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AD HOC TECHNICAL EXPERT GROUP ON REVIEW OF THE IMPLEMENTATION OF THE PROGRAMME OF WORK ON FOREST BIOLOGICAL DIVERSITY
Third meeting
Bonn, 25-29 July 2005

PRELIMINARY SYNTHESIS OF THEMATIC NATIONAL REPORTS ON SUCCESSES, CHALLENGES AND OBSTACLES TO THE IMPLEMENTATION OF THE PROGRAMME OF WORK

Note by the Executive Secretary

I. INTRODUCTION

1. In paragraph 27 of decision VI/22, the Conference of the Parties agreed to call a voluntary thematic report in relation to implementation of the programme of work on forest biological diversity, to elicit information on:

(a) Priority actions that Parties have identified under the programme of work;

(b) Successes in implementing the programme of work; and

(c) Challenges and impediments to implementing these priority actions, and, as appropriate, the programme of work.

2. In order to provide input to the Ad Hoc Technical Expert Group on the Review of Implementation of the Programme of Work, pursuant to paragraph 26 of decision VI/22, the present note synthesizes the views of seventeen Parties 1/ who submitted their voluntary reports to the Secretariat based on notifications 2003-057 of June 2003 and 2003-103 of September 2003. The questionnaire contains a total 31 questions. In the first three questions, Parties were requested to identify priority actions from the programme of work and within these, to report on successes as well as challenges/impediments during their implementation. The fourth question relates to regional and international cooperation. The remaining 27 questions relate to each objective in the expanded programme of work on forest biological diversity. Due to the low number of respondent countries, the present synthesis should not be taken as a reflection of current status and trends. The annex contains the questionnaire included in the format for a voluntary report on implementation of the expanded programme of work on forest biodiversity.

1/ Austria, China, Colombia, Denmark, Estonia, Finland, Germany, the Islamic Republic of Iran, Ireland, Morocco, Myanmar, Poland, Sri Lanka, Sweden, Switzerland, Turkey, the United Kingdom and the United States of America. The United States of America did not complete the questionnaire, but sent the "National Report on Sustainable Forest – 2003", USDA Forest Service. Their contribution is not included in the report.

II. PRELIMINARY SYNTHESIS OF VOLUNTARY REPORTS

A. Analysis of priority actions, successes, challenges and collaboration

1. Priority actions identified by Parties for the implementation of the expanded programme of work

3. Overall, the responses to Question 1 of the questionnaire vary considerably among the reporting countries. A few countries indicated that work was under way to identify priority goals and actions for implementing the expanded programme of work on forest biodiversity. Some countries reported that priorities for conservation and sustainable use of forest biodiversity have been incorporated into their environmental and/or biodiversity strategies and action plans, in the form of a National Forest Programme or Policy. A few countries have identified specific targets and priority actions for implementing the programme of work on forest biological diversity adopted under the Convention.

4. Five countries stated that national priority objectives have not been identified yet. **Austria** indicated that the National Commission on Biodiversity was setting up priority goals, objectives and activities for implementing the expanded programme of work on forest biodiversity in order to include them in the National Strategy on Biodiversity and the Austrian Forest Dialogue which was established to elaborate a National Forest Programme. **Finland** also indicated that the assessment of priorities for implementing the expanded programme of work was under way. A preliminary assessment undertaken by Finland shows that most of the proposed activities in the expanded programme of work are of high or medium relevance to Finland. **Myanmar** stated that a mechanism to coordinate various ministries in the management of natural resources including forest biodiversity resources is in development; hence, national priority objectives have not been determined yet. **Switzerland** indicated that it had a long tradition of preserving and managing forest biodiversity, which is represented by "close-to-nature" forest management. Switzerland also reported that an assessment was under way to identify priority goals, objectives and activities for implementing the expanded programme work, in conjunction with the assessment of the Intergovernmental Panel on Forests (IPF) and the Intergovernmental Forum on Forests (IFF) proposals for action. **United Kingdom** is currently undertaking an evaluation to determine national activities that are relevant to the priority objectives of the expanded programme of work; however, informal priorities for the conservation of forest biodiversity can be found within the context of the Biodiversity Action Plan of the United Kingdom, which will be review in 2005.

5. **China** reported that it will increase the number of forest reserves to 2,000 by the year 2050, with the total area accounting for 16 percent of China's land mass and 85 percent of key national wild plants and animals will be covered within these reserves. China also reported on its recent efforts in this field: from 1991 to the end of 2002, China has increased the number of nature reserves of various categories from 708 to 1757, with the coverage increasing from 56.06 million hectares to 132.90 million hectares. China is also implementing a programme of work to rescue endangered species, which has produced positive results; for example, there are 28 Giant Panda conservation areas established or under construction. In addition, the Biodiversity Conservation Action Plan and China's National Report on Implementation of the Convention on Biological Diversity was developed in order to implement the expanded programme of work. The Report has comprehensively assessed Chinese biodiversity resources and their values, listed the names of national endangered angiosperms and vertebrates, and put forward the policy recommendations for national capacity-building of biodiversity conservations and sustainable uses of bio-resources.

6. **Colombia** stated that priority goals, objectives and activities for implementing the expanded programme work have been incorporated into the National Forest Development Plan, approved in December 2000 and valid for 25 years, the main instrument to promote conservation and sustainable use of forest resources. Some priority actions are:

(a) Planning of forest zones;

(b) *In situ* biodiversity conservation;

(c) *Ex situ* biodiversity conservation;

(d) Forest ecosystems rehabilitation and restoration;

(e) Forest fires protection.

7. **Denmark** reported that its national priority goals are mainly laid out in the National Forest Programme, a process that was initiated before COP 6 (decision VI/22 of April 2002) and finalized shortly thereafter, in June 2002. In addition, Denmark specified that future foundations for priority objectives would arise from the National Biodiversity Action Plan, which was recently revised and coordinates fully with the National Forest Programme. Furthermore, Denmark attached to its thematic report a list of both high and low priority activities it had identified to implement the expanded programme of work on forest biological diversity. In summation, out of a total of 130 activities listed in the expanded programme of work, Denmark had identified 92 activities as high priorities for implementation.

8. **Estonia** implemented a number of environmental policies at the national level, including the National Environmental Strategy (1997), the Estonian Forest Policy (1997), the National Biodiversity Strategy and Action Plan (1999), and the Estonian Forestry Development Plan (2003). Not all of the objectives and goals of these documents correspond to the expanded programme of work on forest biodiversity. More specifically, the Estonian Forest Policy strategically plans the most important biological resources in the country, and includes the most number of the objectives of the expanded programme of work on forest biological diversity. The goals of the Estonia Forest Policy are as following:

(a) Sustainability of forestry, which is considered to require the management and utilization of forests and forest land in a manner and at a rate which maintains their biological diversity, productivity, capacity for regeneration, and vitality as well as their potential to fulfil at present and in the future ecological, economic and social functions at local, national and global levels without damaging other ecosystems;

(b) Efficiency in forest management, which entails securing an efficient production and effective utilization of valuable forest-based products and services for present and future generations.

9. **Germany** reported that two ministries, the Federal Ministry of Consumer Protection, Food and Agriculture and the Federal Ministry for the Environment, Nature and Nuclear Safety, are currently being evaluated for relevant proposed activities and priorities covered under the expanded programme of work on forest biodiversity. In the forest sector strategy for the conservation and sustainable use of biological resources, which was operational in 2000, 11 priorities were identified for the implementation of the expanded programme of work on forest biodiversity of the Convention on Biological Diversity:

(a) Monitoring the state of forest biodiversity;

(b) Reducing external threats to forest biodiversity;

(c) Implementing the concept of ecological silviculture;

(d) Improving conditions for timber utilization;

(e) Regulating game populations;

(f) Carrying out conservation measures;

(g) Carrying out forestry measures in a way compatible with the ecosystem;

(h) Continuing and developing measures for conservation, promotion and sustainable use of genetic diversity of forest trees and shrubs;

(i) Developing economic incentives for the conservation and development of biodiversity in private and local forests;

(j) Continuing and developing public relations and environmental education;

(k) Carrying out research projects on forest biodiversity.

10. **Islamic Republic of Iran** listed its national priority goals:

(a) Analysis of the situation of forestlands for the prevention of forestland conversion to other uses, with a time limit of two years;

(b) Improvement of laws and regulations in the field of conservation and exploitation in northern forests regions, with a time limit of 6 months;

(c) The establishment of special courts relating to illegal forest occupation and exploitation;

(d) Participation of the public and military forces (Police) within the fields of conservation and disseminating of information;

(e) Providing fuel and more facilities for villagers and nomads;

(f) Increasing protected national forest areas to 10%;

(g) Development of urban forestry and reforestation.

11. **Ireland's** priority objectives for the implementation of the expanded programme of work are:

(a) Goals of the Forestry Acts of 1946 and 1988, the Wildlife Act 1976 and 2000, and implementation of relevant directives of the European Union;

(b) Protection to the most valuable semi-natural woodlands and expansion of Ireland's native woodland;

(c) Goals of the Native Woodland Scheme for conserve;

(d) Ensuring sustainable forest management is the core of forest planning and operations;

(e) Implementation of the Forest Biodiversity Guidelines (2000) and the Code of Best Forest Practice (2000) for all forest types and all forest operations;

(f) Adaptation of the forest inventory to include biodiversity;

(g) Develop an inventory and classification system for broadleaf woodlands;

(h) Afforestation by broadleaf consisting of 30%, by 2006;

(i) Encouraging local provenances of native species;

(j) Revision and upgrading of forest legislation as appropriate, to provide for conservation and sustainable use of biodiversity;

(k) Expanding research to obtain information on biodiversity, including plantation forests and semi-natural woodlands.

12. **Morocco** reported that the majority of priority actions are incorporated into the global policy of the country, including regulations of environmental protection, in general, and biodiversity, in particular: the National Forest Programme, the National Study on Protected Areas (1995) and the National Act Against Desertification (1999). In addition, many objectives of the conservation and sustainable use of forest biodiversity programme were defined as priorities for the expanded programme of work, mostly within programme element 1. The major goals of the National Act Against Desertification are soil conservation and the reforestation of 119 000 ha.

13. **Poland** reported that its priority objectives were framed within programme element 1 of the expanded programme of work. Poland is especially interested in implementing objective 1 under goal 1, the development of the ecosystem approach to the management of all types of forests; however, the other objectives are also important. In addition Poland's National Forestry Policy (1997) contains may goals;

(a) Leading forest-political declarations related to sustainable development of forests;

(b) Importance of forests and forestry for the society;

(c) Increase relationships with other sectors;

(d) The future forest policy concerning important areas of operation and public interest; strategy of permanent development of forests assuring fulfilment of their economic, ecological and social functions.

14. **Sri Lanka** has identified the following as its priorities for implementing the expanded programme of work:

(a) Habitat mapping; biodiversity survey and development of an action plan for endemic species conservation;

(b) Promote activities that minimize the negative impacts of forest fragmentation, including afforestation, forest restoration, watershed management;

(c) Develop and implement strategies at regional and national level to mitigate the impacts of invasive alien species;

(d) Improve the knowledge of invasive alien species, public education and awareness;

(e) Promote practices of fire prevention and control;

(f) Determine the conservation needs of threatened and endemic species;

(g) Ensure adequate and effective networks of protected areas for management of protected areas and conservation of wildlife;

(h) Undertake surveys and demarcation of all natural forest areas under the Forest Resources Management Project.

15. **Sweden** reported that it had not identified specific priority objectives but during the implementation of the Environmental Quality Objectives, Sweden identified several overlapping elements with the expanded programme of work on forest biodiversity:

(a) By the year 2010, 900,000 hectares of forestland with high conservation value will be excluded from forest production.

(b) By 2010, the amount of dead wood, the area of mature forest with a large deciduous element, and the area of old forest will be maintained and increased by:

(i) Increasing the quantity of hard dead wood by at least 40% throughout the country and considerably more in areas where biodiversity is particularly at risk;

(ii) Increasing the area of mature forest with a large deciduous element by at least 10%;

(iii) Increasing the area of old forest by at least 5%; and

(iv) Increasing the area regenerated with deciduous forest.

(c) By 2010, forestland will be managed in a way to avoid damages to ancient monuments and to ensure that damages to other known cultural heritages are negligible;

(d) By 2004, an action plan will be developed for threatened species that are in need of targeted measures.

