practices, although necessary, may not be sufficient to halt the loss of biodiversity if other root factors, such as institutional, macro-economic, sectoral policies and their implementation and key socio-economic reasons and governance systems, remain unchanged.

6. *Identification of perverse practices.* Special analytical care is needed if practices are to be held accountable for any adverse impacts on biological diversity. Such practices are difficult to change as they may be rooted in [cultural traditions or customary law], which may have wider social values. Furthermore, perverse incentives may be often be explained by an economically rational response to ill-adapted policies. The analysis should determine whether the promotion of cultural adaptation is appropriate or whether the reform of policies, or a combination of both, provides better opportunities for an effective policy intervention.

7. *Differential effects of policies.* In some instances, policies and practices may generate perverse incentives only under specific local conditions and socio-economic circumstances, while they may prove to be neutral or even favourable for biological diversity under other conditions and circumstances. Whenever feasible and appropriate, the *scope* and *extent* to which such policies and practices adversely affect biodiversity should be identified or quantified, as this information is important for prioritization and for choosing the appropriate policy response, bearing in mind that polices of one country may negatively affect biodiversity in another country.

8. *Differentiation of policy objectives, operational targets, and tools.* [Policies that induce unsustainable use, [production and consumption] may result in unintended decline in biodiversity, despite the original objective.] Once a specific policy is identified as generating perverse incentives, further analytical work should differentiate the underlying objectives, operational targets and the specific tools used in attempting to deliver the outcomes of the policy, in order to identify the appropriate entry point for policy reform. [An evaluation of the economic social and environmental costs and benefits of the perverse incentive should be undertaken to assess the combination of policies and markets actions that would achieve a better outcome for biodiversity, and achieve the original policy objectives at lower cost. The choice of policies or market actions should ultimately depend on their combined contribution to the environmental, social and economic dimensions of sustainable development, as well as their consistency with international obligations.]

9. *Identification of all relevant costs and benefits and their distribution.* The identification of all relevant costs and benefits from removing or mitigating policies or practices that generate perverse incentive as well as their distribution within society and the economy is key for a well-informed policy choice. Hence, the assessment should, where feasible, include not only the direct, tangible costs and benefits, but also the intangible costs and benefits of all those affected by the policy. The use of appropriate valuation tools should be considered if feasible. Furthermore, when assessing the merits of mitigation policies, the following cost components should also be taken into consideration: compliance costs, monitoring and enforcement costs, administrative costs and costs of change management.

10. *Identification of obstacles for policy reform.* The following elements should also be identified, as they are crucial for the design of effective policy responses:

(a) Relevant obstacles for the removal of policies and practices generating perverse incentives, such as distributional issues, property rights, entrenched interests, cultural traditions and relevant international [law and policy][considerations] [obligations];

(b) Relevant obstacles for the implementation of policies that mitigate such perverse incentives, such as international obligations, lack of funds or lack of administrative and/or institutional capacity.

11. *Periodic policy evaluations*. The lack of evaluation of policy efficacy and efficiency contributes to the persistence of policies that create perverse incentives and do not assist in achieving what may still be legitimate policy objectives. Periodic quantitative policy evaluation, which includes biodiversity impacts, is desirable for various reasons: it provides criteria for the selection of the most desirable policy reform interventions, it assists in the identification of relevant stakeholders (winners and losers), creates political and evidentiary support for change of ineffective and perverse incentives, gives an indication of policy alternatives and provides an indication of the cost of removal of the perverse incentives. The establishment of periodic quantitative evaluation of the effectiveness of policy instruments and an assessment of any perverse incentives created by them would enable the development of win-win policy reforms. International organizations are requested to cooperate in this effort.

12. *Prioritization* The analysis should facilitate prioritization of subsequent reforms to remove or mitigate perverse incentives, that is, it should enable to spell out which reforms to take up first, and which ones to take up later. The prioritization should be based on a set of criteria, the primary of which should be the extent to which the reform will [promote conservation and/or sustainable use of biodiversity components] [address biodiversity degradation] [promote the three objectives of the Convention].

13. *Strategic environmental assessment*. Elements of strategic environmental assessment (SEA) procedures could be used, if appropriate, as a means to identify policies and practices that generate perverse incentives. In this regard, the Guidelines for Incorporating Biodiversity-related Issues into Environmental Impact Assessment Legislation and/or Processes and in Strategic Environmental Assessment (decision VI/7, annex) could be taken into consideration. While mainly used for *proposed* policies, SEA procedures provide useful guidance on how to design and conduct research to identify perverse incentives for biodiversity conservation and sustainable use that emanate from *existing* policies. In particular, the following steps emerge as possible means of assessing policies and practices with regard to potential perverse incentives:

(a) Screening to determine which policies or practices require full or partial study with regard to possible perverse incentives;

(b) Scoping to identify which potential impacts on biological diversity are relevant to address, and to derive terms of reference for the actual study;

(c) The actual study to identify the perverse incentives for biodiversity conservation and sustainable use emanating from policies and practices, taking into account those impacts that result from the interaction of different policies and practices;

(d) The identification of possible action to remove or mitigate perverse incentives;

(e) The identification of possible reform obstacles;

(f) Pursuant to the design and implementation of reform policies, monitoring and evaluating the implementation of such reform policies, to ensure that unpredicted outcomes and failed mitigation measures are identified and addressed in a timely fashion.

14. *Stakeholder involvement.* The involvement of all relevant stakeholders is an important element in identifying policies or practices that generate perverse incentives. The direct benefits of policies often go to well organized societal actors, while the costs of these policies, e.g., the loss of ecosystem services due to biodiversity decline, are borne by the wider public or by diffuse and/or powerless groups. Such groups, whether local, national or international, however, may be able to forward additional important information and to point to possible shortcomings in the conclusions of the assessment. It should

therefore be ensured, through appropriate mechanisms of levelling the playing field for all stakeholders, that all relevant groups are involved throughout the process. A balanced representation of stakeholders in the consultation will contribute to identifying properly and comprehensively both the benefits of individual policies and their possible shortcomings.

15. *Transparency.* Perverse incentives could be difficult to detect. It is therefore important to ensure that the process of assessing policies and practices is conducted in a transparent manner and will contribute to ensure that all relevant stakeholders are well-informed about the process and its outcomes as well as the causes of perverse effects and their mechanisms. This is an important precondition for effective stakeholder involvement.

16. *Capacity-building.* In developing countries and countries with economies in transition, lack of institutional and administrative capacity to design and conduct appropriate assessment studies is often a serious impediment to identifying policies and practices that generate perverse incentives. In those cases, the resourcing and building of capacity, supported by relevant national, regional and international organizations, is therefore an important prerequisite in successfully removing or mitigating policies and practices that generate perverse incentives.

C. Design and implementation of appropriate reforms

17. *Possible political action.* The following is an indicative list of possible political action once specific policies and practices are identified as generating perverse incentives for the conservation and sustainable use of biological diversity, bearing in mind that, in some instances, several such activities need to be undertaken simultaneously, and also recalling that reforms of other macro-economic and sectoral policies may often be necessary to capture the full benefits of removing or mitigating perverse incentives and to halt the loss of biodiversity:

(a) Removal of the policy or practice;

(b) Removal of the policy and its replacement with another policy that attains the same objectives, but without or with fewer perverse impacts on biological diversity (re-instrumentation);

(c) In those cases where a policy or practice has overall negative impacts but some positive impacts, removal of that policy or practice and introduction of an additional policy that seeks to maintain the positive impacts;

(d) Removal or the policy or practice, combined with measures to overcome obstacles for policy reform;

(e) Introduction of policies that mitigate the perverse impacts on biodiversity of policies or practices, possibly including policies that address relevant obstacles.

