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SCIENTIFIC, TECHNICAL AND TECHNOLOGICAL ADVICE ON FOREST
BIOLOGICAL DIVERSITY, TAKING ACCOUNT OF RESEARCH
AND TECHNICAL PRIORITIES PREVIOUSLY IDENTIFIED

Draft programme of work for forest biological diversity

Note by the Executive Secretary

EXECUTIVE SUMMARY

1. In paragraph 6 of decision III/12, the Conference of the Parties requested the Executive Secretary to develop a focused work programme for forest biological diversity, identified the elements for such a work programme and determined its initial focus.
2. In order to be able to draw effectively upon the active assistance of all Parties, as requested in paragraph 7 of the decision, the Executive Secretary established a roster of experts on forest biological diversity, based on names submitted by Governments. A meeting of a liaison group on forest biological diversity, the participants of which were drawn from the roster, was held in Helsinki from 25 to 28 May 1997, on the invitation of the Government of Finland. The report of the meeting is contained in document UNEP/CBD/SBSTTA/3/Inf.5.
3. On the basis of the identified elements for a work programme, as proposed by the working groups at the meeting of the liaison group (see annex III to document UNEP/CBD/SBSTTA/3/Inf.5), and of the substantive comments that the secretariat of the Intergovernmental Panel on Forests and other relevant institutions and organizations have provided during the

* UNEP/CBD/SBSTTA/3/1.

process of developing this draft work programme, the Executive Secretary proposes that the focused programme of work called for in paragraph 6 of decision III/12 be based upon the following five elements:

- (a) Defining the ecosystem approach to forest biological diversity;
- (b) Identifying the conditions for implementing Article 6 (b) of the Convention in respect of the conservation and sustainable use of forest biological diversity;
- (c) Identifying and implementing criteria and indicator frameworks for forest biological diversity;
- (d) Identifying research and information needs and mechanisms for the conservation and sustainable use of forest biological diversity and the fair and equitable sharing of the benefits arising out of the utilization of forest genetic resources;
- (e) Identifying best practices and approaches for sustainable forest management in regard to forest biological diversity.

4. Consideration of traditional systems of conservation and sustainable use of forest biological diversity and the wider application of such knowledge in accordance with Article 8 (j) and other related provisions of the Convention should be included as an integral component of each of these five programme elements.

5. In accordance with paragraph 9 of decision III/12, the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) is requested to contribute advice on the draft programme of work and to report back to the fourth meeting of the Conference of the Parties.

6. The proposed work programme takes account of the outcome of the Ad Hoc Intergovernmental Panel on Forests (IPF) and seeks to complement and not duplicate, its work, in accordance with paragraph 6 of decision III/12. In addition, the proposed work programme takes account of paragraph 10 of decision III/12, in which the SBSTTA is also directed, in light of the proposed work programme and taking account of the research and technical priorities already identified in its recommendation II/8, to advance its scientific, technical, and technological consideration of forest biological diversity by initially focusing on the synthesis and development of scientific information in the following research areas:

- (a) Methodologies necessary to advance the elaboration and implementation of criteria and indicators for the conservation of biological diversity as part of sustainable forest management;
- (b) Scientific analysis of the ways in which human activities, in particular forest management practices, influence biological diversity and the assessment of ways to minimize or mitigate negative influences.

7. The Conference of the Parties also requested SBSTTA to bear in mind for possible future action, inter alia, the remaining forest research priority items listed in its recommendation II/8.

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DRAFT PROGRAMME OF WORK FOR FOREST BIOLOGICAL DIVERSITY

INTRODUCTION

8. Forests are the most biologically diverse terrestrial ecosystems. Although still rich in both absolute and relative terms, the biological diversity of all types of forests has been diminished by the impacts of human societies. Those impacts are greater now than at any time in human history and they are still increasing. They are eroding contemporary forest biological diversity and challenging the processes which maintain it in forest communities and their constituent populations.

9. Forest biological diversity is shaped by complex interactions between the physical environment, the biology of forest systems and populations and the influences of individuals and societies. A work programme for forest biological diversity under the Convention on Biological Diversity must recognize these forces and their interdependencies.