16. **Turkey** identified many objectives under their National Biodiversity Strategy and Action Plan:

(a) Conserve biodiversity and use biological resources in a sustainable manner;

(b) Improve the understanding of ecosystems and increase resource management;

(c) Promote an understanding of the need to conserve biodiversity and use biological resources in a sustainable manner;

(d) Maintain or develop incentives and legislation that supports the conservation of biodiversity and the sustainable use of biological resources;

(e) Work with other countries to conserve biodiversity, use biological resources in a sustainable manner and share equitably the benefits that arise from the utilization of genetic resources

(f) Eliminate or reduce to acceptable levels, the adverse impacts of forest management practices on watersheds, soils, adjacent ecosystems and species.

2. Successes in implementation of priority activities in the programme of work

17. From the responses to question 2, a few countries reported that some positive impacts resulted from the implementation of the expanded programme of work. Many countries reported that it was premature to assess any successes considering that the expanded programme of work was adopted only at the sixth meeting of the Conference of the Parties and that national programmes established as a result of the expanded programme of work have only just begun. Some countries indicated that successes in implementing the programme of work were reflected in the responses to the 27 questions designed to assess the progress of the objectives for the expanded programme of work (including **Germany**).

18. **China** listed a number of successful examples, in relation to animal conservation. First, the number of existing giant pandas is about 1000, and the population is stabilizing. Second, the numbers of crested ibis, a worldwide endangered bird, has risen from seven to more than three hundred. Third, there are about four hundred breeding stations of rare plants for ex-situ conservation. More specifically, there are about 1800 species of plants that are protected

19. **Denmark** indicated that it had achieved some successes in preventing and mitigating losses due to fragmentation and conversion to other land uses (Programme element 1, goal 2, objective 6), because of centuries of efforts in promoting afforestation programmes. Since 1989, the afforestation programme was intensified and reassessed to concentrate on integrated land use planning, taking into account economic, social, recreational and environmental concerns and opportunities. This was achieved through state forest plantation and mainly incentives provided to private landowners. Another contribution is from the establishment of wind mantles on arable land. The implementation of the above programmes has resulted in significant improvement for wild flora and fauna, including domestic species, which benefits biological diversity. These efforts have partly reduced the negative impacts caused by deforestation and fragmentation of forests and other natural sites in the open land. Internationally, Denmark has provided technical and financial support to some countries for the development of some national action plans for conservation and sustainable use of forest genetic resources, including Sahelian African countries, East and South African countries, some Pacific and Central American countries.

20. One success story provided by **Estonia** is the implementation of the Woodland Key Habitats Process in Estonia. This process was initiated by the Estonian Forestry Development Programme and is supported by the Estonian Forest Policy and the Forest Act. Drawing upon the Swedish experience in this field, this process was launched as a joint Estonian-Swedish project to assess the distribution of high-value forest habitats in Estonia. The main outcome of the project was the detailed and illustrated inventory of woodland key habitats in Estonia, including area, number and types of habitats, elements, indicator species and habitat specialists.

21. The **Islamic Republic of Iran** indicated a recent increasing of 10% of national forest area to the protected areas network.

22. **Ireland** cited a number of success examples. First, Ireland has taken measures to ensure that field officers, inspectors and staff of the Forest Service, the National Parks and the Wildlife Service comply with relevant legislation. Second, Ireland has developed the Native Woodland Scheme, which included a successful training and publicity programme; it was preceded by the People's Millennium Forests that included an outreach programme and a very effective publicity programme. Third, Ireland is implementing the Forest Biodiversity Guidelines for all operations, particularly in plantation forests. Fourth, Ireland is developing a National Forest Inventory, including a component on forest biodiversity. Lastly, Ireland also aims to increase broadleaf afforestation to 30% by the year 2006.

23. **Poland** indicated that it had elaborated in its National Forestry Policy the main principles for sustainable forest management, including provisions relating to forest biodiversity. Poland's National Forestry Policy is not only consistent with the expanded programme of work but also with the international agreements adopted by the Ministerial Conference on the Protection of Forests in Europe (MCPFE).

24. One example of success provided by **Sri Lanka** is the National Conservation Review undertaken by the Forest Department of Sri Lanka with the technical assistance from the World Conservation Union (IUCN). The review constituted a systematic assessment of biodiversity in the natural forests of the country. Although the biodiversity assessment was restricted to woody plants, vertebrates, molluscs and butterflies, the National Conservation Review is hailed as one of the most detailed, comprehensive and innovative evaluations of its kind carried out on a countrywide scale to date. In addition to valuable records of the species assessed, the review has also revealed critical gaps in biodiversity and hydrology conservation, even though Sri Lanka has established an extensive network of protected areas.

25. **Switzerland** indicated that it had made many achievements in the past two decades in the management and preservation of forest biodiversity, such as "close-to-nature" forest management.

3. Challenges/impediments to the implementation of priority activities

26. Only a few countries provided some further comments on the challenges or impediments they faced in the implementation of the priority objectives for the expanded programme of work. Comments vary from country to country; however, a few countries consider constraints in financial, human and technical resources as the main impediments.

27. **China** considered population pressure as one of its major challenges to forest resource management. First, many unsustainable human activities bring severe threats to forest biodiversity. Second, activities such as unregulated hunting and exploitation of medicinal herbs and other economic plants are key factors in the loss of biodiversity. Third, excessive deforestation has had serious impacts on the loss of biodiversity, such as shrinking of forest habitats for wild flora and fauna resulting in the reduction of forest types. Fourth, other threats to the conservation of forest biodiversity in recent years are increasing forest fires, pests and diseases. Fifth, current practices of plantations have led to the destruction of the natural forests with abundant biodiversity and the reduction in the types of forests, which have caused severe losses of forest biodiversity. Finally, the impacts of pollution on forest biodiversity are identified as a threatening factor.

28. **Denmark** reported that limited resources were a common problem for state forests and privately owned forests, which makes it necessary to identify priorities for implementation. Furthermore, another challenge for some private owners is the lack of priority for the conservation of biological diversity. One of **Estonia's** challenges is achieving the goals already set for increasing the area of protected forests and the number of species protected. Other challenges for Estonia includes: updating the forest inventory in

relation to land reform; establishing proper support structures for private forest owners; assessing the protection value of forests; introducing effective protection measures; and establishing a more efficient system of environmental planning and monitoring. In addition, the lack of an integrated plan of implementation resulted in the retardation of the Estonian Forest Policy.

29. **Germany** reported that theirs problems in implementing the programme of work arose partly from methodological and economic constraints. The methodological constraints are mainly in the evaluation of biodiversity and a need to improve the integration of forest biodiversity into other sectors' policies to reduce the adverse impacts. **Ireland** also incited a lack of monetary funds as a large impediment to the implementation of the Native Woodland Scheme. **Morocco** also reported that lack of finances was their major challenge. **Sri Lanka** cited financial constraints, lack of technical capacity, and shortage of trained manpower and poor participation of other relevant departments as main impediments to successful implementation of the activities for implementing the programme of work. The **Islamic Republic of Iran** presented lack of scientific and financial resources, together with limited public understanding of the values of forest biological diversity, as the main constraints to the implementation of the programme of work.

30. **Poland** pointed out that one of the most important challenges would be to further improve sustainable forest management. **Switzerland** was of the view that the overlaps and duplications in the current international processes related to forest presented challenges for small countries like Switzerland in the identification and implementation of priorities. **Turkey** indicated that coordination and legal problems with related stakeholder was the largest problem. **United Kingdom** indicated inadequate deer management for many years has resulted in a large treat to biodiversity. In addition, low timber prices provide a challenge to generate income and to positively manage woodlands.

4. Collaboration with other Governments and regional and international organizations and processes to implement regional or international activities in the expanded programme of work

31. The additional information provided in response to Question 4 mostly covered the cooperative activities undertaken by various reporting countries to implement the programme of work in general, without being restricted to the regional or international activities identified in the expanded programme of work.

32. A number of European countries, such as **Austria, Denmark, Finland, Germany, Ireland, Poland, Switzerland** and the **United Kingdom**, indicated that some collaborative activities were undertaken within the framework of the MCPFE and processes such as "Environment for Europe" and the Pan-European Biological and Landscape Diversity Strategy (PEBLDS), **Sweden** also. **Austria** and **Denmark** reported that they had signed the recent Vienna Resolution 4 under MCPFE, which strives for coordinated implementation among member states of the MCPFE of the expanded programme of work on forest biodiversity under the Convention on Biological Diversity. This resolution also contains a framework for cooperation between MCPFE and "Environment for Europe" process, through the PEBLDS.

33. **China** indicated that in recent years, it had strengthened cooperation with many countries and international organizations to promote the conservation and sustainable use of forest biodiversity. China has been undertaking bilateral cooperation with countries such as Austria, Australia, Canada, Japan, India, Russia, and the USA in the field of nature reserves, which aims to improve the management level and techniques of nature reserves in China. China has also been collaborating with some international organizations such as the World Bank, the United Nations Development Programme, and WWF in promoting the conservation and sustainable use of forest biodiversity. With the assistance of the United Nations Development Programme and FAO, China has developed national and local indicators and criteria consistent with those formulated by the International Tropical Timber Organization (ITTO), the

Montreal Process and the new Regional Initiative for Dry Forests in Asia. **Myanmar** also developed ITTO criteria and indicators for sustainable forest management, together with the Code of Harvesting Practice and Model Forest. The **Islamic Republic of Iran** reported some Global Environmental Facility (GEF) projects and bilateral cooperation with neighbouring countries were underway.

34. In addition to the above, **Denmark** has been participating in a number of international forums where forest biodiversity is either a key issue or an integral part of relevant issues, including United Nations Forum on Forests (UNFF), the Convention on Biological Diversity, the United Nations Framework Convention on Climate Change (UNFCCC), the United Nations Convention to Combat Desertification (UNCCD), the Food and Agriculture Organization of the United Nations (FAO), and the International Tropical Timber Organization (ITTO). Denmark actively participates in the Nordic Council of Ministers, the Baltic 21 Forest Sector as well as their jointly established Consultation Committee for Agriculture and Forestry. **Estonia** is collaborating in part with some of its neighbouring countries such as Sweden and Denmark, as well as in some regional initiatives such as Baltic Environment Forum.

35. **Germany** has collaborated with others for certain activities: the establishment of ecological corridors at national and regional levels with European Union habitat and birds directives; the development of a holistic framework for conservation and management of forest genetic resources with the European Forest Genetic Resources Programme; and the development and implementation of conservation strategies for endemic and threatened species at global and regional levels with the Convention on Migratory Species. Germany has provided technical and financial support through bilateral and multilateral channels to forest-related activities in various countries, some of which are directly related to activities identified in the expanded programme of work. For example, programme element 2 (institutional and socio-economic enabling environment) is a crucial part of German cooperation in the field of forest biodiversity. As part of the activities in implementing programme element 2, goal 1, objective 4, Germany supports the development of the European Union Action Plan on Forest Law Enforcement, Governance and Trade to combat the illegal production and trade in timber and wood products. This is accomplished by supporting administrations and Governments in wood-producing countries as well as controlling illegal trade in wood and wood products, including measures taken by wood-importing countries. Support for developing countries and their efforts in forest conservation and sustainable use, has been and continues to be a major part of the Germany development cooperation programmes. Since 1985, Germany has supported more than 300 projects worldwide, which contributes to the conservation and sustainable use of forest biological diversity. Areas of technical cooperation, knowledge and technology transfer, and improvement in the capacity of partner countries, include nature and resource conservation, sustainable use of forest biodiversity and social forestry. In addition, Germany has been cooperating with some international NGOs such as IUCN, WWF in implementing some projects in the field of protected areas management and environmental education. Lastly, Germany is increasingly cooperating with developing nations, to support regional processes and sustainable forest development, with a particular focus on three regions, namely the Congo Basin, Southeast Asia and the Amazon Basin.

36. In addition to regional cooperation mentioned in paragraph 31, **Ireland** mentioned that it played an active role in the Cost Action Programme by getting involved in the Cost E4 Forest Reserves Research Network, Databank of Forest Reserves. In addition, Ireland is participating in both the Cost Action E25, which is in the process of establishing a database for forest ecosystem research sites, and Cost Action E27, which analyses and harmonizes protected forest areas in Europe. Ireland also participates in the establishment of the regional network of Natura 2000 sites by establishing special areas of conservation and protection in Ireland.