18. The following paragraphs provide an indicative list of conditions for the selection of action further to the identification of policies or practices that generate perverse incentives. Some conditions make reference to costs and/or benefits. It is important to note that the policy choice should be based not only on the direct, tangible costs and benefits, but also on an assessment of the intangible costs and benefits, including, for instance, benefits emanating from ecosystems services. Furthermore, the assessment should also include components such as compliance costs, monitoring and enforcement costs, administrative costs and the costs of change management, if appropriate. The choice of reform policies should be based on the extent to which the new policy will contribute to achieving the three objectives of the Convention and take into account distributional objectives and effects at national and global levels.

19. *Removal of policies that generate perverse incentives.* The removal of policies that generate perverse incentives should be a priority, when the analysis reveals that a policy-generating perverse incentive was introduced under circumstances that no longer prevail and, as a consequence, the policy objectives are no longer valid. In other cases, the policy objective may still be valid. In such cases, complementary/alternative policy mechanisms or implementation strategies should be explored and the removal of the corresponding element of the existing policy should be considered.

20. *Removal of perverse practices.* The removal of practices that generate perverse incentives should be considered if a careful analysis of their interplay with formal policies reveals that such practices are indeed the appropriate target for reform. Such practices are often difficult and costly to remove, because of the fact that they may be rooted in cultural traditions or customary law. Their removal should be considered if the cost of promoting cultural adaptation, through for instance appropriate awareness-raising and education programmes, is lower than the cost of effective mitigation policies. Furthermore, it has to be recalled that perverse incentives, apparently caused by specific practices, may often be explained by an economically rational response to ill-adapted policies. In those cases, the reform of these policies may often provide better opportunities for an effective policy intervention.

21. *Re-instrumentation.* In many cases, the underlying policy objective may still be valid and legitimate, and the perverse incentives emanating from the policy could be substantially lowered or avoided if other operational targets and tools would be used. In such instances, the removal of the policy and its replacement by a policy with fewer or no perverse impacts should be considered. Special care should be paid to identifying and implementing those operational targets and related tools that generate the least or no adverse impact on biological diversity.

22. *Removal and introduction of policies that maintain any positive impacts.* In some cases, policies and practices may generate perverse incentives under specific local conditions and socio-economic circumstances, while they may even be favourable for biological diversity under other conditions and circumstances. In these cases, the removal of these policies and practices should still be envisaged if the overall effect on biological diversity is mainly negative. Additional, well-targeted policies could be introduced to maintain the positive impacts.]

23. *Removal and overcoming of obstacles.* Substantial obstacles may sometimes hinder the removal of policies and practices. Additional policies to overcome such obstacles could be introduced if the associated costs are lower than the costs of effective mitigation. The choice of the appropriate policy would clearly depend on the relevant obstacle identified. A step-by-step approach to the reforms could be considered and, as part of that approach, attention should also be given to the costs and benefits for all relevant stakeholders:

(a) *Distributional concerns*. In some cases, the removal of policies or practices may have adverse distributional consequences. The impact of reforms on food security and poverty should be of particular concern. [A step-by-step approach to the reforms could be considered. Additional well-targeted income policies could also be implemented to compensate for these adverse effects;][Additional well-targeted non-trade-distorting direct income support could also be implemented to compensate for these adverse effects;]

(b) *[Legal issues*. In some cases, the removal of policies may impinge on the property rights of some stakeholders. Compensation of associated losses might be required, in accordance with [international law] [and the legal framework of the country concerned;]]

(c) *Entrenched interests*. In most cases, some groups or individuals will lose as a result of the removal of policies or practices. Such groups or individuals will resist such reform. Participation in the decision making process, access to information, education and awareness-raising can be a measure to overcome such obstacles as well as to increase transparency. [Compensatory policies for such stakeholders should only be considered as a last resort;]

(d) *Lack of capacity.* In developing countries and countries with economies in transition, lack of resources, institutional and administrative capacity is often a serious impediment to removing or mitigating perverse incentives. The resourcing and building of capacity will be needed in these cases;

(e) *Cultural traditions.* The removal of practices generating perverse incentives is particularly difficult if they are deeply rooted in cultural beliefs, customs and traditions. Participation in the decision-making process, access to information, education and awareness-raising can be appropriate means to overcome such obstacles;

(f) [*International competitiveness*. Unilateral removal of policies that generate perverse incentives may create a risk that domestic industries lose competitiveness. Such risks become more important in a globalized world of increased international trade and capital flows. When evidence for such cases is compelling, international cooperation to remove such policies in a coordinated, synchronized way may be warranted;]

(g) *Global benefits of removing perverse incentives*. In many cases, the benefits arising from a removal of policies that generate perverse incentives for the conservation and sustainable use of biodiversity are of a global nature, while the costs of removing such policies accrue at the national level. In such cases, international cooperation, including the extension of the activities of international funding mechanisms such as the Global Environment Facility, is warranted to cover developing countries with the possible incremental national costs of generating global benefits.

24. *Mitigation.* If the removal of policies or practices that generate perverse incentives is not feasible or too costly, the effective mitigation of their perverse effects on biodiversity, through appropriate means should be implemented. The following scenarios could be considered:

(a) The cost for society of removing policies and practices, including forgone benefits, would be higher than the cost of effective mitigation policies;

(b) The cost for society of replacing the policy by a policy serving the same objective with less or no perverse impacts would be higher than the cost of effective mitigation policies;

(c) The cost for society of overcoming obstacles to the removal of policies and practices is higher than the cost of effective mitigation policies.

25. All the mitigation policies selected and applied under such conditions should introduce measures aimed at mitigating the impact of the policies with perverse incentives, taking into consideration the adverse effects on biodiversity and all relevant stakeholders.

2. Ways and means to remove or mitigate perverse incentives

(a) Important tools for removal and mitigation

26. *National guidelines*. Guidelines that are adopted by competent national authorities will be an important indirect means to effectively remove or mitigate perverse incentives. Guidelines that are well adapted to national needs and circumstances may serve to structure and inform the national process of identifying as well as removing or mitigating policies and practices that generate perverse incentives. If made publicly available, they may serve as a benchmark against which the general public can gauge the effectiveness of the reform process.

27. *Stakeholder involvement.* The removal of policies or practices that generate perverse incentives is often opposed by influential groups or individuals that profit from these policies or practices. Even when it is not the stated objective of a policy to support such groups or individuals, its removal may be at risk because of their influence. In contrast, the costs of these policies, e.g., the loss of ecosystem services due to biodiversity decline, are borne by the wider public or by diffuse and/or powerless groups. The empowerment and involvement of such groups during the design and implementation phase, through appropriate mechanisms of levelling the playing field for all stakeholders, is therefore another important means to ensure that appropriate policy responses are implemented.

28. *Participation, awareness-raising and education*. The very fact that practices that generate perverse incentives may be rooted in customary law, social norms or cultural traditions implies that considerable obstacles exist to their removal, obstacles that are beyond the immediate reach of formal policy-making. The more indirect approach of *participation in the decision-making process, access to information, education and awareness-raising* may therefore be a particularly important means in removing such practices. However, awareness-raising and education programmes will also be an important element in successfully removing policies or introducing mitigation policies, to overcome the resistance of powerful groups opposing their removal.

29. *Transparency.* Creating transparency with regard to the intermediate and final outcomes of the assessment study, that is, with regard the objectives, costs, and possible negative impacts of policies and practices will contribute to clarifying the implicit choices and priorities and will expose irresponsible policies and practices to the wider public. Transparency will therefore be an important element of a successful programme to raise awareness of these issues. As a consequence, it will also increase the political costs of irresponsible policies and generate political rewards for appropriate action.