The main direct causes of forest ecosystem loss and fragmentation include:

(a) Habitat transformation, including: conversion to agricultural systems; urban settlements; extractive industries such as energy and mining projects; military activities; and uses related to the production and trafficking of narcotics;

(b) Pollution, including long range transboundary pollution and pollution caused by management practices, e.g., pesticide use;

(c) Forest management practices that are not consistent with Convention on Biological Diversity objectives;

(d) Species introduction, whereby non-native species outcompete native species;

(e) Natural disasters, including forest fires; and

(f) Wind and water erosion leading to loss of soil fertility.

I. FRAMEWORK FOR A FOCUSED WORK PROGRAMME FOR
FOREST BIOLOGICAL DIVERSITY

Table 1

Elements and outputs of a work programme for forest biological diversity

ELEMENTS	OUTPUTS
1. Defining the ecosystem approach to forest biological diversity	<ul style="list-style-type: none"> • Definitions, development and harmonization of terminology • Guidelines • Principles
2. Identifying the conditions for implementing Article 6 (b) of the Convention, i.e., the integration of forest biodiversity considerations into relevant sectoral and cross-sectoral planning	Legislative, administrative or policy measures using direct regulation, market or information-based instruments.
3. Formulating and implementing criteria and indicators of forest biological diversity	<ul style="list-style-type: none"> • Definitions • Agreed global framework • Guidelines • Programme and mechanism for development • Formal links with other criteria and indicators processes
4. Identifying research and information needs and mechanisms	<ul style="list-style-type: none"> • Mechanisms to promote access to available information • Identification of unmet needs • Guidelines for effective biodiversity information systems • Research on sustainable forest management techniques of particular importance to forest biodiversity
5. Identifying best practices and approaches in relation to forest biological diversity	<ul style="list-style-type: none"> • Techniques and technologies • Silvicultural practices • Partnership agreements • Transfer of sound technologies • Equitable sharing of benefits • Sustainable use of components of forest biological diversity

A. General considerations

10. Consideration of traditional systems of the conservation and sustainable use of forest biological diversity and the wider application of such knowledge in accordance with Article 8 (j) and other related provisions of the Convention should be included as an integral component of each of these five programme elements.

11. In accordance with paragraphs 6 (a) and 6 (c) of decision III/12, the work programme should also take into account and complement the outcome of IPF and other forest-related forums. In order to facilitate this, the relevant IPF proposals for action are highlighted in boxes under each of the elements. In this context, reference is also made to the submission by the IPF secretariat to the meeting of the liaison group on forest biological diversity (see annex IV to document UNEP/CBD/SBSTTA/3/Inf.5).

12. To facilitate an effective and coordinated response from the United Nations system for the implementation of those IPF proposals for action directed at international organizations, the informal Interagency Task Force on Forests (ITFF) ^{1/} has prepared an implementation plan, entitled "Interagency Partnership on Forests: Implementation of IPF Proposals for Action by the ITFF". The secretariat of the Convention on Biological Diversity is a member of ITFF and the lead agency for programme element I.3 (traditional forest-related knowledge). ^{2/}

13. The special session of the United Nations General Assembly established an ad hoc, open-ended Intergovernmental Forum on Forests under the Commission on Sustainable Development. It is expected that the first session of the Forum will take place before the end of 1997, to elaborate its terms of reference and to decide on organizational matters. In implementing the proposed programme of work on forest biological diversity under the Convention, the Executive Secretary will work closely with the Intergovernmental Forum on Forests and its secretariat.

B. The ecosystem approach

14. Parties to the Convention have agreed that the ecosystem approach should be the primary framework of action to be taken under the Convention (decision II/8, paragraph 1) and that sustainable forest management should take an ecosystem approach and aim at securing forest quality (decision II/9, Annex, paragraph 12).

^{1/} ITFF comprises the Food and Agriculture Organization of the United Nations (FAO), the United Nations Development Programme (UNDP), the United Nations Environment Programme (UNEP), the International Tropical Timber Organization (ITTO), the World Bank, the Department for Policy Coordination and Sustainable Development and the secretariat of the Convention on Biological Diversity.