37. **Morocco** is cooperating with many international organizations including the European Union, the United Nations Environment Programme (UNEP), the United Nations Development Programme (UNDP), the Global Environment Facility (GEF), the World Bank, and AFD. **Poland** also participates in several regional and international organizations, such as the Organisation for Economic Co-operation and

Development (OECD), the Timber Committee of UNECE, the European Forestry Commission of FAO, the International Union of Forest Research Organizations (IUFRO), and the European Forester's Union. **Sri Lanka** is collaborating with IUCN in the implementation of several activities identified in the expanded programme of work, such as mitigating impacts of invasive alien species and conservation of threatened species.

38. To address the issue of forest law enforcement and education, the **United Kingdom** Department for International Development is working with a broad range of international partners. In Las Cuevas, Belize, a multidisciplinary research station was constructed providing a location for conservation research, workshops and educational training programmes. In addition, the Forestry Commission is collaborating with many European partners, including the European Union and MCPFE.

B. Programme element 1: Conservation, sustainable use and benefit-sharing

1. Activities to develop practical methods, guidelines and/or indicators to apply the ecosystem approach in relation to sustainable forest management

39. Overall, the majority of Parties responded that sustainable forest management practices are in place. Several Parties mention existing practices, which have not *per se* been developed to apply to the ecosystem approach, but which can be regarded as contributions to the implementation of the ecosystem approach within forestry (**Austria**, **Denmark**, and **Germany**), or partly as a conformation to the ecosystem approach (**Estonia, Morocco**, **Myanmar** and the **United Kingdom**). Austria, **China**, Denmark, Germany, and **Turkey** are in the process of developing guidelines and indicators for the ecosystem approach, while **Sri Lanka** is in the process of introducing a "bio-regional" concept. Colombia, Estonia, **Finland**, the Islamic Republic of Iran, Morocco, Myanmar, Sweden and United Kingdom have implemented some methodologies for this directive, while **Ireland** and Poland have implemented comprehensive regulations. **Switzerland** has yet to begin assessment measures.

40. The **German** Federal Agency for Nature Conservation is planning to support the development and implementation of the ecosystem approach, as defined by the Convention on Biological Diversity, in selected forest biosphere reserves. In **Ireland**, the ecosystem approach is explicitly implemented within the "Native Woodland Scheme". **Poland** has recently started the implementation of a Resolution adopted at fourth Ministerial Conference in Vienna (2003) and the Improved Pan-European Indicators for Sustainable Forest Management. Other Parties (**Denmark** and **Switzerland**) also mention the Pan-European criteria and indicators for sustainable forest management (SFM). **Myanmar's** selection system maintains living and non-living resources, and the Forest Department is developing approaches according to socio-economic welfare as well as geophysical aspects. In **Sweden**, the concept of SFM is said to be difficult to implement and control in privately owned areas. In the **Islamic Republic of Iran,** new forest management initiatives, from single-product utilization towards the value of other products, started five years ago. The national strategy is "sustainable use of natural resources and biodiversity", but it needs more case-studies and implementation feedbacks from pilot projects to refine and adjust our practical guidelines.

41. While most Parties consider the practices of "sustainable forest management" as it conforms to the ecosystem approach, some look at the two approaches in detail (**Denmark**, **Germany** and **Switzerland**) to ensure consistency in the use of terms. **Finland,** in particular, developed the document "Relationship with the ecosystem approach and sustainable forest management" presented by SBSTTA at its ninth meeting (in which sustainable forest management can be considered as a means of applying the ecosystem approach to forests), and implemented a comprehensive set of practical guidelines and indicators on sustainable forest management. **Morocco** put in place, as part of the ecological approach to the National Study on Protected Areas, with the participation of local communities, many national and international organizations and Governments, three large objectives: (i) definitions for objectives of protection and conservation goals of bio-ecological sites; (ii) the placement of installation and

management goals based on the zoning of each objective; (iii) creation of participatory partnerships with users and traditional exploiters.

42. Criteria and indicators relating to national strategies, policies or programmes for sustainable forest management are in place but need development for the ecosystem approach. For instance, in **Colombia** the Ministry of Environment, together with the Natural Science Institute of Colombian National University elaborated guidelines to apply the ecosystem approach in forest ecosystems; at the same time, Colombia is developing criteria and indicators for the sustainable management of forest ecosystems. The **United Kingdom** is in the process of adopting an ecosystem approach to forest management that integrates existing sustainable forestry policies and practices with the MCPFE guidelines and a landscape ecology programme that uses a series of whole-forest scale study areas to integrate the needs of species that have wide dispersal abilities.

2. Measures taken to prevent the introduction of invasive alien species that threaten ecosystems, and mitigate their negative impacts on forest biodiversity in accordance with international law

43. **Austria, China, Colombia, Denmark, Finland, Germany, Islamic Republic of Iran, Ireland, Myanmar, Poland, Sri Lanka, Sweden, Switzerland, Turkey** and the **United Kingdom** all indicated having taken some measures for the prevention and control of invasive alien species on forest biodiversity by enforcing quarantine laws, national and regional legislation. For example, the Law on Quarantine of Imported and Exported Animals and Plants applies in **China**. **Ireland**, **Sweden** and **Switzerland** apply the European Union regulations and guidelines for the prevention and control of invasive alien species. **Poland** applies the Nature Conservation Act (1991 with later amendments) the Hunting Law Act (1995, revised in 2002), and the Regulation on Establishment of a List of Game Animals and the Hunting Period for Them (1996, revised in 2001). **Sri Lanka** strictly enforces custom regulations to prevent any unnecessary introductions of invasive alien species and the **Austrian** Forest Act (amended in 2002) restricts a spectrum of potentially invasive tree species.

44. The **Islamic Republic of Iran** and **Myanmar** prevent and control the impact of invasive alien species on forest biodiversity by following the regulations of CITES. The Islamic Republic of Iran also follows the biosafety protocol regulations. In Myanmar, the CITES Management Authority and Scientific Authority was formed, and active collaboration continues with CITES member countries. In contrast, **Moroccan** law has no specific regulations for the introduction of exotic species; however, there are preventative measures for the control of imported plants and animals. In addition, in **Germany** a research and development project is under construction by the Federal Agency for Nature Conservation entitled, "Basic requirements for the development of a national strategy on invasive alien species." The aim of the project is to provide essential information on, *inter alia* ecological, legal and economic issues and the interests of important stakeholders and to give recommendations for the development of a national strategy on invasive alien species which will provide a framework for the cooperation of all relevant players, taking into account existing international and European requirements.

45. Despite the fact that **Finland** considers the impact of alien species on its boreal forest ecosystems a minor problem, it has set up a series of measures:

(a) A detailed information report entitled "Alien Species in Finland" (2000);

(b) The Nordic "Introduced Species" report, which identifies the alien species that have become established in the terrestrial ecosystems of Finland;

(c) Section 43 of the Finnish Nature Conservation Act (1096/1996), which restricts the introduction of non-native species;

(d) The Hunting Act (615/1993, 1268/1993), on the basis of which wild bird or mammal species of foreign origin can not be imported or released in the wild without a permission of the Ministry of Agriculture and Forestry;

(e) The revised Plant Protection Act (2004), which lays down provisions to prevent the introduction of pests and diseases of plants into Finland; and

(f) A comprehensive Finnish Plant Protection Strategy.

46. **Austria** and **Sri Lanka** promote awareness activities to eliminate the negative impacts of invasive alien species on forest biodiversity using workshops, homepages and guides. **Denmark** has developed networks and websites for controlling, combating and preventing the introduction of invasive alien species that threaten ecosystems. In addition, Denmark mitigates the negative impacts of invasive alien species on forest biodiversity by carry out research, inventories and monitoring strategies. Furthermore, Sri Lanka has identified invasive alien species under their jurisdiction using this instrument.

3. Measures taken to mitigate the impact of pollution on forest biodiversity

47. **Austria** reported that its Forestry Act contained provisions for preventing atmospheric pollution damages on forests including a forest damage monitoring system. The National Environmental Plan has recommended measures to reduce damages to forests caused by atmospheric pollution. Various scientific studies were completed in the past two decades to investigate the impacts of pollution such as acidification on the health and stability of forest ecosystems. Despite considerable progress made, the exact impacts of atmospheric pollution on many groups of species remain widely unknown due to complex metabolic processes, different reactions of individual species, releases of large numbers chemical substances, and intricate chemical synergies and antagonisms. Austria reported in the past decades, that the levels of emission of many air pollutants affecting forests were mitigated considerably.

48. **China** reported that it had undertaken a preliminary survey on the impacts of acid rain on forest ecosystems and found that environmental pollution in ecosystems, particularly acid rain, heavy metals and pesticide concentrations, were threatening many species and ecosystems. In addition, acid rain has caused soil acidification and land degradation. However, further studies are needed on the impacts of acid rain on biodiversity and how to mitigate those impacts.

49. **Denmark** is conducting research on the impacts of pollution on forest health. Denmark has participated in the previous European forest health monitoring system and will continue to participate in the new monitoring system called Forest Focus. Denmark will conduct a national forest inventory that includes a forest health monitoring system. Both systems address forest health issues relating to pollution and climate change. In addition to general environmental measures to reduce industrial pollution, current forest policies are aiming at forest management practices based on near-to-nature principles. **Estonia** wrote that they took measures to restore some forests degraded by pollution from oil shale, underground mining, military base by-products, and factory by-products such as chemicals, metals, minerals, wastes and oils.

50. **Germany** reported that a large number of measures were taken at the national level, over the past few decades, in order to reduce the impacts of pollution and eutrophication on German forests, including: the introduction and development of the Federal Emission Control Act, the Ordinance on Large Combustion Plants, and tax benefits for the use of catalytic converters in cars. Germany has also taken measures to mitigate emissions of air pollutants within the framework of the UNECE Convention on Long-range Transboundary Air Pollution, relevant European Union regulations and the new German regulation on national emission rates. A few specific measures to mitigate the impacts of pollution on forests by Germany are compensation of fertilization applications, including lime, and stabilization of forest ecosystems by promoting ecological silviculture.

51. In **Finland,** the effects of air pollution on forest ecosystems are minor; therefore, special forest management techniques that reduce the impacts of changing environmental conditions are not developed. Instead, a comprehensive set of prevention measures to eliminated or reduce pollution emissions were implemented. For example, the reduction of nitrogen emissions was achieved by structural changes in industrial production, reduction of emissions from energy production, cuts in the use of industrial fuel oil, shifts toward the use of nuclear power, and improved production methods in the pulp and paper, metal and chemical industries. In addition, in the 1980's a large research project on the effects of acidification on terrestrial and aquatic ecosystems (HAPRO) was conducted. In 1985, participation in the International Cooperative Programme on the Assessment and Monitoring of Air Pollution Effects on Forests (ICP Forests), based on the UNECE Convention on Long-Range Transboundary Air Pollution (CLRTAP), began. In addition, in Finland an annually assessment on the health and vitality of forests on 460 permanent sample plots occurs, and the relationships between the condition of forests and atmospheric pollutants as well as other stress factors are monitored on 31 forest stands in various parts of the country.

52. **Ireland** has legislation on the control of air, soil and water pollution, and their efforts to reduce pollution are ongoing through a pollution control licensing system for pollutant-discharging companies. **Poland** also reported that one of the legal measures taken to mitigate the impacts of pollution was a maximum allowable amount of air pollutants law. Another measure is monitoring on a regular basis the negative impacts of pollution on forest biodiversity.

53. **Myanmar** specified that Reserved Forests are protected against pollution by Forest Laws, and protected areas are strictly protected against pollution by Protected Areas Laws 1994. **Sweden** indicated that it had been combating for decades the impacts of pollution on all ecosystems, including forests. **Switzerland** has adopted the Ordinance on Air Pollution Control that imposes strict limitations on the emission of stationary installations and requirements for fuel quality. Switzerland has also ratified all the Protocols of the Convention on Long-range Transboundary Air Pollution. On the other hand, the **Islamic Republic of Iran** has conducted only some academic studies as measures to mitigate the negative impacts of pollution.

4. Measures taken to mitigate the negative impacts of climate change on forest biodiversity

54. In order for the **Austrian** Climate Strategy to meet the Kyoto targets, procedures must contain a cluster of forest-related measures to increase the overall stability and adaptability of forest ecosystems. Austria has in progress a number of studies for the development of priority restoration measures in forests that have shown destabilization symptoms induced by climate change. **Denmark** is conducting research pertaining to the impacts of climate change on forest health, including the "Forest Focus" and the national forest inventory, which includes monitoring the health of forests with systematic surveillance within a total area of 2 by 2 km.