30. *Resourcing and building of capacity.* In developing countries and countries with economies in transition, lack of resources, institutional and administrative capacity is often a serious impediment to removing or mitigating perverse incentives. While some policies that generate perverse incentives can, in principle, be easily removed, the removal of practices or the implementation of successful mitigation policies may require substantial resources, institutional and administrative capacity. The provision of resources and building of capacity, supported by relevant national, regional and international organizations, is therefore a key precondition in successfully removing or mitigating policies and practices that generate perverse incentives for the conservation and sustainable use of biological diversity.

31. *International cooperation.* International cooperation is a very important element in removing or mitigating perverse incentives as set out in paragraph 23 (f) and (g) above.

(b) Ways and means of removal

32. [*Re-instrumentation.* In the case of legitimate and valid policy objectives, re-instrumentation, that is, the application of operational targets and related tools that attain the same objective with less or no adverse impacts on biological diversity, may often be a particularly effective way of removing policies that generate perverse incentives for the conservation and sustainable use of biodiversity.]

33. [*Compensatory policies.* The introduction of additional measures could be considered to compensate stakeholders that are negatively affected by the removal of policies that generate perverse incentives. Provided that funding is ensured, the use of compensatory policies could be considered in the following cases:

(a) If the removal of policies will have an adverse effect on distributional objectives, a step-by-step approach to removing such policies could be taken, and additional, well-targeted income policies could be implemented;

(b) If the removal of policies negatively affects the property rights of some stakeholders, the compensation of associated losses could also be envisaged;

(c) If the conditions spelled out under (a) and (b) above do not prevail, compensatory policies should be used only as a last resort.]

(c) Ways and means of mitigation

34. *Regulation.* Where appropriate, the introduction of regulation may be an effective means to mitigate the perverse impacts on biodiversity, provided that a number of preconditions are met. Such preconditions include:

(a) The existence of well-defined, comprehensive and measurable performance indicators;

(b) The resources and capacity to effectively manage, monitore and enforce; and

(c) Regulation that can be designed in a comprehensive way so as to avoid adaptive behaviour of target groups, leading to secondary adverse effects on biological diversity.

35. *Overcoming obstacles to mitigation through regulation*. It should be borne in mind that the very obstacles preventing the removal of policies may also impede the effective mitigation of their perverse effects. For instance, the incentive of target groups not to comply with the regulation may be especially high if the policy generating the perverse incentive remains in place unchanged. Therefore, access to information, education, awareness-raising, transparency and stakeholder involvement are important elements of effective regulatory policies to mitigate perverse incentives.

36. *Positive incentive measures.* The introduction of additional positive incentive measures is another possible means to mitigate the perverse impacts of some policies and practices. In addition to the preconditions enumerated in paragraph 34 above, a number of other caveats should be taken into consideration when using positive incentive measures:

(a) If policies having perverse impacts on biodiversity remain unchanged, the cost of using positive incentives for mitigating these impacts will be especially high, which, in turn, will impair the efficiency of using this instrument. Prior to using positive incentives, such policies should therefore be removed to the extent possible, through the means enumerated above;

(b) As explained in paragraph 22 above, policies and practices that generate perverse incentives in most circumstances may have a favourable impact on biological diversity in others. In such cases, the use of positive incentive measures could be considered to mitigate the negative effect of removing these policies and practices;

(c) The careful design of the incentive measure, including the proper specification of eligibility conditions, is especially important in the case of positive incentive measures to avoid the generation of secondary adverse effects on biological diversity;

(d) In some cases, the strategic behaviour of rational recipients will impede the long-term effectiveness of positive incentive measures. In such cases, their use should be restricted to a transitional period of time through appropriate legal means such as sunset legislation;

(e) Lack of funds may limit the use of positive incentive measures;

(f) The use of positive incentive measures may have both negative and positive distributional consequences. These consequences need to be taken into consideration when using positive incentive measures.]

37. [*Negative incentive measures.* The use of negative incentive measures could also be considered to mitigate the perverse impacts of some policies and practices. In addition to the preconditions enumerated in paragraph 34 above, political resistance will often be especially severe if negative incentive measures are to be introduced. Therefore, awareness-raising, transparency and stakeholder involvement are key elements of a successful introduction of negative incentive measures to mitigate perverse incentives.]

38. *Guidance on the use of incentive measures.* Further guidance with regard to the design and implementation of incentive measures is given in the proposals for the design and implementation of incentive measures, endorsed by the Conference of the Parties to the Convention on Biological Diversity at its sixth meeting (decision VI/15, annex I).

D. Monitoring, enforcement and evaluation of reforms

39. *Stakeholder involvement*. Even after the design and implementation of reforms, all relevant stakeholders, as appropriate, should have the opportunity to be involved in evaluation to ensure their feedback on unanticipated side-effects, failed mitigation measures and other shortcomings, and to ensure that such shortcomings are addressed in a timely fashion.

40. *Indicators and information systems*. The introduction of appropriate information systems should be considered in order to facilitate the process of monitoring and enforcing reforms. Furthermore, the development and application of sound indicators is a crucial precondition to the useful evaluation of reform policies.

41. *Criteria for evaluation.* The evaluation of the effectiveness of the reforms should use sound criteria that incorporate the three objectives of the Convention on Biological Diversity.

42. *Transparency.* Further dissemination of information can play a key role in building and maintaining public support for the reforms, and can thereby contribute to lower monitoring and enforcement costs for public authorities. Again, transparency may be a crucial precondition to ensuring effective stakeholder involvement in evaluating reforms.

43. *Resourcing and the building of capacity.* The ultimate success of the chosen reform is contingent upon successful monitoring, enforcement and evaluation of its impact, including unanticipated side-effects, failed mitigation measures and other shortcomings. It therefore depends on sufficient resources, institutional and administrative capacity.

X/9. *Options for a cross-cutting initiative on biodiversity for food and nutrition*

The Subsidiary Body on Scientific, Technical and Technological Advice

1. *Takes note* of the note by the Executive Secretary on options for a cross-cutting initiative on biodiversity for food and nutrition (UNEP/CBD/SBSTTA/10/13), which outlines the linkages between biodiversity and food, existing initiatives on food and nutrition, and the potential scope of the proposed cross-cutting initiative;

2. *Takes note* of the elements of the cross-cutting initiative on biodiversity for food and nutrition annexed to the present recommendation;

3. *Further takes note* that the cross-cutting international initiative on biodiversity for food and nutrition is to be established within the programme of work on agricultural biodiversity of the Convention on Biological Diversity.

4. *Also takes note* that the Food and Agriculture Organization of the United Nations, the International Plant Genetic Resources Institute and other organizations are undertaking work in the field of biodiversity for food and nutrition, and draws attention to related background information provided to the Subsidiary Body at its tenth meeting (UNEP/CBD/SBSTTA/10/INF/25); and

5. *Requests* the Executive Secretary to:

(a) Continue to develop this initiative with the Food and Agriculture Organization of the United Nations and the International Plant Genetic Resources Institute, and to consult with other organizations, including those responsible for the relevant existing initiatives, and, subject to the availability of the necessary resources, to organize a consultation on the scope of the proposed initiative in conjunction with the thirty-second session of the United Nations Standing Committee on Nutrition, to be held in Brasilia in March 2005;

(b) Compile relevant case-studies relating to biodiversity, food and nutrition;

(c) In line with decision VII/32, liaise with the Office of the Secretary General of the United Nations and the Millennium Project to highlight the role of biodiversity in the achievement of relevant Millennium Development Goals, in particular target 2 of goal 1 (To halve between 1990 and 2015, the proportion of people who suffer from hunger) and goal 7 (Ensure environmental sustainability); and

(d) Report on progress to the Subsidiary Body on Scientific, Technical and Technological Advice at its eleventh meeting.

Annex

ELEMENTS FOR AN INTERNATIONAL INITIATIVE ON BIODIVERSITY FOR FOOD AND NUTRITION

1. The objective of the initiative should be to promote the enhanced sustainable use of biodiversity in programmes contributing to food security and improved human nutrition, as a contribution to the achievement of Millennium Development Goal 1 (target 2), Goal 7 and related goals and targets, and, thereby, to raise awareness of the importance of biodiversity, its conservation and sustainable use.

2. The initiative should be incorporated into, and remain within as appropriate, the Memorandum of Understanding between the Convention on Biological Diversity and the Food and Agriculture Organisation of the United Nations.

3. The initiative should take note of existing work addressing biodiversity for food and nutrition and avoid duplication of effort.

4. The initiative should acknowledge that the first report on the State of the World's Animal Genetic Resources and the second report on the State of the World's Plant Genetic Resources will make a valuable contribution to the initiative.

5. The initiative would complement existing activities under the programme of work on agricultural biodiversity of the Convention on Biological Diversity (and others where relevant), and other existing

initiatives, and focus on a limited number of activities to raise awareness on the role of biodiversity and integrate biodiversity issues into existing initiatives concerned with food, agriculture, and nutrition.

6. Hence, the following are potential elements of the initiative:

(a) Describe and assess the links between biodiversity, food and nutrition, in particular clarifying the relationship between biodiversity and dietary diversity (and the relevant links between human health and ecosystem health);

(b) Integrate the conservation and sustainable use of biodiversity into nutrition agendas and programmes, and agriculture agendas by promoting awareness of the links between biodiversity, food and nutrition, including by promoting public awareness of the links between biodiversity, food and nutrition. (This activity would be linked to target 14 of the Global Strategy for Plant Conservation.);

(c) Develop an indicator or indicators of biodiversity used in food, consistent with decision VII/30;

(d) Within the context of the programme of work on agricultural biodiversity, and taking into account the ecosystem approach, promote activities that contribute to improving food security and human nutrition through enhanced sustainable use of biodiversity including, *inter alia*:

(i) Conservation and sustainable use of crop and livestock genetic diversity, including wild relatives of domesticated animals and plants;

(ii) Conservation and sustainable use of neglected and underutilized species;

(iii) Promotion of genetically diverse home gardens, agro-forests and other production systems that promote the *in situ* conservation of germplasm;

(iv) Conservation and sustainable use of wild resources, including those that support bushmeat and fisheries, including maintaining viable stocks of wild species for sustainable consumption by local and indigenous communities;

(v) Promotion, conservation and sustainable use of important biodiversity associated with agricultural, forestry and aquaculture systems at all levels;

(vi) Poverty alleviation through livelihood diversification, involving the conservation and sustainable use of biodiversity; and

(vii) Species currently underutilized or of potential value to human food and nutrition; and

(e) Integrate food and nutrition issues into the programme of work on Article 8(j) and related provisions of the Convention.

X/10. Agricultural biodiversity: further development of the International Initiative for the Conservation and Sustainable Use of Soil Biodiversity

The Subsidiary Body on Scientific, Technical and Technological Advice,

Recommends that the Conference of the Parties:

1. *Welcomes* with appreciation the progress made by the Food and Agriculture Organization of the United Nations and other collaborators, with the International Initiative for the Conservation and Sustainable Use of Soil Biodiversity, and the report of the International Technical Workshop on Biological Management of Soil Ecosystems for Sustainable Agriculture, organized by the Brazilian Agricultural Research Corporation (EMBRAPA)-Soybean and the Food and Agriculture Organization of the United Nations in Londrina, Brazil, from 24 to 27 June 2002;

2. *Notes* that the conservation and sustainable use of soil biodiversity is an important issue beyond agricultural biodiversity and is relevant to most terrestrial ecosystems;

3. *Endorses* the framework for action contained in the annex to the present recommendation as a basis for the further implementation of the International Soil Biodiversity Initiative;

4. *Invites* the Executive Secretary, Parties, other Governments, international organizations, non-governmental organizations and other interested stakeholders to:

(a) Support and, where appropriate, implement the International Soil Biodiversity Initiative; and

(b) Supply further case-studies on soil biodiversity to the International Soil Biodiversity Initiative in order to further strengthen the Initiative.

Annex

FRAMEWORK FOR ACTION

A. Strategic principles

1. The strategy for the implementation of the International Initiative for the Conservation and Sustainable Use of Soil Biodiversity should adhere to the following principles, many of which have already been emphasized through other processes and/or forums:

(a) Focus on the improvement of farmers' livelihoods in relation to food security, soil biodiversity and other relevant land-use activities;

(b) Build on previous experience and knowledge, through combining the skills and wisdom of farmers with modern scientific knowledge;

(c) Focus on integrated holistic solutions and technical adaptation to local contexts within a clear framework that builds on the principles for application of the ecosystem approach;

(d) Use participatory technology development and adaptive approaches to develop agricultural systems and land resource management practices for specific situations and farmer typologies that are technically and environmentally appropriate, economically viable, and socially and culturally acceptable;

(e) Develop partnerships and alliances that demonstrate multidisciplinarity and foster synergies and ensure multi-stakeholder participation;

(f) Promote cross-sectoral and interdisciplinary approaches to address different perspectives (social, political, environmental - including soil ecosystem services) through association and flexibility;

(g) Prioritize actions on the basis of country goals and the needs of direct beneficiaries and locally validate such actions through the full participation of all actors;

(h) Promote innovative and flexible solutions that are adapted to local conditions;

(i) Promote information sharing and/or exchange of data, taking into account articles 8(j) and 8(h) of the Convention on Biological Diversity;

(j) Promote entrepreneurship and marketing strategies for agro-production.

B. Implementation

2. The Initiative is to be implemented as a cross-cutting initiative within the programme of work on agricultural biodiversity, through the coordination, and with the technical and policy support, of FAO, with appropriate links to other thematic programmes of work of the Convention, particularly those on the biodiversity of dry and sub-humid lands, mountain and forest biological diversity, and with relevant cross-cutting issues, particularly the Global Taxonomy Initiative and work on technology transfer and cooperation. The Initiative provides an opportunity to apply the ecosystem approach and the Addis Ababa Principles and Guidelines for Sustainable Use. The Initiative will liaise closely with the United Nations Convention to Combat Desertification and its advisory bodies and processes in order to enhance synergies between the conventions and avoid the duplication of effort.

3. Progress in implementation could be made through focusing, inter alia, on the following strategic areas of action:

(a) Increasing recognition of the essential services provided by soil biodiversity across all production systems and its relation to land management, through:

(i) Research, information management, data collection, processing, dissemination, transfer of technologies, sharing and networking;

(ii) Public awareness, education and capacity-building;

(iii) Adoption of integrated, ecosystem-level approaches for the sustainable use of soil biodiversity and enhancement of agro-ecosystem functions; in particular in the FAO context focusing on three categories of outputs: assessment, adaptive management and advocacy and training;

(b) Partnerships and cooperation through mainstreaming and cooperative programmes and actions.

C. Goals

1. Promote awareness raising, knowledge and understanding of key roles, environmental services, functional groups and impacts of diverse soil management practices, including those performed by indigenous and local communities, in different farming systems and agro-ecological and socio-economic context.