55. **Estonia** and **Finland** indicated that some research and monitoring activities to mitigate the impacts of climate change on forest biodiversity are ongoing. In Estonia, the data management system mainly follows the criteria and indicators recommended by the Ministerial Conference on the Protection of Forests in Europe and the FAO Framework of Global Forest Resources Assessment. In Finland, much research was done on forest biodiversity and climate change (studies on carbon sinks) and related issues. For instance, the University of Joensuu plays an active part in the EU-funded SilviStrat project studies adaptive management strategies to enhance carbon sequestration in the European forests and to mitigate adverse impacts of the global climate change on them. **Poland** reported that its forest monitoring programme was introduced in 1989 and in 1995, the scope was greatly extended to cover changes in forest ecosystems resulting from detrimental factors. Poland included the assessment of carbon sequestration into its forest monitoring programme. **Sri Lanka** indicated that some studies on adaptation measures were under way while recognizing that the full impacts of climate change on biodiversity are not clear at this stage.

56. In the **Islamic Republic of Iran,** a GEF project on carbon sequestration is underway. **Ireland** indicated that its National Climate Change Strategy had included a commitment to afforestation. **Myanmar** wrote that although the impacts of climate change on forest biodiversity is not a big issue in Myanmar, special attention is given to afforestation in the central dry zone of the country, to ameliorate the weather.

57. **Germany** reported that various institutions, including universities, undertook research activities pertaining to possible impacts of climate change on forests and forest biodiversity. The research areas under the German Climate Impact Programme also covered the impacts of climate change and analysis of the resilience of different systems. The forest management programmes launched by the federal and local governments are designed to improve the capability of forests to adapt to future climate conditions in Germany. Germany plays a leading role in planning and coordinating the International Cooperative Programme on Assessment and Monitoring of Air Pollution Effects on Forests, which include indicators that allow conclusions to be drawn vis-à-vis the effects of climate on the condition and development of European forests, especially monitoring activities. In addition to adaptation measures such as silvicultural measures, Germany is also pursuing an active policy to reduce emissions of greenhouse gases while implementing the United Nations Framework Convention on Climate Change.

5. Measures taken to prevent and mitigate the adverse effects of forest fires and fire suppression (where fire is a natural disturbance agent)

58. **Austria**, **China**, **Finland**, **Islamic Republic of Iran**, **Ireland, Morocco, Poland, Sri Lanka, Switzerland** and **United Kingdom** have at least some measures to prevent and suppress the adverse effects of forest fires. **Colombia** promotes development of new practices for agricultural management and forest fires prevention and control through the Forest Fires Protection Program.

59. **Denmark**, **Germany**, **Ireland**, and **Sweden** do not consider forest fires a big problem, so normal fire emergency measures are in place but no specific forest policies are needed. In **Germany,** only the Federal State of Mecklenburg-West Pomerania has adopted specific action plans against forest fires: besides organizational measures in case of fire, it also outlines precautionary principles and associated training measures. **Estonia** has measures under development, according to the Estonian Forestry Development Programmed until 2010. The strategy is to bring the update the legislation according to international standards for forest protection. "The manager of state forests will build and reconstruct the fire protection systems of state forests. The state will support the implementation of similar measures in private forests pursuant to the National Forest Fire Protection Scheme and depending on the availability of the corresponding funds."

6. Activities to mitigate the effects of the loss of natural disturbances necessary to maintain biodiversity in regions where these no longer occur

60. **Austria** and **Finland** provided a number of mitigation examples. Austria includes:

(a) Reducing natural flood dynamics of floodplain forests by regulating river systems and building of hydro-electric power plants;

(b) Establishing a network of nature forest reserves aimed at, *inter alia*, investigating natural ecological processes and developing methods of close-to-nature silviculture;

(c) Leaving dead wood in the forests, in accordance with the amended Austrian Forest Act;

(d) Restoring some of the regulated floodplain forest ecosystems;

(e) Applying close-to-nature river regulation techniques.

61. And Finland reports:

(a) Using prescribed limited burning in connection with forest regeneration (altogether 2286 hectares of forest land was prepared using prescribed burning in 2001);

(b) Increasing decaying wood in forest ecosystems by leaving some retention trees and windfalls in logging areas;

(c) Promoting active restoration methods in protected areas.

62. **Denmark** reported that sudden natural disturbances were limited to windfall. A former subsidy scheme for ditches and drainage systems has stopped. Focus is now on re-establishing wet areas in forests. **Estonia** has started to preserves important forest elements that ensure conservation of biodiversity, such as dead trees. In addition, Estonia is identifying many methods that simulate natural processes.

63. Due to the disappearance of forests in **Germany,** a result of high population density and centuries of unstable use, adequate knowledge in relation to natural disturbances is not possible and neither are direct observations on forest dynamics. Nevertheless, Germany assumes the following natural disturbances are of importance: windthrow, flooding, landslides, avalanches and possibly insect gradations following other disturbance events. Germany indicated that the facilitation of natural forest dynamics without human interference is a key objective for some of Germany's protected areas. In forests outside protected areas, many principles of ecological silviculture are employed to mitigate the loss of disturbances, including: promoting and using natural processes, prolonging regeneration stages by applying single stem cutting, cutting small areas only, integrating ageing and disintegration stages, and preserving of dead wood in managed forests.

64. **Ireland** indicated that its Forestry Act and Wildlife Act provided protection to existing woodlands. The Native Woodland Scheme of Ireland places particular importance on connectivity in the creation of new native woodlands. **Poland** has also established a strong legal basis for the protection of forest ecosystems from various human and natural disturbances, including the Forest Act, the National Forest Policy, the National Programme for Augmenting Forest Coverage, the Act on Protection of Agricultural and Forest Lands, and the Environmental Protection Law Act. **Sweden** reported that prescribed burning is practiced by forest owners at small or large scales at their own costs for enhancing biodiversity. **Switzerland** reported that programmes, which allow natural disturbances (such as periodic flooding), are in place for the restoration of riparian forests. Furthermore, strict forest reserves are established to allow natural processes and successional changes to occur at their natural rate as well as to protect biotic communities and ecological integrity.

7. Activities to prevent and mitigate losses of forest biodiversity due to fragmentation and conversion to other land uses

65. **China, Denmark**, and **Sweden** have legal framework for preventing and mitigating forest biodiversity loss. While **Austria**, **Germany, Finland**, **Islamic Republic of Iran**, **Ireland, Morocco, Myanmar**, **Poland**, **Sri Lanka**, **Switzerland, Turkey,** and **United Kingdom** have undertaken some measures, **Colombia** and **Estonia** have identified potential measures for preventing conversion of forest lands to other land uses. In Germany the conversion of forest area to other land uses is strictly regulated by the Federal Forest Act.

8. Activities to restore forest biological diversity in degraded secondary forests and in forests established on former forestlands and other landscapes

66. **Austria** has taken a number of measures to restore forest biodiversity in degraded secondary forests, including:

(a) Undertaking environmental impact assessments for infrastructure projects;

(b) Conducting case studies to develop recommendations for conservation and restoration of connectivity;

(c) Identifying wildlife ecological corridors;

(d) Developing guidelines for road planners with respect to wildlife passages; and

(e) Granting subsidies for close-to-nature silvicultural measures.

67. **China** has imposed bans on the logging of natural forests, particularly in the upper and middle reaches of the Yangtze River and the Yellow River. Compensation funds are provided to areas affected by this ban. China has also implemented a project based on returning cropland to forests and pastures. Subsidies and compensations are provided to farmers and communities that have restored their land for afforestation and grazing.

68. **Denmark** has guidelines for afforestation that contain provisions for choice of species, silvicultural practice, location, etc. Financial incentives are provided for compliance with the guidelines. Relevant policies, including incentives, promote forest management regimes, which are of benefit to the protection of biodiversity. Denmark is also redrafting its forest act. An action plan for promoting close-to-nature forest management is implemented in state forests. **Estonia** indicated that some project-based measures were under development to restore forest biodiversity in degraded secondary forests and in forests established in abandoned farmlands.

69. In **Finland,** 33,000 hectares of conservation areas are being restored to as close to natural state as possible, under the Forest Biodiversity Programme for Southern Finland. At the end of 2002, the restoration work began; it will finish at the end of 2007. On mineral soils, the restoration consists mainly of prescribed burning and increasing the number of decayed trees and small blanks in the forests. On marshland, ditches are blocked in order to restore the hydrological conditions. In some cases, tree stands are removed.

70. **Germany** reported that the restoration of productive potentials of stands entailed afforestation of fast-growing conifer species, which were suitable for the establishment of closed stands on degraded soil. During the past three decades, measures were taken in forestry to initiate the transformation of stands towards a higher share of deciduous species. With the introduction of ecological management rules by the local forest authorities, efforts have been intensified to restore forest ecosystems to a more natural state. Some measures contributing to ecological silviculture in private and local forests are funded within the framework of the "Joint Task for Improvement of Agricultural Structure and Coastal Protection".

71. **Ireland** indicated that its Native Woodland Scheme encourages and provides grants for activities to restore forest biodiversity in secondary degraded forests. **Poland** reported that special programmes for the management of former industrial lands included the restoration of forest biodiversity. In general, the preservation of degraded secondary forests is maintained through: (1) stand reconstruction in line with the principle of adjusting species composition of stands to habitat conditions; (2) implementation of the programme for small-scale retention of water in forests; (3) preventing forest fires; (4) educational programmes provided to the public, students and visitors.

72. **Myanmar** listed the following activities: plantation of suitable tree species; enrichment planting; and rehabilitation of natural forests. In addition, a large-scale afforestation program is being implemented by Dry Zone Greening Department.

73. **Sri Lanka** reported that a number of research projects contributed to the rehabilitation and management of degraded forests, such as cultivation of native tree species, and integrated management planning. **Sweden** indicated that a part of its forest policy was to restore biodiversity in stands or landscapes where intensive land use has led to species-poor forests. **Switzerland** reported that there was

an overall policy goal and long-standing tradition of close-to-nature forest management, which contributes to the prevention of degraded secondary forests.

9. Activities to promote forest management practices that further the conservation of endemic and threatened species

74. **Colombia** and **Poland** stated that relevant forest management practices are under development. **China, Estonia, Islamic Republic of Iran, Ireland, Sri Lanka, Switzerland** and **Turkey** have adopted and promoted some practices, while, **Austria, Denmark, Finland, Germany**, **Morocco**, **Myanmar, Sweden** and the **United Kingdom** have implemented some forest management practices that further the conservation of endemic and threatened species.

75. The forest department of **Sri Lanka** has imposed a ban on the cutting certain highly threatened tree species. **Austria, China** and **Denmark** have each constructed a red list of threatened and endemic species. In Austria, there are no species protection regulations at the national level only single-species conservation programmes at the federal level. China has established 14 Wild Animals Refuge Stations and more than 400 wild plant germplasm bases to improve endangered wild fauna and flora. In Denmark, a range of measures, including incentives for private forest owners and specific initiatives/guidelines in the state forests, are in place in order to protect forest areas of particular high value or vulnerability in terms of biodiversity or other nature values.

76. In **Finland**, the Ministry of the Environment is compiling a protection programme for special species; the law prohibits the destruction of habitats necessary for the survival of protected species, as well as any other actions that might impair their conditions of existence. In commercial forests, the habitats of special importance to biodiversity are protected, and the management and utilization measures applied should be carried out in a manner that preserves the special features of the habitats.

77. **Estonia** is expanding its conservation of endemic and threatened species by adopting the guidelines of the Natura 2000 network. In **Germany**, the *Länder* Forest Acts also include specific provisions that promote the integration of species conservation into forest management, *inter alia* by allowing for the designation of special purpose forest areas (sometimes called biotope protection forest) where management must meet certain requirements exceeding the basic legal standard. For **Ireland**, most measures are habitat oriented rather than species oriented; however, where a rare or threatened species is present, the site must be managed in a way to ensure the protection, survival and where possible enhancement of the species.

78. The **Islamic Republic of Iran** and the **United Kingdom** have implemented many guidelines for the conservation of endemic and threatened species (the UK has few endemic species). For the United Kingdom there are:

(a) The UK Biodiversity Action Plan, Species Action Plan and the Habitat Action Plan cover research, management, inventory and monitoring of endangered species;

(b) The UK system of protected Sites of Special Scientific Interest includes the locations of most of the UK's rarest species;

(c) The Forest Research Agency is developing a decision-making support system based on computers to identify threats and opportunities from forest management

(d) The England Biodiversity Strategy seeks revised incentives to support work for priority species and improved guidance on habitat management based on current research.