2. Promote the understanding of the impacts, ownership, and adaptation of all land use and soil-management practices as an integral part of agricultural and sustainable livelihood strategies.

3. Promote the mainstreaming of soil biodiversity conservation into soil-management practices.

Objective 1 – Sharing of knowledge and information and awareness-raising

Activity 1.1.: Within a common framework that recognizes the importance of determining processes affecting soil biodiversity, compile, synthesize, and evaluate case studies for practical advice and active dissemination, through, *inter alia*, the clearing-house mechanism, for use in awareness-raising, capacity-building and informing research.

Activity 1.2.: Create and strengthen networking arrangements for sharing of information, experiences and expertise with a focus on supporting local initiatives on the ground.

Activity 1.3.: Enhance public awareness, education and knowledge on integrated soil management and agro-ecological approaches.

Activity 1.4.: Develop information systems and databases.

Objective 2 – Capacity-building for the development and transfer of knowledge of soil biodiversity and ecosystem management into land use and soil management practices

Activity 2.1.: Evaluate capacity-building needs of farmers and other land managers, researchers, extension and/or advisory services and development programmes for integrated soil biological and ecosystems management.

Activity 2.2.: Develop, apply and adapt indicators and tools for assessment and monitoring of soil health and ecosystem functioning for global, regional, and national use and in line with the framework contained in decision VII/30.

Activity 2.3.: Promote adaptive management approaches for the development and uptake of improved soil biological management practices, technologies and policies that enhance soil health and ecosystem function, and that contribute to sustainable land use.

Activity 2.4.: Mobilize targeted participatory research and development in order to enhance understanding of soil biodiversity functions and ecosystem resilience in relation to land use and sustainable agriculture.

Objective 3 – Strengthening collaboration among actors and institutions and mainstreaming soil biodiversity and biological management into agricultural and land management and rehabilitation programmes

Activity 3.1.: Mainstream soil biodiversity and ecosystem management in agricultural and land management programmes and policies.

Activity 3.2.: Develop partnerships and collaborative activities for the development and implementation of the International Soil Biodiversity Initiative as a partnership between the Food and Agriculture Organization of the United Nations and the Convention on Biological Diversity, taking into account the need for coordination with the United Nations Convention to Combat Desertification and its ongoing work in order to enhance synergies and avoid duplication of effort and utilizing other existing knowledge from initiatives connected with soil biodiversity in all terrestrial ecosystems.

Activity 3.3.: Promote the participation of indigenous and local communities in both the elaboration and implementation of management plans that relate to soil biodiversity.

X/11. *Advice on the report of the Ad Hoc Technical Expert Group on the Genetic Use Restriction Technologies*

The Subsidiary Body on Scientific, Technical and Technological Advice,

Recalling paragraph 4 of decision VII/3 of the Conference of the Parties,

1. *Transmits* the following comments of a scientific, technical and technological nature to the Ad Hoc Open-ended Inter-Sessional Working Group on Article 8(j) and Related Provisions of the Convention on Biological Diversity and to the eighth meeting of the Conference of the Parties:

(a) In considering the report of the Ad Hoc Technical Expert Group on the Potential Impacts of Genetic Use Restriction Technologies on Smallholder Farmers, Indigenous and Local Communities and Farmers' Rights (UNEP/CBD/SBSTTA/9/INF/6), the Subsidiary Body on Scientific, Technical and Technological Advice could not reach consensus on the report of the Ad Hoc Technical Expert Group;

(b) The Conference of the Parties has already invited Parties and indigenous and local communities to review the recommendations of the report of the Ad Hoc Technical Expert Group (decision VII/3, paras. 3-4), and the results of this review will be submitted by the Executive Secretary to the Working Group on Article 8(j) and Related Provisions, which will take them into account when it considers further the potential impacts of genetic use restriction technologies, including cultural and socio-economic impacts, on traditional knowledge, innovations and practices of indigenous and local communities; and

(c) Decision V/5 already includes a relatively comprehensive approach to the use of genetic use restriction technologies including drawing attention to the precautionary approach;

2. *Requests* that the Executive Secretary notify Parties, other Governments, indigenous and local communities, smallholder farmers' organizations, organizations and other relevant stakeholders to present new comments on the Potential Impacts of Genetic Use Restriction Technologies on Smallholder Farmers, Indigenous and Local Communities and Farmers' Rights and present these directly to the next appropriate meeting of the Working Group on Article 8(j) and Related Provisions to ensure the widest and most up-to-date information be considered at that meeting in order to assist the consideration of issues under the mandate of the Working Group on Article 8(j) and Related Provisions;

3. *Recommends* that the Conference of the Parties:

(a) Determine the scope of the mandate of its bodies relating to genetic use restriction technologies;

(b) Reaffirms decision V/5, section III (Genetic use restriction technologies);

(c) Encourages Parties, other Governments, relevant organizations, and interested stakeholders to:

(i) Respect traditional knowledge and farmers' rights to the preservation of seeds under traditional cultivation;

(ii) Continue to undertake further research on the impacts of genetic use restriction technologies, including their ecological, social, economic and cultural impacts, particularly on indigenous and local communities; and

(iii) Continue to disseminate the results of studies on the potential environmental (e.g., risk assessment), socio-economic and cultural impacts of genetic use restriction technologies on smallholder farmers, indigenous and local communities, and make these studies available in a transparent manner through, *inter alia*, the clearing-house mechanism;

(c) *Invites* the Governing Body of the International Treaty on Plant Genetic Resources for Food and Agriculture to examine, within the context of its work, priorities and available resources, the

potential impacts of genetic use restriction technologies with special consideration to the impacts on indigenous and local communities, smallholder farmers and Farmers' Rights;

(d) *Notes* that there is a strong demand for capacity-building and technology transfer, particularly for developing countries and countries with economies in transition, and that adequate resources need to be provided, particularly relating to the assessment of, and decision-making, on genetic use restriction technologies, including regarding cultural and socio-economic aspects, in accordance with Articles 12, 16, 17, 18 and 20 of the Convention, and *supports* capacity-building initiatives covering environmental, cultural and socio-economic aspects to enable Parties to make informed decisions and actions on genetic use restriction technologies with the participation of local and indigenous communities and other stakeholders; and

(e) *Notes* that the issues related to genetic use restriction technologies should be presented in appropriate language and simplified form, in particular in order to facilitate the participation of indigenous and local communities in the development and implementation of appropriate policies and strategies.

X/12. ***Global Taxonomy Initiative: development of the process and the guidelines for the in-depth review of the programme of work and outline of the Global Taxonomy Initiative guide***

The Subsidiary Body on Scientific, Technical and Technological Advice

1. *Welcomes* the proposed process and guidelines for the in-depth review of the implementation of the programme of work for the Global Taxonomy Initiative (GTI) put forward by the Executive Secretary in collaboration with the Coordination Mechanism for the Initiative, as contained in annex I to the present recommendation;

2. *Requests* the Executive Secretary to:

(a) Carry out the activities described in the annex I to the present recommendation, also taking into account the report of the Coordination Mechanism for the Global Taxonomy Initiative, and to report thereon to the Subsidiary Body on Scientific, Technical and Technological Advice at its eleventh meeting; and

(b) Develop an Internet-based portal dedicated to the Global Taxonomy Initiative in collaboration with the Coordination Mechanism for the initiative under the clearing-house mechanism of the Convention;

3. *Invite*s Parties, other Governments and relevant organizations to contribute information needed for the review;

4. *Endorses* the outline of the Global Taxonomy Initiative guide as contained in annex II to the present recommendation.