10. Activities to ensure adequate and effective protected forest area networks

79. While one third of the respondents established major networks of protected areas (**Austria, China, Finland, Sweden** and the **United Kingdom**), the majority are in the process of establishing networks of protected areas (**Denmark, Estonia, Germany, Islamic Republic of Iran, Morocco, Myanmar, Sri Lanka**, and **Switzerland**). **Ireland, Poland,** and **Turkey** have some protected areas established but networks not in place. In Colombia, networks of protected areas being planned.

80. **Finland** presented the Finnish Natura 2000 network, including more than 3,5 million hectares of terrestrial ecosystems, half of which are forests. Unfortunately, this network was evaluated to be unrepresentative for some forest types, especially the southern part of the country; therefore, an assessment is underway to evaluate further needs for forest conservation as well as research to enhance forest conservation on privately owned land. **Denmark** wrote that the forestry part of the European Natura 2000 will be implemented in the near future.

81. In 1995, **Morocco** put in place, as part of the National Study on Protected Areas, 2.5 million hectares of protected lands, the majority of which consists of forests, including 168 biological and ecological important sites. Identification of the sites was based on the diversity of flora and fauna as well as the habitats. This project united the national parks, the nature parks and the nature reserves. The importance of the sites is being classified based on a three level system (priority 1, 2 and 3). Priority 1 being the most important, that the site must be fully protected within 5 years. Priority 2 and 3 are within 8 and 10 years respectively.

11. Activities to promote sustainable use of forest resources to enhance the conservation of forest biological diversity

82. **Estonia**, and **Sri Lanka** have relevant policies and programmes under development, while, **Austria, China, Denmark, Islamic Republic of Iran, Ireland, Morocco, Myanmar, Turkey** and the **United Kingdom** have some policies and programmes in place; and **Finland, Germany, Poland, Sweden** and **Switzerland** have comprehensive policies and programmes in place for the sustainable use of forest resources.

83. Most respondent countries indicated that the sustainable use of forest resources is part of sustainable forest management and contained in national objectives and legislation. This is the case for the **Finnish** Thematic Report on Forest Ecosystems (2001), the **Austrian** Forest Act, the **Polish** Act on Forests and the Federal Forest Act of **Germany**.

84. In general, national forest programmes include a series of different measures to promote conservation and sustainable use of forest resources. For instance, in **Colombia** the *in situ* biodiversity conservation strategy of the National Forest Development Plan promotes threaten ecosystems within a programmed entitled the Protected Areas National System, as well as the selection and adoption of ecological corridors. Similarly, the **Danish** National Forest Programme includes the establishment of protected areas (10% of the national forest area) and the use of guidelines for sustainable forestry. In **Ireland**, forest operations must follow guidelines issued by the forest service, including the Forest Biodiversity Guidelines, as well as promote the ecosystem approach. In **Switzerland**, the criteria for ecologically sound forest management are contained within the Swiss National Forest Programme. The **Islamic Republic of Iran** has two specific national programmes in place: the Northern Forest Preservation Plan and the Zagros Project.

85. As far as the establishment of protected areas is concerned, **Sri Lanka** has launched the protected area management and wildlife conservation project, which is instrumental for the creation of a system of protected areas that, while protecting biodiversity, will generate employment and income. In addition, the **Swedish** model for the maintenance of biodiversity and sustainable use of forest resources is based on formal and voluntary area protection, reaching the 5-10 % of the total forest area. **Morocco** set up several programmes pertaining to the sustainable use of forest resources, including regulations on exploitation of

aromatic and medicinal plants, hunting, and reforestation. **Turkey** simply wrote that multipurpose management is applied.

86. Other instruments for the sustainable use of forest biodiversity include certification schemes. For instance, **Austria, Germany** and the **United Kingdom** consider the implementation of voluntary independent forest certification schemes as a further way to encourage the sustainable use and conservation of biodiversity. In addition, the United Kingdom system takes into consideration socio-economic standing as well as biodiversity. The regulation of the size of allowable harvest is a method used to conserve biodiversity in such cases as **Poland** and **China**. In this latter case, it has facilitated the control of over-logging and the conservation of forest resources.

12. Activities to prevent losses caused by unsustainable harvesting of timber and non-timber forest resources

87. Colombia and Denmark have identified potential measures but not implemented them, while, Austria, Estonia, Islamic Republic of Iran, Morocco, Myanmar, Poland Sri Lanka, Turkey, and United kingdom have some measures underway; and China, Finland, Germany, Ireland, Sweden, and Switzerland have taken comprehensive measures to prevent the losses of unsustainable harvesting of timber.

88. In most cases, restrictions on clear-cutting and unsustainable harvesting of timber and non-timber forest resources are addressed by national forest acts. For instance, the **Austrian** Forest Act forbids clear-cuttings that would permanently reduce soil productivity, influence water regulation in a negative way, enhance soil erosion, or impair the function of protective forests. In **Finland**, the regulation of timber resources is integrated into forest policy and legislation, and it is implemented through all forestry related programmes and action plans at different levels. In addition, the *Finnish Hunting Act* was amended to include the European Commission's Bird and Habitat Directives (1998), and the reindeer husbandry is regulated by the current Reindeer Husbandry Act (1990). In **Germany**, legal provisions on sustainable harvesting are contained in the Federal Forest Act and Forests Acts of Landers. These forestry acts control timber harvesting in **Ireland** too. The Act on Forest regulates forest owners' rational use of forests in **Poland**, in a way that can ensure optimal compliance with all forest functions. The **Swedish** Forest Act and the Environmental Code establishes binding rules, including obligations on forest regeneration.

89. In **Morocco**, several acts enforce the participation and education of the public, including: local development participation projects to diminish the pressures on forest resources, reorganization of the population that utilities forest resources directly, and public education and awareness. The **United Kingdom** has many acts pertaining to the losses of non-sustainable use of forest resources, including: the Conduct Assurance Scheme, regulations regarding importations of non timber forest products, and a number of polices regarding developing nations regulations.

90. In addition to national legislation, criteria and indicators for sustainable forest management are often used to avoid unsustainable management practices and to ensure a regular and sustainable yield of the goods and services which society expects, as is the case in **Austria, Myanmar,** and **Ireland.** In the later case, the Forest Harvesting Act and the Environment Guidelines ensure that forest harvesting adopts sound planning procedures, operating techniques and control measures to reduce any potentially adverse effects. In Myanmar, the forest department developed the special criteria and indicators in accordance to the ITO guidelines.

91. Other instruments to prevent losses caused by unsustainable uses include the sustained yield principle, according to which the removal of the resource should not exceed its increment. For instance, this is the case for Austrian timber resources, the **Swiss** Forest Policy, and **China**'s forest flora and fauna. Other countries have also established "no-take" zones, natural reserves where the use of resources is

prohibited. Under the **Danish** law, in some specially protected forest areas, clear cuttings are not allowed. In **Sri Lanka**, many wet zone forests have been designated as "conservation forests" where no commercial logging is permitted. Nature reserves have also been established in Sweden to this purpose.

92. Finally, a common concern expressed by many respondent countries, including **Turkey**, is law enforcement. While in **Germany** the enforcement of laws governing the unsustainable harvesting of timber and non-timber forest resources is considered fairly good, as practices violating current regulations are reported and prosecuted, illegal logging remains an important issue for **Poland**. Forest guards in Poland cooperate with police forces and other services in order to prevent illegal activities in forests. The role of forest guard officers was strengthened in order to assure that illegal activities are identified and prosecuted. In **Estonia**, the Estonian Environmental Inspection Act monitors violations of forest regulations, considered the most critical aspect of unsustainable uses of forest biodiversity.

13. Measures taken to enable indigenous and local communities to develop and implement adaptive community-management systems to conserve and sustainably use forest biological diversity

93. **Germany, Ireland, Poland**, and **Switzerland** find that this objective does not apply to their country. **Austria, Denmark, Colombia, Estonia, Islamic Republic of Iran, Sri Lanka, Turkey,** and the **United Kingdom** have relevant policies and programmes under development, and **China, Finland, Morocco, Myanmar** and **Sweden** have some policies and programmes in place to enable indigenous and local communities to develop adaptive community-management systems of conservation.

94. In **Finland**, according to the Reindeer Husbandry Act (1990), Metsähallitus (which manages State lands) must negotiate with the Sami people before any action may occur. The Act on Metsähallitus (1993) also states that natural resource management in the Sami Homeland area (the areas of the municipalities of Enontekiö, Inari, Utsjoki and a part of Sodankylä in northern Lapland) must be done in a way that does not cause harm to the traditional livelihood and culture of the Sami people. Furthermore, the action plan for the Forest Biodiversity Programme for Southern Finland includes projects on local cooperation between forest owners (including other local bodies) so as to safeguard natural values in more extensive areas. Several adult education and study centres as well as folk high schools offer courses, study programmes and other education related to forests. Forest information is also available in books and other printed publications, on the Internet, and in magazines published by various forestry organisations, NGOs and interest groups. In recent years, there was an increase in efforts to promote forest-related knowledge and skills among children and young people.

95. Although indigenous concerns are not addressed directly by forest legislation and instruments, in general, balancing the interests of different users is part of the forest policy processes in many countries. In **Sweden**, for instance, forest management occurs through local participation and a multi-stakeholder approach involving the Sami people. In **Austria**, there are several examples of participation of local communities in the forest management: platforms for the management of protective forests; the Austrian Forest Dialogue, which is being developed into a national forest programme; and the implementation process of Natura 2000 (EU nature conservation legislation). In the **Islamic Republic of Iran**, the development of specific policies occurs within the Zagros Project.

96. In addition, **China** encourages minority communities to participate in the conservation of biodiversity. With the assistance of corresponding government departments and international organizations, participatory management approaches have been implemented in some nature reserves where a number of minorities live together. This approach encouraged indigenous communities and women to participate in the management of nature reserves. Similarly, in **Sri Lanka**, protected area management and wildlife conservation projects promote community strengthening and partnership building around protected areas.

97. In many cases, respondent countries indicated only a limited number of activities were in place pertaining to the use of traditional knowledge and the involvement of indigenous communities in forest management. In general, participation includes other activities, such as the integration of sustainable forestry with the development of communities (**Austria, Denmark**, and **Poland**).

14. Activities to develop effective and equitable information systems and strategies and to promote implementation of those strategies for in situ and ex situ conservation and sustainable use of forest genetic diversity

98. **Austria** has adopted a number of measures for *in-situ* conservation, such as the establishment and stewardship of the Nature Forest Reserve Programme, as well as a number of other protected areas. Austria has also developed some measures for *ex-situ* conservation, including: genetic conservation forests, seed plantations, clone archives, work on forest genetics. Austria has undertaken a comprehensive study on the hemeroby of Austrian forest ecosystems as well as developed and published a Red List of threatened forest biotope types. Austria has collected data on natural forest communities to develop the Austrian Forest Inventory.

99. **China** has established a system of monitoring and assessing forest resources at national and local levels. Furthermore, China conducted surveys of forests at national and local levels every five years to gain information on the status and trends of national forest resources, which provided a scientific basis for the development of forest resource management. China has also conducted monitoring of biodiversity in some forest ecosystem reserves and established biodiversity information management systems for this purpose. Since 1997, China has been developing a national network of information concerning forest pest and disease control, which accelerates the diffusion of relevant information across provinces and provides a sound basis for decision making for management.

100. **Denmark** is in the process of identifying genetic variability for important tree species, in collaboration with the EU and the European Forest Genetic Resources Programme. In 1994, Denmark adopted the Strategy for the Conservation of Genetic Resources for Trees and Shrubs, which is closely linked to the Strategy for Natural Forests and Other Forest Types of High Conservation Value. The Danida Forest Seed Centre, in collaboration with FAO, IPGRI, ICRAF, has developed guidelines for in situ and ex situ conservation of forest genetic resources. In addition, Denmark has provided assistance to a number of countries through tree seed programmes, including technical and financial support to specific programmes on *in situ* and *ex situ* conservation.

101. **Estonia** identified its main weakness in forest management as insufficient gathering, processing and analysis of forest-related information as well as a lack of proper communication among different organizations dealing with the sustainable management. To improve this situation, Estonia has established an integral information system or registry on forests and forest management. The registry is maintained regularly, accessible to various interested audiences, and updated regularly to meet new demands.