Annex I

PROCESS AND THE GUIDELINES FOR THE IN-DEPTH REVIEW OF THE PROGRAMME OF WORK FOR THE GLOBAL TAXONOMY INITIATIVE

I. PROCESS

A. Assessing implementation of the programme of work

1. The activities described in the programme of work for the Global Taxonomy Initiative (GTI) include a rationale; expected outputs; a timetable/timing; actors; mechanisms; financial, human resources and other capacity requirements; and pilot projects. Each activity thus contains the necessary elements needed for assessing the level/stage of implementation.

2. The relevant information for the review may be obtained from: (i) national reports; (ii) the national biodiversity strategies and action plans (NBSAPs) and documentation prepared during their development; (iii) reports on taxonomy projects funded by the Global Environment Facility (GEF); (iv) reports of regional GTI workshops; and (v) reports on GTI-related activities prepared by international organizations, non-governmental and inter-governmental organizations. Additional sources of information are listed in the report on progress and status of the GTI prepared for the sixth meeting of the Conference of the Parties (UNEP/CBD/COP/6/INF/23).

B. Assessing effectiveness of the programme of work

3. An appraisal of the outputs of the planned activities and related pilot projects *vis-à-vis* the main goals and objectives of the GTI, may provide a baseline for assessing the effectiveness of the programme of work.

II. WAYS AND MEANS FOR UPDATING THE PROGRAMME OF WORK FOR THE GLOBAL TAXONOMY INITIATIVE

4. The Executive Secretary in collaboration with the Coordination Mechanism for the GTI is reviewing the GTI-related components of the programmes of work on thematic areas and on cross-cutting issues. This review will outline the taxonomic capacity required for the achievement of the targets of the programmes of work in order to strengthen the taxonomic components thereof. The results of this review will be partly reflected in the GTI guide and reported at the eleventh meeting of SBSTTA.

5. This review will also consider the needs of the new programmes of work and targets developed under the framework of the Strategic Plan of the convention. In addressing gaps in knowledge and tools, consideration may be made of taxonomy of micro-organisms and other poorly studied taxa, the role of traditional taxonomic knowledge systems, emerging techniques and technologies in taxonomy as well as the distribution of resources and taxonomic capacity *vis-à-vis* world centres of biodiversity.

6. The Executive Secretary is also carrying out a comprehensive gap analysis of missing elements of the existing programme of work taking into consideration the proposals prepared by the Coordination Mechanism in its fifth report.

III. THE PROVISION OF PRACTICAL SUPPORT FOR NATIONAL AND REGIONAL IMPLEMENTATION OF THE PROGRAMME OF WORK FOR THE GLOBAL TAXONOMY INITIATIVE

7. In decision VII/9, the Conference of the Parties invited Parties, other Governments, regional and international organizations to take full account of the importance of taxonomic capacities in achieving the goals of the Convention, to support taxonomic activities to attain the 2010 target, and to provide all necessary support to national, and where appropriate regional, taxonomic centres of research and expertise. The Conference of the Parties also urged Parties, other Governments and relevant funding organizations to provide adequate and timely support to developing countries to assist in the implementation of the Global Taxonomy Initiative, and for integrating taxonomic capacity-building activities into thematic and cross-cutting programmes, including supporting activities and projects, such as, where appropriate, stand-alone capacity-building projects.

8. Some of the resources needed to support national and regional implementation of the GTI programme of work, as well as ways in which they can be applied, have been identified in thematic reports and other reports submitted by Parties, in regional workshops, in SBSTTA recommendation II/2, and in decisions III/10, IV/1 D and V/9 of the Conference of the Parties.

9. Potential synergies between the GTI programme of work and activities carried out by other organizations at a global/regional level, for example, the Global Biodiversity Information Facility in taxonomic information management and sharing, BioNET International, the Plant Resources of South East Asia, Plant Resources of Tropical Africa projects and other regional and national initiatives which involve a large number of institutes could provide practical support for national and regional implementation.

10. There is a need to compile relevant information on available and potential sources of practical support, share it among stakeholders such as through the clearing-house mechanism, e-forums and proposed partnership-building workshops (section IV below).

11. The process for the in-depth review of the programme of work for the GTI including a timeframe is presented in the following section.

IV. PROCESS, GUIDELINES AND MECHANISMS FOR MONITORING PROGRESS IN THE IMPLEMENTATION OF THE PROGRAMME OF WORK FOR THE GLOBAL TAXONOMY INITIATIVE

Action	Mechanisms/tools	Guidance/guidelines on the use of tools and application of mechanisms, and timeframe
1. Information acquisition	1.1. National reports	
	1.1.1. Guidelines/format for the section on GTI in the third national reports due in May 2005	1.1.1. The guidelines for the third national report 16/ will assist Parties in preparing a comprehensive report on their implementation of the GTI programme of work, due in May 2005. Guidelines on how to fill the questionnaire accessible at http://www.biodiv.org/programmes/cross-cutting/taxonomy/gti/gti-review-en.doc . Compilation of the third national reports will take place prior to SBSTTA 11 in December 2005
	1.1.2. Questionnaire 17/ for a thematic report addressing the 18 planned activities identified in the programme of work for the GTI annexed to decision VI/8	1.1.2. Because the number of reports submitted by May 2005 may not be enough for a comprehensive study, and to be able to prepare in time the note by the Executive Secretary on review of implementation of GTI for consideration by the tenth meeting of SBSTTA, a questionnaire was sent out to CBD and GTI national focal points on 23 April 2004, with a 30 June 2004 deadline for action. This deadline was further extended to 31 August 2004. To date, 32 Governments have responded. A letter requesting information on the status of implementation of the programme of work for the GTI was also sent on 28 May 2004 to relevant organizations including all categories of actors listed in the programme of work for the GTI. It is expected that a multi-stakeholder process will be used during national-information acquisition for the thematic and national reports, with the participation of all categories of actors listed in the programme of work, including, *inter alia,* relevant Government entities, academia, research organizations, indigenous and local communities. As described in the guidelines for the thematic report referred to under item 1.1.1 above, information should be gathered on: (a) whether the planned activities for the programme of work of the GTI have been started or completed, including the progress that has been achieved; (b) the impacts of

16/ UNEP/CBD/COP/7/17/Add.2.

17/ http://www.biodiv.org/programmes/cross-cutting/taxonomy/gti/gti-review-en.doc.

Action	Mechanisms/tools	Guidance/guidelines on the use of tools and application of mechanisms, and timeframe
		the activities carried out in meeting the goals of the programme of work and achieving the objectives of the Convention; (c) opportunities and constraints in implementation; (d) achievement of the goals of the Strategic Plan of the Convention, in particular the 2010 target; and (e) lessons learned. It is also expected that answers to the questionnaire will be used in the third national reports as appropriate.
	1.2. Previous national reports and thematic reports containing sections on taxonomic issues, National Biodiversity Strategies and Action Plans (NBSAPs); and other relevant documents prepared/considered during the preparation of NBSAPs.	1.2.1. Sections in NBSAPs and relevant documents used during the preparation of the NBSAPs will be compiled as part of national needs assessment for taxonomy and taxonomic capacity. This work is ongoing and should be finalized by June 2005. 1.2.2. GTI sections in the first and second national reports submitted between June 1997 and January 1998, and in May 2001 respectively will be compiled and updated as needed, although they include activities carried out before the adoption of the programme of work. Some activities had been initiated in response to decisions III/10, IV/1 D and V/9 and have been summarized for the countries that submitted reports in documents UNEP/CBD/COP/6/INF/10 and UNEP/CBD/COP/6/INF/23. Information on activities carried out by countries that did not submit their reports in time for inclusion in documents from the sixth meeting of the Parties will also be taken into account. This work is ongoing and should be finalized by June 2005.
	1.3. Reports on relevant taxonomic projects from national and international organisations including GEF-funded projects with a taxonomic component	1.3. GEF funded a number of projects containing taxonomic components. Progress reports on these projects will contribute to the assessment of implementation of the GTI programme of work.
	1.4. GTI workshop reports.	1.4. Pursuant to decision V/9, a number of regional workshops took place in Central America (in February 2001), Africa (February/March 2001 and July 2002)), Europe (June 2004), and Asia and Pacific (September 2002 and October 2004). The outcomes of these workshops have been submitted to SBSTTA or the Conference of the Parties in information documents. They contain information that is useful for the assessment of implementation of the GTI programme of work. Compilation of this