102. In 2001, **Finland** implemented the National Plant Genetic Resources Programme for Agriculture and Forestry through the Finnish Forest Research Institute. The genetic resources of the main tree species are present in the gene reserve forests (currently about 7000 hectares) and *ex situ* collections. Nature conservation areas and breeding populations of forest tree species complement the network of gene reserve forests. The main task in the near future is to complete the network of gene reserve forests and to double *ex situ* collections of noble hardwoods. In addition, within the framework of the Nordic Council of Minister's Strategy of Conservation of Genetic Resources a network for forest gene conservation was launched in 2003. It promotes the exchange of data and knowledge as well as increases general awareness on the importance of management and sustainable use of genetic resources. As part of the Finnish Biodiversity Research Programme (1997-2002), a research project entitled "Maintenance of Genetic Diversity in Fragmented Boreal Forests" was carried out. In addition, special conservation

programmes to protect the most threatened ecosystems were launched, namely: the Mire Conservation Programme, the Herb-Rich Forest Conservation Programme, Programme for the Protection of Old-growth Forests, Waterfowl habitats Conservation Programme, and Shore Conservation Programme.

103. **Germany** established a prototype database providing information on conservation of genetic resources of trees and shrub species. Germany revised in 2000 the Forest Gene Conservation Concept. One priority of the concept is the conservation of genetic diversity *in situ* and its integration within forest management practices. Other elements of the concept include: registration and evaluation of forest genetic resources; specific conservation measures for endangered species; rare tree and woody shrub species; comprehensive research programmes; development of a long-term genetic monitoring system; and cooperation with international conservation programmes. Germany is also actively participating in the work of the European Forest Genetic Resources Programme (EUROPEN). One of the outputs produced by the EUROPEN networks are long-term conservation strategies and guidelines for genetic conservation and the use of various tree species.

104. **Ireland** has an information system on only some conservation sites, such as special areas of conservation, protected areas and natural heritage sites. The National Forest Inventory also records information on forests in Ireland. The People's Millennium Project promotes the diffusion of relevant information to households. The legislation concerning forest reproductive materials ensures the traceability and certification of genetic integrity of these materials.

105. **Poland** is implementing a programme for forest gene resources conservation and selective breeding of forest trees. As a result, Poland has established a considerable number of seed bases, seed extraction plants, regional seed stores, seed testing stations and see quality monitoring stations to meet the needs of both state forests and private owned forests. Poland has established forest gene banks for protection of Polish genetic resources of threatened species of trees, shrubs and forest floor plants. Poland has undertaken studies on ex situ conservation of forest genetic resources. In addition, Poland has established rules for trade in forest reproductive materials in accordance with the Act on Forest Reproductive Material and relevant EU directives. Poland has also employed ways for *in situ* conservation such as utilization of forest resources because of sustainable forest management and naturalizing ecosystems. **Switzerland** reported that it had developed genetic inventories for some species and work was under way to develop inventories for other species and a strategy for preserving genetic diversity of all tree species.

15. Activities to promote the fair and equitable sharing of benefits resulting from the utilization of forest genetic resources and associated traditional knowledge

106. A number of respondent countries have reported that no initiatives have been undertaken at the national level to address this objective to date (**Austria**, **Estonia**, **Sweden**, **Switzerland**), or they are in a very early stage of development (**Finland**). In **Demark** for instance, there are no policies or programmes dealing specifically with forest genetic resources. Only a provision in the Danish Penal Code is meant to address the issue of prior informed consent for the use of genetic material under mutually agreed terms.

107. In addition, in **Poland** the issue of traditional knowledge associated with the utilization of forest genetic resources has not been tackled yet. Issues pertaining to the conservation of genetic resources are included in the general provisions of the National Policy on Forests, which promotes forest management methods that respect ecological functions of forests and takes into account their economic and ecological conditions. Similarly, in **Ireland**, given the limited utilization of genetic resources, the issue of forest traditional knowledge is addressed more generally by the section of the Strategic Plan for the Development of the Forestry Sector on Sustainable Forest Management, in which biodiversity is a key element.

108. While **China** did not report on the development of arrangements regarding access and benefit sharing, it stressed the relevance of the need for local communities to derive benefits from the use and conservation of biodiversity. Given the importance attributed to China's vast and rapidly expanding traditional medicine herb industry, forest gene banks classified by species and germplasm storage were built.

109. The CBD Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising out their utilization are under consideration by a number of Parties, including **Denmark** and **Germany**. In Germany, the Federal Office for Nature Conservation is supporting a project which will contribute to the follow-up of the implementation of the Bonn Guidelines. Also, the Federal Ministry of Education and Research is funding a joint interdisciplinary pilot project which is intended to elaborate a workable model for fair and equitable benefit-sharing in cooperation with the indigenous communities of an Ecuadorian rainforest area. In addition, the Deutsche Gesellschaft für Technische Zusammenarbeit GmbH (GTZ) (German organization responsible for government-sponsored technical development cooperation) has supported several projects contributing to the implementation of access and benefit-sharing regulations.

110. Amongst respondent countries, **Sri Lanka** seems to be the only one where legislation addresses access to genetic resources and the equitable sharing of benefits is at an advanced stage of development, with a new Biodiversity law. In addition, a new legal instrument on medicinal plant traditional knowledge and the national policy on traditional knowledge are under development.

C. Programme element 2: Institutional and socio-economic enabling environment

1. Activities to improve the understanding of the various causes of forest biodiversity losses

111. **Austria** has undertaken a comprehensive study on the hemeroby of Austrian forest ecosystems, which focuses on present conditions and explores specific causes of biodiversity losses. The Austrian Forest Inventory has adopted parameters that are appropriate to describe biodiversity aspects during its last two inventory periods. Appropriate technical analysis and interpretation of biodiversity-related data might contribute to further understanding of some causes of biodiversity losses to a certain extent. A Red List of threatened forest biotope types also provides some information on the causes of threats. A case study on the implementation of the ecosystem approach in Austrian forests also investigates threats to forest biodiversity on the basis of a comprehensive review of relevant literature.

112. **China** reported that various educational and publicity programmes have been launched to increase the public's understanding of biodiversity-related issues, including forest biodiversity. **Denmark** cited a few analyses have increased the understanding of various causes of forest biodiversity losses, including: the succession from broadleaves to conifers and time needed for reestablishment; the impacts of afforestation on vegetation; and the impacts of pesticides and soil treatment on fauna diversity. **Estonia** has developed a number of ecosystem-level inventories that partly indicate the status of forest management sustainability, including an inventory of old-growth forest, an inventory of wooded meadows and an inventory of woodland key habitats. Estonia has also developed national criteria and indicators for sustainable forest management in accordance with the Pan-European Ministerial Forest Process. However, Estonia indicated a need for more focused and comprehensive analysis of various causes of forest biodiversity losses. In the **Islamic Republic of Iran,** some analysis on tree and shrub plant species was completed and the main causes of forest biodiversity loss were identified: conversion of forestlands to other land uses, overgrazing and unsuitable exploitation methods of forest resources.

113. In **Finland,** universities and research institutes provide relevant scientific information including: the Finnish Biodiversity Research Programme (1997-2002) and research programmes on the diversity of forest, agricultural and aquatic ecosystems (2003-2006). Threats to Finnish animal and plant species have been thoroughly assessed in the three subsequent, comprehensive red data books. A nationwide analysis

of the threats to different habitat types was conducted as part of the habitat conservation programmes. Latest, comprehensive analysis was done, by the Ministry of the Environment, in connection with the National Forest Programme (2010), to test the adequacy of protection measures in the forests of southern Finland and Ostrobothnia regions. Based on the findings and recommendations of the analysis, the Forest Biodiversity Programme for Southern Finland was launched.

114. **Germany** indicated that there was a large body of literature on the impacts of external factors and management measures affecting the state of forest ecosystems and their biodiversity. Various German institutions have undertaken research on these subjects. One of the main areas of interest over the past decade has been on the so-called "new types of forest damage" and the impact of air-borne pollutants on forest ecosystems. However, Germany indicated that its understanding of the causes of forest biodiversity losses was far from complete.

115. **Ireland** states that the current risks to the Irish forest biodiversity include (i) deer population increase without any natural predation; (ii) spreading of invasive alien weeds; (iii) grazing by farm animals; and (iv) neglect of woodland management.

116. Recently, **Poland** has identified three main factors that are responsible for the current condition of forests in Poland, namely air pollution, anomalous weather conditions and silvicultural procedures in the past. In general, main threats to forests are anthropogenic changes in the environment, including: soil and water pollution, decreasing underground water levels, excessive fragmentation of forest areas, land use changes related to mining, penetration of forests by people, destructive forest management practices oriented towards obtaining raw materials, and forest fires.

117. **Sri Lanka** reported that deforestation, overexploitation, and illegal mining could be major causes of forest biodiversity losses. In addition, the introduction of invasive alien species is becoming a threat to forest biodiversity. Environmental pollution can have a negative impact on the populations of some sensitive species, such as lichens. **Sweden** is implementing strategies based on conservation of biodiversity and landscape ecology, which narrows the focus of habitats for future conservation.

2. Activities to integrate biodiversity conservation and sustainable use into forest and other sector policies and programmes

118. The **Austrian** National Forest Programme, in development, aims at furthering sectoral integration. The Austrian Strategy for Sustainable Development also requires sectoral integration. However, practical implementation of cross-sectoral integration is not keeping pace with the progress made at the conceptual, legislative and strategy levels. **China** has integrated biodiversity conservation and sustainable use into forestry and other sectoral policies and programmes. This includes the nature reserve establishment of the 10th National Five-year Plan for Economic and Social Development and the integration of forest biodiversity conservation and sustainable use as an important part of the National Programme for Ecology Conservation.

119. **Denmark** developed a National Forest Program in 2002, aimed at a cross-sectoral approach. Some laws highly relevant to forest policy such as those on agriculture, spatial planning, and nature protection are being drafted simultaneously with the new forest act. These processes are well coordinated and forest issues are duly taken into consideration. In addition, forestry is integrated into national strategies, policies and plans for spatial development, sustainable development and biodiversity.

120. **Estonia** has integrated biodiversity conservation and sustainable use into forests and other sectoral policies and programmes mostly through national biodiversity strategy and action plans. Forest biodiversity is also addressed in the Estonian Forest Policy and the Estonian Forestry Development Plan. **Germany** has integrated biodiversity conservation and sustainable use into programmes and policies within the forest sector, more specifically, the National Forest Programme as well as other forest sector

strategies. However, Germany still needs to improve the integration of forestry policy into other sectors. The main instruments for ensuring the consideration of biodiversity aspects in the activities of other sectors include the Federal Act on Environmental Impact Assessment, the so-called intervention provision of the Federal Nature Conservation Act and the conservation requirements in landscape planning.

121. In **Finland**, the importance of the maintenance of biodiversity has been included in the constitution, which states that responsibility for the environment and wildlife, for their diversity and for our cultural heritage is shared by all. Furthermore, forest biodiversity is one of the priority areas in the Finnish Government's Programme for Sustainable Development, in the National Action Plan for Biodiversity in Finland and in the Finland's National Forest Programme (2010). The Forest Biodiversity Programme for Southern Finland (2003-2007) addresses specifically forest biodiversity. The implementation reports of the National Action Plan (1997-1999, 2000-2001) for Biodiversity in Finland stresses the importance of integration of biodiversity into all sectors in society. In order to monitor the implementation of the National Action Plan and the CBD, the Ministry of the Environment has set up a broad based monitoring group, along with two expert groups covering the sustainable use, and research, monitoring and information systems. Current legislation requirements for taking biodiversity conservation and sustainable use into consideration are important, as the renewal of the Water Act, the Penal Code, and the Genetic Technological Act. In addition, the Land Use and Building Act highlights the importance of integrating transport planning and land use planning.

122. In the **Islamic Republic of Iran**, some programmes and projects are in place under different governmental organizations. Some of these national initiatives are: national forests, rangelands and environment regulations; establishment of a specialized environmental court; a five year national development programme; a master plan for the National Protection Area Network.

123. **Ireland** indicated that biodiversity conservation and sustainable use was integrated into the forest sector through an ecosystem approach, which integrates forestry with agricultural, sustainable and rural development. The Irish National Forest Standard has defined criteria and indicators for sustainable forest management. Moreover, the Irish National Biodiversity Strategies and Action Plans, pays special attention to the need for integrating biodiversity conservation and sustainable use into all relevant sectors.

124. **Poland** pointed out that its current structure of forest management promotes a bottom-up approach, which aims at cross-sectoral harmonization of forests with relevant sectors, such as agriculture, environment, energy, transport, and spatial planning. The Poland National Forest Programme, recently initiated, establishes links to relevant programmes and strategies. **Sri Lanka** reported that its wildlife and forest sectors directly addressed biodiversity and sustainable use in their relevant policies and there was a growing tendency of recognizing this in other sectoral policies as well. **Switzerland** indicated that its national forest programme contains a number of objectives and activities related to biodiversity conservation and sustainable use.

3. Activities to develop good governance practices, review and revision of and implementation of forest and forest-related laws, tenure and planning systems, in order to provide a sound basis for conservation and sustainable use of forest biodiversity

125. **Austria**, **China**, **Denmark, Finland, Germany, Islamic Republic of Iran, Ireland, Morocco, Poland, Sweden, Switzerland** and **United Kingdom** developed good governance practices, reviewed and revised and implemented forest and forest-related laws, tenure and planning systems, to provide a sound basis for conservation and sustainable use of forest biodiversity. In **Sri Lanka,** there has been a considerable re-orientation in policy adopted by the Forest Department over the years. **Colombia** indicated lack of economic resources and institutional instability (particularly at the local level), as the main constraints to the development of good institutional and socio-economic reforms. **Turkey** is in the

process of conducting a review in which, so far, it is determined that there is a need to formulate new nature conservation laws that will be in sink with related EU laws.

4. Activities to promote forest law enforcement and addressing related trade

126. Denmark**, Finland, Ireland,** and **Switzerland** have comprehensive measures in place to strengthen forest law enforcement and address related trade; **Austria**, **China**, Germany, **Islamic Republic of Iran**, **Morocco, Myanmar, Poland**, **Sri Lanka** and **United Kingdom** have some measures in place, and **Estonia** as well as **Sweden** have identified potential measures.

127. In **Denmark** and **Germany**, at the national level, forest law enforcement is not considered to pose a serious problem. In terms of international trade, they are working to ensure the provenance of imported wood from legal sources within the scope of CITES regulations, by supporting voluntary independent forest certification. Similarly, **Colombia** promoted the inclusion of *Cedrella odorata* in CITES Appendix III, and the compilation of a Red Book of particularly threaten species.

5. Activities to mitigate the economic failures and distortions that lead to decisions that result in loss of forest biodiversity

128. **Austria, Islamic Republic of Iran, Sri Lanka,** and **Turkey** indicated that reviews were underway. **Estonia, Myanmar,** and **Sweden** indicated that some measures have been identified. **Finland** reported that financial support is now only granted for renovation ditching and remedial fertilization, but support is needed for forest ditching, and forest fertilization. **Denmark** indicated that perverse incentives such as drainage subsidies have been abandoned.

129. **Austria**, **China**, **Germany**, **Ireland** and **Poland** have programmes in place to promote forest conservation, and to counteract the cost-revenue squeeze observable for many forests. Incentives are provided by direct payments, tax rebates and grant aid schemes.

130. **Estonia** has schemes in place to provide market incentives for the use of sustainable practices and to develop alternative income generation programmes for local communities. **Germany** encourages voluntary independent forest certification.

131. **Austria** and **Germany** noted the role of non-monetary forest benefits and values. **Austria** noted that such values have not been integrated in national accounting systems yet. **Germany** mentioned recent enquiries on public values of ecological forests and of several non-market goods and services, as a basis for further deliberations on how to reduce economic failures and distortions.

6. Activities to increase public support and understanding of the value of forest biodiversity and its goods and services at all levels

132. **Austria**, **China**, **Estonia**, **Germany, Islamic Republic of Iran**, **Ireland**, **Morocco, Myanmar, Sweden, Switzerland** and **Turkey** are increasing public support and understanding of the value of forest biodiversity. **Denmark** is establishing and developing several activities, such as capacity building of nature guides, and outdoor facilities for education on forest biodiversity in state and private forests. In **Finland,** comprehensive sets of programmes are in place.

133. In **Germany**, the value of forest biodiversity is addressed in public awareness programmes, including *inter alia* the *Länder* Forest Administrations, large-scale protected areas such as biosphere reserves, national parks, and governmental ministries such as the Federal Ministry for the Environment, the Ministry for Nature Conservation and Nuclear Safety, as well as the Federal Ministry for Consumer Protection, Food and Agriculture. The extension services offered to private forest owners by local forest

authorities also represent an important tool in promoting the understanding of and support for concerns regarding the conservation and sustainable use of biodiverity.

134. In **Poland,** there are some Promotional Forests Complexes as a place for implementing protection on a deep scale and, in accordance with the Convention on Biological Diversity for reconciling economic and conservationist goals – preserving all the organisms occurring in the forests and especially supporting those that, for different reasons, have the greatest value. These include species and biocenoses along with their habitats that are protected by law or deserve legal protection. Simultaneously, Promotional Forests Complexes plays an important role in the process of shaping awareness on the aims of sustainable forest management. Additionally, the Forest Culture Centre in Gołuchów and the Forest Education Centre in Rogów play an important role in ecological education conducted by State Forests.

135. In **Sri Lanka**, the Biodiversity Conservation Action Plan is the framework for action; it contains the strategy for biodiversity conservation, identifying different sectors of biodiversity as separate chapters. The issues of these sectors were identified and for each, relevant recommendations were given. Revision of the Biodiversity Conservation Action Plan will incorporate relevant policies into sectoral activities and institutions identified.

D. Programme element 3. Knowledge, assessment and monitoring

1. Activities to review and adopt a minimum forest classification system, based on harmonized and accepted forest definitions and addressing key forest biodiversity elements

136. The responses of several Parties are ambiguous, with respect to forest definitions; forest biodiversity elements do not clearly fit into the adoption of a forest classification system (**Austria**, **Estonia**, **Islamic Republic of Iran, Ireland**, **Sweden** and **Switzerland**). Three Parties are still reviewing their forest classification systems (**Denmark**, **Poland**, and **Sri Lanka**) or results are not yet available (**China**). **Finland** remarked that the question refers to the review and adaptation of harmonized *global* or *regional* forest classification system; therefore, all proposed activities should be implemented with international collaboration, and not only by individual countries. **Germany** requests clarification of the term "minimum classification system". A forest classification system addressing key forest biodiversity elements is reported to be in place in **Colombia**. **Austria, Estonia, Ireland, Morocco, Sweden, Switzerland, Turkey** and **United Kingdom** have adopted a system of forest classification based on harmonized and accepted forest definitions and addressing key forest biodiversity elements. In addition, Morocco's classification system is founded on the physical make-up of the forests and the predominant elements.

2. Activities to develop national forest ecosystem classification systems and maps that use agreed international standards and protocols

137. Less than half the Parties have classification systems in place (**Austria**, **China**, **Estonia**, **Finland**, **Morocco, Sweden** and **Switzerland**), while the remaining countries are in early (**Colombia, Denmark**, **Islamic Republic of Iran, Myanmar, Poland**, **Sri Lanka, Turkey,** and **United Kingdom**) or advanced (**Ireland**) stages of development. No internationally agreed national forest ecosystem classification systems are in place in **Germany**.

3. Activities to develop specific forest ecosystems surveys in priority areas for conservation and sustainable use of forest biodiversity

138. **Austria** mentioned the establishment of natural forest reserves, but there are few direct responses with regard to ongoing surveys (**Denmark**, **Finland, Islamic Republic of Iran, Estonia**, **Poland**, **Sri Lanka**) and to surveys, which are part of long-term monitoring (**Ireland**). **China,** in the past, completed

many surveys, as well as **Estonia**, **Poland**, **Sri Lanka**, **Sweden** and **Switzerland**. **Germany** requests clarification of the expression "specific forest ecosystem surveys". Several Parties participate since 1988 in the European Network of Permanent Sample Plots for Monitoring of Forest Ecosystems.

4. Activities to advance the development and implementation of international, regional and national criteria and indicators based on key regional, subregional and national measures within the framework of sustainable forest management

139. Several Parties (**Austria, Denmark, Estonia, Finland, Germany, Ireland, Poland,** and **Switzerland**) mention the Pan-European guidelines for sustainable forest management and monitoring programmes of the Ministerial Conferences on the Protection of Forests in Europe (MCPFE) as guiding the development of national indicators. The aforementioned Parties contributed to the development at Pan-European level as well as improving and adapting them to nationally relevant guidelines.

140. In addition, **Finland** revised and further developed some Finnish criteria and indicators: representatives from 13 different organizations such as ministries, research organizations, forest industries, forest owners, universities and non-governmental environmental organizations took part in this work, which was finalized at the beginning of 2001, when the report "The State of Forests in Finland 2000 - Criteria and Indicators for Sustainable Forest Management in Finland" was published.

141. **China** mentioned a national goal of increasing the extent of protected forest areas. Relevant programmes are being developed by **Sri Lanka**. In **Colombia**, the project "Application and evaluation of Criteria and Indicators for sustainable forest management" (1998 to 2002) was conducted with the support of the International Organization of Tropical Wood (ITTO).

5. Activities on key research programmes on the role of forest biodiversity and ecosystem functioning

142. **China, Finland** and **Sweden** have conducted comprehensive research programmes on the role of forest biodiversity and ecosystem functioning. **Austria**, **Germany**, **Islamic Republic of Iran**, **Ireland**, **Morocco, Myanmar**, **Sri Lanka, Switzerland** and the **United Kingdom** have only conducted some research. **Germany** cited two modular project examples, on forest biological diversity, funded by the Federal Ministry of Consumer Protection, Food and Agriculture (cf. question 20), as well as the research programme "Forest management of the future" funded by the Federal Ministry of Education and Research (1998-2003), which aims to investigate the consequences of the transformation of managed forests according to ecological criteria. **Denmark**, **Estonia, Poland** and **Turkey** have research programmes under development.

6. Activities to enhance and improve the technical capacity at the national level to monitor forest biodiversity, benefiting from the opportunities offered through the Clearing House Mechanism of CBD

143. **China** has a National Clearing House for Biodiversity Information and it has developed databases and information networks on biodiversity. The Chinese Academy of Science and its institutions have developed over 50 databases of biodiversity mainly including databases of: species inventory, rare endangered species, specimens, ecosystems, taxonomical code, crop germplasm resources and an external information exchange network of germplasm. Departments of environmental protection, forestry, and oceanography have developed environment database systems, such as forestry and oceanography database systems. The development and use of these databases promotes the cooperation in science and technology between China and other countries and furthers technology communication and transfer. There is a concern that departments currently separate Chinese databases and database systems. In addition, there is a need for conformity and standardization for precision functioning of database systems.

144. **Estonia** has improved the technical capacity at the national level *inter alia* to monitor forest biodiversity, because of GEF funded project (GF/2716-01-4354), including "Assessment of Capacity building needs for Biodiversity and Participation in Clearing House Mechanism".

145. In **Finland** activities related to forest biodiversity were included in the following development cooperation projects and programmes:

(a) East Usambara Conservation Area Management Programme, Tanzania (1990-2003);

(b) Creation of national strategy for biodiversity in the Amazon region, including biodiversity database (SIAMAZONIA) support to sustainable management of Allpahuayo-Mishana Reserve (2003);

(c) Cooperation in forest conservation and sustainable development in Brazil, the creation, trial and dissemination of a replicable model of sustainable development for nature conservation (2003);

(d) Forest corridors, an alternative approach for the Golden Lion Tamarin habitat restoration in Brazil (2002);

(e) Project of participative management and conservation of biodiversity in Ecuador, Conservation of biodiversity at the Alto Choco Biological Reserve's mountain cloud forests area (2002-2003);

(f) Development and support project for the Itatiaia National Park in Brazil, to improve and develop the park to receive nature-tourism in ecologically sustainable way and to renovate the surrounding areas of the park and promote environmental protection (2002-2003).

146. In **Germany**, capacity for monitoring the forest biological diversity is considered to be adequate in terms of both access to technical equipment and availability of trained specialists. Limiting factors are seen with respect to financial resources; as a result, the need to coordinate existing monitoring activities is carried out by different players on varying geographical scales (in individual protected areas).

147. In **Ireland**, at present, they are conducting an audit of the Irish National Forest Standard to include biodiversity criteria. Other research programmes are also in place. In **Poland**, numerous groups of scientific experts, representing not only the forestry but also other sectors, are taking part in the process of improving the monitoring of forest biodiversity. The work will result in the elaboration of the Forest Code, which will include general principles and directions of forest development as well as conditions of sustainable forest management and monitoring.