Action	Mechanisms/tools	Guidance/guidelines on the use of tools and application of mechanisms, and timeframe
		information is ongoing and should be finalized by June 2005.
	1.5. Reports relevant to the programme of work of the GTI from organizations at the regional and international levels; including the status of GTI pilot projects (see an indicative list in UNEP/CBD/COP/6/INF/23).	1.5. Various governmental, intergovernmental and non-governmental organizations are conducting work relevant or in the context of the GTI programme of work. The Executive Secretary requested these organizations to submit reports and is compiling that information. This work is ongoing and should be finalized by May 2005.
2. Assessment of the level of implementation	2.1. Synthesis of national and thematic reports using analytical tools developed by the Secretariat of the Convention for the third national reports.	2.1. The synthesis was started in September 2004 and will be completed in June 2005. Results of this study will be communicated to parties before the eleventh meeting of SBSTTA as a baseline for the in depth review.
	2.2. Desk study: compilation of information from 2.1 above and relevant information from other sources.	2.2. The desk study is ongoing, and will be completed in May 2005. Operative indicators may include identification of regional taxonomic capacities, regional exchanges and training, selected taxonomic treatments of priority taxa and dissemination of protocols and methodologies.
	2.3. E-forum and/or, depending on availability of funds, workshop to consolidate the conclusions/findings	2.3. The e-forum is expected to be launched from March to May 2005.
3. Assessment of the effectiveness of the programme of work and its output in meeting the objectives of the Convention, including the 2010 target	3.1. Desk study by the Executive Secretary in collaboration.	3.1. The desk study is ongoing and expected to be completed in February 2005.
	3.2. E-forum and/or, depending on availability of funds, workshop to consolidate findings.	3.2. The forum is expected to be launched from March to May 2005.

Action	Mechanisms/tools	Guidance/guidelines on the use of tools and application of mechanisms, and timeframe
4. Revision and updating of the GTI programme of work. adopted in decision VI/8 in 2002	4.1. Gap analysis taking into account results from assessments under items 2 and 3 above.	4.1.1. The Executive Secretary in collaboration with the Coordination Mechanism of the GTI will re-examine and re-evaluate the GTI programme of work after compiling and reviewing available information gathered above. This will explicitly consider decisions of the sixth and seventh meetings of the Conference of the Parties on the thematic areas and other cross-cutting issues, and earlier decisions, to ensure that all needs expressed by the Parties that are hindered by the taxonomic impediment are accommodated in the GTI programme of work, including thematic areas and cross cutting issues developed after endorsement of the GTI programme of work, e.g. mountain and island biodiversity, protected areas, and the international soil biodiversity initiative. This work is ongoing and should be finalized by June 2005.
		4.1.2. For the purpose of revising and updating the programme of work for the GTI, the following are being considered: the Strategic Plan and the 2010 target, the goals, targets and sub-targets being developed as well as the indicators for progress in achieving the targets. This work is ongoing and should be finalized by June 2005.
	4.2. E-forum, including for considering GTI contribution to the 2010 target.	The e-forum is expected to be launched in March 2005 and closed in May 2005
5. Enhancing practical support for national and regional implementation of the GTI programme of work	5.1. Desk study on good practices and success stories for dissemination and use in training workshops and survey of scientific literature.	5.1. The desk study is ongoing, to be completed in August 2005.
	5.2. E-forum to assist activities under 5.1 above.	5.2. The e-forum is expected to be launched from March to May 2005.
	5.3. Partnership building workshop, (subject to availability of funds).	5.3. A partnership building workshop is envisaged in May-June 2005, depending on availability of funds. The workshop will bring together key stakeholders to support the Coordination Mechanism in strengthening the implementation of the programme of work of the GTI and deliberate on means and ways for supporting measures to enhance progress in implementation such as in country training and capacity-building activities.

Annex II

OUTLINE OF THE GLOBAL TAXONOMY INITIATIVE GUIDE 18/

Foreword

Executive summary

The executive summary provides a condensed narrative of the purpose and scope of the Global Taxonomy Initiative guide and highlights key messages on the Global Taxonomy Initiative, the programme of work and the mechanisms for promoting its implementation.

Chapter 1: Introduction

This chapter explains the purpose of the guide, defines the science of taxonomy, and highlights the taxonomic impediment and the reasons why the Global Taxonomy Initiative was established as a cross-cutting issue under the Convention. It describes the types of gaps found in taxonomic work relevant to the Convention and the lack of taxonomic capacity required for the implementation of the Convention.

Chapter 2: Background

This chapter provides a brief overview of the Convention and describes the historical background of the GTI and its operation within the context of the Convention. It highlights the objectives of the Global Taxonomy Initiative and the processes and mechanisms for its implementation.

Chapter 3: The programme of work for the Global Taxonomy Initiative

This chapter describes how the programme of work of the Global Taxonomy Initiative can contribute to the implementation of the thematic work programmes and cross-cutting issues of the Convention. It contains 18 sections representing the 18 planned activities of the Global Taxonomy Initiative work programme. Each section describes the key issues to be addressed, ways and means of implementation; as well as specific activities to be implemented by the Parties and other partners. The chapter also lists ongoing initiatives and programmes, relevant to the respective planned activities.

Chapter 4: Developing the Global Taxonomy Initiative and monitoring its progress

This chapter articulates the range of actions and mechanisms that promote implementation, building on earlier chapters. The chapter describes pilot projects, the role of national focal points, the clearing-house mechanism and the GTI Coordination Mechanism in the implementation of the programme of work. It also highlights the need for communication, education and public awareness of taxonomic issues. In addition the relationship of the Global Taxonomy Initiative to the Strategic Plan of the Convention and the 2010 biodiversity target, mechanisms for monitoring progress in implementation, including a brief discussion on the forthcoming review of the GTI at the eighth meeting of the Conference of the Parties and its possible impact on future work.

18/ The Guide will be a brief and concise document not more than 30 pages, in plain language, aimed at the general public, policy and decision makers and other stakeholders. It will be produced in both hard and electronic formats in all the United Nations official languages.

Chapter 5: Funding for the Global Taxonomy Initiative

This chapter explains the resource needs to implement the Global Taxonomy Initiative, how finances can be mobilized for implementing the programme of work. It also highlights various potential funding sources for taxonomy-related projects and provides relevant examples of such projects including GEF-funded projects with a taxonomic component.

Chapter 6: Information sources and useful contacts

This chapter provides information on appropriate taxonomic tools, presented in various text boxes and annexes, useful additional literature and information sources and key partners to assist the Parties in implementing the Global Taxonomy Initiative.

Annexes/boxes

Annexes and boxes contain supplementary and more technical information, including some texts from decisions of the Conference of the Parties. Annexes will include:

(a) Supplementary information;

(b) Information sources and further reading;

(c) Contact addresses and URLs of key organizations and initiatives;

(d) Glossary of terms;

(e) Key paragraphs of decisions of the Conference of the Parties referring explicitly to the Global Taxonomy Initiative or, more generally, to taxonomic needs for implementing the Convention's programmes of work on the thematic areas and cross-cutting issues.

X/13. *Climate change: terms of reference of an Ad Hoc Technical Expert Group*

The Subsidiary Body on Scientific, Technical and Technological Advice,

Recalling paragraph 14 of decision VII/15, in which the Conference of the Parties requested the Subsidiary Body on Scientific, Technical and Technological Advice, as the next stage of its work on the interlinkages between biodiversity and climate change to develop for consideration of the Conference of the Parties advice or guidance for promoting synergy among activities to address climate change at the national, regional and international level where appropriate, including activities to combat desertification and land degradation, and activities for the conservation and sustainable use of biodiversity,

Also recalling paragraph 15 of decision VII/15, inviting the conferences of the parties to the United Nations Framework Convention on Climate Change and the United Nations Convention to Combat Desertification to collaborate with the Convention on Biological Diversity through the Joint Liaison Group, as appropriate, in developing guidance to Parties in implementing activities that are mutually supportive of the objectives of the three Rio conventions at the local, subnational and national levels,

Recognizing that the Conference of the Parties, in its decision VII/30 on the Strategic Plan, decided to develop a framework to enhance the evaluation of achievements and progress in the implementation of the Strategic Plan, that includes activities aimed at maintaining and enhancing resilience of the components of biodiversity to adapt to climate change,

Recognizing also that the report *Interlinkages between Biological Diversity and Climate Change: Advice on the Integration of Biodiversity Considerations into the Implementation of the United Nations Convention on Climate Change and its Kyoto Protocol* [19] focuses on the links to, and impacts on, biodiversity in relation to mitigation options but assesses, to a lesser extent, the integration of, and impacts on, biodiversity into adaptation activities,

Decides to establish an Ad Hoc Technical Expert Group on Biodiversity and Climate Change on the basis of the following terms of reference in order to start addressing decision VII/15:

1. Drawing on the report of the Ad Hoc Technical Expert Group on Biological Diversity and Climate Change and other relevant documents including the reports of the Intergovernmental Panel on Climate Change and the Millennium Ecosystem Assessment, the Arctic Climate Impact Assessment, and guided by relevant outcomes from the Subsidiary Body for Scientific and Technological Advice and the Conference of the Parties to the United Nations Framework Convention on Climate Change and on other material as appropriate, and by decisions VII/15 on biodiversity and climate change and VII/26 on cooperation with other conventions and international organizations, the Ad Hoc Technical Expert Group will:

   (a) Undertake a supplementary assessment on the integration of biodiversity considerations in the implementation of adaptation activities to climate change at the local, subnational, national, subregional, regional, and international levels, whenever appropriate drawing on case-studies and seeking also to identify and avoid duplication in activities between the Rio conventions. In particular, the assessment shall contemplate:

      (i) The identification of the major biological factors that contribute to ecosystem resilience under the current and projected impacts of climate change, and the identification of particular adaptation activities carried out under the current thematic areas of the Convention: agricultural biodiversity, dry and sub-humid lands biodiversity, forest biodiversity, inland waters biodiversity, marine and coastal biodiversity, mountain biodiversity, and island biodiversity;

19/ CBD Technical Series No. 10, available at http://www.biodiv.org/doc/publications/cbd-ts-10.pdf.

(ii) The potential consequences for biodiversity of those particular adaptation activities, taking into account, but not limited to, technical and technological interventions, highlighting gaps in current scientific knowledge and identifying research needs; and

(iii) The role of biodiversity as an adaptation element by itself;

(b) Based on existing work, including the information contained in the report of the Ad Hoc Technical Expert Group on Biological Diversity and Climate Change and the above supplementary assessment, as well as other relevant sources referred to in the chapeau to the present paragraph, prepare advice or guidance under the thematic areas of the Convention, for use at local, national, regional and international level as appropriate, for planning and/or implementing activities to address adaptation to climate change and that interlink across climate change, biodiversity conservation and sustainable use and land degradation and desertification. The draft advice or guidance may include relevant tools and technologies, including those under the Convention, and take into account traditional knowledge, innovations, and practices of indigenous and local communities, on the integration of biodiversity considerations in the design, implementation, and monitoring of projects aimed at addressing climate change.

Duration of work

2. The work of the Ad Hoc Technical Expert Group should be initiated as soon as possible and completed on time for consideration by the Subsidiary Body on Scientific, Technical and Technological Advice at its eleventh meeting.

Annex II

PROVISIONAL AGENDA FOR THE ELEVENTH MEETING OF THE SUBSIDIARY BODY ON SCIENTIFIC, TECHNICAL AND TECHNOLOGICAL ADVICE

I. ORGANIZATIONAL AND REPORTING MATTERS

1. Opening of the meeting.
2. Organizational matters:
   - 2.1. Election of officers;
   - 2.2. Adoption of the agenda;
   - 2.3. Organization of work.
3. Progress report on the implementation of the programmes of work of the Convention.

II. SUBSTANTIVE ISSUES:

4. In-depth review of programmes of work:
   - 4.1. Dry and sub-humid lands biodiversity;
   - 4.2. Global Taxonomy Initiative.
5. Strategic issues for evaluating progress or supporting implementation of the Strategic Plan, including the 2010 biodiversity target, and contributions to achievement of the Millennium Development Goals:
   - 5.1. Second Global Biodiversity Outlook: review of the draft;
   - 5.2. Millennium Ecosystem Assessment: review of the findings, in particular the synthesis report on biodiversity prepared for the Convention;
   - 5.3. Incentive measures:
     - (a) Proposals on the application of positive incentive measures and their integration into relevant policies, programmes or strategies;
     - (b) Proposals on valuation of biodiversity and biodiversity resources and functions;
   - 5.4. Mountain biodiversity: development of goals and sub-targets for the programme of work in the framework of the 2010 target.
6. Other scientific and technical issues as determined by the Conference of the Parties:
   - 6.1. Marine and coastal biodiversity: identification of technical options for the conservation and sustainable use of deep seabed genetic resources beyond national jurisdiction;
   - 6.2. Inland water ecosystems:
     - (a) Proposals on matters identified in paragraphs 3 and 16 of decision VII/4 relating to national reporting on inland water ecosystems;
     - (b) Consideration of matters relating to paragraphs 29 and 30 of decision VII/4 on criteria for the designation of Ramsar sites in the context of the Convention on Biological Diversity and guidelines for their application;
     - (c) Ways and means for making the review of the implementation of the programme of work on inland water ecosystems more comprehensive;
   - 6.3. Forest biological diversity:
     - (a) Consideration of matters arising from the implementation of paragraph 19 of

decision VI/22;

(b) Consideration of the report of the Ad Hoc Technical Expert Group on the Review of Implementation of the Programme of Work on Forest Biological Diversity;

6.4. Invasive alien species: further consideration of gaps and inconsistencies in the international regulatory frameworks;

6.5. Sustainable use: further consolidation of the work on the use of terms and on associated instruments;

6.6. Guidance for promoting synergy among activities addressing biological diversity, desertification, land degradation and climate change.

III. FINAL MATTERS

7. Preparation for the twelfth and thirteenth meetings of the Subsidiary Body on Scientific, Technical and Technological Advice:

7.1. Draft provisional agendas;

7.2. Dates and venues.

8. Other matters.

9. Adoption of the report.

10. Closure of the meeting.