148. **Sweden** has some programmes in place, such as the Swedish National Forest Inventory, which describes the changes and current state of forest resources. All types of land are included in the survey but the most detailed information concerns forestland. Around 25 % of the key habitats are known in Sweden. The Woodland Key Habitat survey is a concept that is widely recognized as a practical instrument for conservation within the Swedish forest sector. These habitats are areas where red-listed animals and plants exist, or could be expected to exist. The term represents various forest types, for example, old fire-influenced pine wood, hillsides, swamps with spruce and black alder, old and mature broadleaf trees and wooded pastures. The concept has also been included in different forest certification standards.

149. In **Switzerland**, the Swiss Agency for the Environment, Forests and Landscape has launched a programme for this purpose called Biodiversity Monitoring in Switzerland. In conjunction with the Biodiversity Monitoring programme, experts contracted by the Federal Government will regularly count animals and plants in numerous predetermined areas in the field.

Annex I

FORMAT FOR A VOLUNTARY REPORT ON IMPLEMENTATION OF THE EXPANDED PROGRAMME OF WORK ON FOREST BIODIVERSITY

1. Has your country identified priority goals, objectives and activities included in the expanded programme of work for implementation at the national level?	
a) no (please specify the reasons)	
b) yes (please provide a list of priorities identified)	
Further comments on identification of priority goals, objectives and activities	
2. From the list of priorities, did some or all of them produce the expected impacts after their implementation (i.e. a success)?	
a) no (please specify the reasons)	
b) yes (please specify success stories)	
Further comments on impacts of implementation of priority activities	
3. Were there any challenges/impediments to the implementation of priority activities that could have negatively affected their chance of success?	
a) yes (please specify the activities and the main challenges/impediments)	
b) no	
Further comments on challenges/impediments to implementation of priority activities	
4. Is your country collaborating with other Governments and regional and international organizations and processes to implement regional or international activities in the expanded programme of work?	
a) no	
b) yes, limited collaboration (please provide details)	
c) yes, significant collaboration (please provide details)	
Further comments on collaboration with other Governments and regional and international organizations and processes to implement regional or international activities in the expanded programme of work	

Programme Element 1: Conservation, Sustainable Use and Benefit-sharing

5. Has your country developed practical methods, guidelines and/or indicators to apply the ecosystem approach in relation to sustainable forest management?	
a) no (please specify the reasons)	
b) relevant methods, guidelines and indicators under development	
c) some methods, guidelines and indicators developed (please provide details)	
d) a comprehensive set of methods, guidelines and indicators developed (please provide details)	
Further comments on the practical methods, guidelines and indicators to apply the ecosystem approach in relation to sustainable forest management	
6. Has your country taken any measures to prevent the introduction of invasive alien species that threaten ecosystems, and mitigate their negative impacts on forest biodiversity in accordance with international law?	
a) no	
b) relevant measures under development	
c) yes, some measures taken (please outline the measures)	
d) yes, comprehensive measures taken (please outline the measures)	
Further comments on the measures taken	
7. Has your country taken any measures to mitigate the impact of pollution on forest biodiversity?	
a) no	
b) under consideration	
c) relevant measures under development	
d) yes, some measures taken (please provide details)	
e) yes, comprehensive measures taken (please provide details)	
Further comments on the measures taken to mitigate the impact of pollution on forest biodiversity	
8. Has your country taken any measures to mitigate the negative impacts of climate change on forest biodiversity?	
a) no	
b) relevant research and monitoring programmes under development	
c) some research and monitoring activities being undertaken but no measures taken	
d) yes, some measures taken (please outline the measures)	
e) yes, comprehensive measures taken (please outline the measures)	

Further comments on the measures taken to mitigate the negative impacts of climate change on forest biodiversity	
9. Has your country taken any measures to prevent and mitigate the adverse effects of forest fires and fire suppression (where fire is a natural disturbance agent)?	
a) no	
b) relevant measures being considered	
c) relevant measures under development	
d) yes, some measures undertaken (please specify)	
e) yes, many measures being undertaken (please specify)	
Further comments on the measures to prevent and mitigate the adverse effects of forest fires and fire suppression	
10. Is your country mitigating effects of the loss of natural disturbances necessary to maintain biodiversity in regions where these no longer occur?	
a) no	
b) monitoring and assessment of effects ongoing	
c) potential measures identified	
d) yes, some adopted and being implemented (please provide details)	
e) yes, comprehensive measures adopted and being implemented (please provide further details)	
Further comments on measures adopted to mitigate effects of the loss of natural disturbances necessary to maintain biodiversity in regions where these no longer occur	
11. Is your country preventing and mitigating losses of forest biodiversity due to fragmentation and conversion to other land uses?	
a) no	
b) potential measures identified	
c) yes, some measures undertaken	
b) yes, comprehensive measures undertaken	
12. Is your country restoring forest biological diversity in degraded secondary forests and in forests established on former forestlands and other landscapes?	
a) no	
b) potential measures identified	
c) yes, some measures implemented in some areas (please provide details)	
d) yes, comprehensive measures implemented in major areas (please provide details)	

Further comments on the measures to restore forest biological diversity in degraded secondary forests and in forests established on former forestlands and other landscapes	
13. Is your country promoting forest management practices that further the conservation of endemic and threatened species?	
a) no	
b) relevant forest management practices under development	
c) yes, some practices adopted and promoted (please provide details)	
d) yes, some practices being implemented (please provide details)	
Further comments on the forest management practices that further the conservation of endemic and threatened species	
14. Is your country ensuring adequate and effective protected forest area networks?	
a) no	
b) networks of protected areas being planned	
c) some protected areas established but networks not in place	
d) networks of protected areas taking shape	
e) major networks of protected areas established	
15. Is your country promoting sustainable use of forest resources to enhance the conservation of forest biological diversity?	
a) no	
b) relevant policy and programme under development	
c) yes, some policies and programmes in place (please provide details)	
d) yes, comprehensive policies and programmes in place (please provide details)	
Further comments on the policies and programmes for promoting sustainable use of forest resources to enhance the conservation of forest biodiversity	
16. Is your country preventing losses caused by unsustainable harvesting of timber and non-timber forest resources?	
a) no	
b) potential measures identified	
c) some measures undertaken (please provide details)	
d) comprehensive measures undertaken (please provide details)	
Further comments on the measures to prevent losses caused by unsustainable harvesting of timber and non-timbering forest resources	

17. Is your country taking any measure to enable indigenous and local communities to develop and implement adaptive community-management systems to conserve and sustainably use forest biological diversity?	
a) no	
b) not applicable	
c) relevant policy and programme under development	
d) yes, some policies and programmes in place (please specify)	
Further comments on the policies and programmes to enable indigenous and local communities to develop and implement adaptive community-management systems to conserve and sustainably use forest biological diversity	
18. Has your country developed effective and equitable information systems and strategies and promoted implementation of those strategies for *in situ* and *ex situ* conservation and sustainable use of forest genetic diversity?	
a) no	
b) relevant information system and strategy under development	
c) relevant information system in place	
d) relevant strategies in place (please provide details)	
e) relevant information system and strategies in place (please provide details)	
Further comments on the strategies for *in situ* and *ex situ* conservation and sustainable use of forest genetic diversity	
19. Is your country promoting the fair and equitable sharing of benefits resulting from the utilization of forest genetic resources and associated traditional knowledge?	
a) no	
b) relevant policies and programmes under development	
c) some policies and programmes in place (please specify)	
d) comprehensive policies and programmes in place (please specify)	
Further comments on the policies and programmes for promoting the fair and equitable sharing of benefits resulting from the utilization of forest genetic resources and associated traditional knowledge	

Programme Element 2: Institutional and Socio-economic Enabling Environment

20. Is your country improving the understanding of the various causes of forest biodiversity losses?	
a) no	
b) a limited analysis being undertaken	
c) a thorough analysis being undertaken	
d) yes, some analyses completed and results available (please outline some findings from these analyses)	
e) yes, comprehensive analysis completed and results available (please provide some findings from these analyses)	
Further comments on the analysis of the various causes of forest biodiversity losses	
21. Has your country integrated biodiversity conservation and sustainable use into forest and other sector policies and programmes?	
a) no	
b) under consideration	
c) yes, integrated into policies and programmes in some sectors (please provide details)	
d) yes, integrated into policies and programmes in major sectors (please provide details)	
Further comments on the integration of biodiversity conservation and sustainable use into forest and other sector policies and programmes	
22. Has your country developed good governance practices, reviewed and revised and implemented forest and forest-related laws, tenure and planning systems, to provide a sound basis for conservation and sustainable use of forest biodiversity?	
a) no	
b) review under way	
c) review and revision completed	
d) some good governance practices and related laws developed and implemented (please provide details)	
e) a comprehensive set of practices and laws developed and implemented (please provide details)	
Further comments on the practices and laws developed and implemented to provide a sound basis for conservation and sustainable use of forest biodiversity	
23. Is your country promoting forest law enforcement and addressing related trade?	
a) no	

b) review under way	
c) potential measures identified	
d) yes, some measures in place to strengthen law enforcement and address related trade	
e) yes, comprehensive measures in place to strengthen law enforcement and address related trade	
24. Is your country mitigating the economic failures and distortions that lead to decisions that result in loss of forest biodiversity?	
a) no	
b) review under way	
c) potential measures identified	
d) yes, some measures taken (please provide details)	
e) yes, comprehensive measures taken (please provide details)	
Further comments on the measures taken to mitigate economic failures and distortions that lead to decisions that result in loss of forest biodiversity	
25. Is your country increasing public support and understanding of the value of forest biodiversity and its goods and services at all levels?	
a) no	
b) relevant programme under development	
c) yes, some programmes in place	
d) yes, comprehensive programmes in place	

Programme Element 3: Knowledge, Assessment and Monitoring

26. Has your country reviewed and adopted a minimum forest classification system, based on harmonized and accepted forest definitions and addressing key forest biodiversity elements?	
a) no	
b) review under way	
c) review completed	
d) a forest classification system adopted	
27. Has your country developed national forest ecosystem classification systems and maps that use agreed international standards and protocols?	
a) no	
b) early stages of development	
c) advanced stages of development	
d) yes, classification systems in place	

28. Has your country developed specific forest ecosystems surveys in priority areas for conservation and sustainable use of forest biodiversity?	
a) no	
b) under consideration	
c) relevant surveys being planned	
d) relevant surveys completed (please provide details)	
e) results of relevant surveys available (please provide details)	
Further comments on the surveys of specific forest ecosystems in priority areas for conservation and sustainable use of forest biodiversity	
29. Is your country advancing the development and implementation of international, regional and national criteria and indicators based on key regional, subregional and national measures within the framework of sustainable forest management?	
a) no	
b) relevant programme under development	
c) some criteria and indicators developed (please provide details)	
d) comprehensive indicators developed (please provide details)	
Further comments on the development and implementation of criteria and indicators	
30. Has your country conducted key research programmes on the role of forest biodiversity and ecosystem functioning?	
a) no	
b) research programs under development	
c) yes, some research programs conducted	
d) yes, comprehensive research programs conducted	
31. Is your country enhancing and improving the technical capacity at the national level to monitor forest biodiversity, benefiting from the opportunities offered through the Clearing House Mechanism of CBD?	
a) no	
b) capacity building programme under development	
c) yes, some programmes in place (please provide details)	
d) yes, comprehensive programmes in place (please provide details)	
Further comments on the programmes to enhance and improve the technical capacity at the national level to monitor forest biodiversity	

Annex II

ABBREVIATIONS AND ACRONYMS

AFD	French Development Agency
CBD	Convention on Biological Diversity
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
COP 6	Conference of the Parties to the Convention on Biological Diversity at its sixth meeting
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
GEF	Global Environment Facility
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit GmbH – German Agency for Technical Cooperation
ICRAF	International Centre for Research in Agroforestry
IUCN	World Conservation Union
IFF	Intergovernmental Forum on Forests
IPF	Intergovernmental Panel on Forests
IPGRI	International Plant Genetic Resources Institute
ITTO	International Tropical Timber Organization
IUFRO	International Union of Forest Research Organizations
MCPFE	Ministerial Conference on the Protection of Forests in Europe
OECD	Organisation for Economic Co-operation and Development
PEBLDS	Pan-European Biological and Landscape Diversity Strategy
SBSTTA	Subsidiary Body on Scientific, Technical and Technology Advice
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
UNFCC	Untied Nations Framework Convention on Climate Change
UNFF	United Nations Forum on Forests
WWF	World Wide Fund for Nature