^{2/} IPF conclusions paragraphs 34-39; IPF proposals for action: paragraph 40 (a) - (q).

15. An ecosystem approach emphasizes the complexity and interdependencies of biological communities and their dependencies on the abiotic site-specific (edaphic) factors. Furthermore, the concept introduces the importance of natural disturbance regimes and regeneration mechanisms as factors involved in the maintenance of biological diversity over large landscapes. Finally, an ecological perspective notes the spatial organization of communities and ecosystems as life-zones, formations, ecoregions, biogeographic zones or realms, and biomes.

16. The importance of applying the ecosystem approach in the sustainable management of forests at the national, regional and global level is further emphasized by the fact that it is through the sustainable management of all types of forests, natural, semi-natural and plantations, particularly those outside reserves, that most in situ conservation of forest biological diversity will be realized. One important aspect of this, as identified by SBSTTA, will be the advancement of scientific and technical approaches to rehabilitating degraded and deforested ecosystems and to enriching biodiversity in forest plantations.

IPF conclusions: paragraphs 15 and 25

C. Implementation of Article 6 (b)

17. According to article 6 (b) of the Convention, each Contracting Party shall, in accordance with its particular conditions and capabilities, "integrate, as far as possible and as appropriate, the conservation and sustainable use of biological diversity into relevant sectoral or cross-sectoral plans, programmes and policies".

18. For the implementation of the provisions of Article 6 (b) in respect of forest biological diversity, countries that have not already begun to do so will need to establish linkages in order to promote integration of the conservation and sustainable use of biological diversity into the development and implementation of relevant sectoral and cross-sectoral plans, programmes and policies. To be effective, this will require coordination among all stakeholders 3/ in order to promote the necessary levels of participation 4/ in the development and implementation of plans, programmes and policies.

3/ The term "stakeholder" is taken to mean those affected by the outcome (positively or negatively) or those who can affect the outcome of the development and implementation of such plans, programmes and policies.

4/ "Participation" is taken to mean more than information sharing (where the views of stakeholders may be sought, but may not influence outcomes) or consultation (which may entail the negotiation of views, but where decision-making power remains restricted). Participation presumes a collaborative partnership in the design and implementation of plans, programmes and policies arising out of early involvement and "ownership" of the process by all relevant stakeholders.

19. In order to ensure the incorporation of traditional systems of the conservation and sustainable use of forest biological diversity into relevant sectoral and cross-sectoral plans, programmes and policies, there is also a particular need to develop national legislation and strategies for the implementation of Article 8 (j) in close collaboration and consultation with representatives of indigenous and local communities.

20. The integration of forest biological diversity considerations into relevant sectoral or cross-sectoral plans, programmes and policies through an open and participatory process will assist countries to identify the underlying causes of biodiversity loss, as well as policies that have positive effects. In this respect, Parties should bear in mind the decisions adopted concerning incentive measures, in particular paragraphs 3 and 4 of decision III/18 and paragraph 9 (b) of decision III/9.

21. Work should be undertaken to provide further guidance to countries on the efficacy - according to different circumstances - of legislative, administrative or policy instruments such as direct regulations (directives, standards, bans, permits, zoning, quotas and use restrictions), market-based instruments (economic instruments, voluntary agreements, certification, life-cycle analysis approaches and joint implementation) and information-based instruments (information extension, education, training and social pressure).

IPF conclusions: paragraphs 9, 10, 14, 18, 21, 22, 24, 25, 44 and 45.

D. Criteria and indicators

22. Criteria and indicators are required to assess forest biological diversity in order to make possible the collection of information necessary for the identification of problems, the setting of priorities and the formulation of appropriate action.

23. In order to be an effective tool for the implementation of the Convention on Biological Diversity criteria and indicators for forest biological diversity must capture the true state of forest biodiversity, adequately characterize the pressures and processes which affect forest biodiversity, and also indicate the response of forest biological diversity to those pressures and processes. Failure of criteria and indicators adequately to capture the true state of biodiversity will render it impossible to generate corrective measures to ameliorate problems before it is too late. To be effective it is essential that criteria and indicator frameworks are appropriate to national circumstances and applied at the appropriate level. Hence, ecological indicators of the state of forest biodiversity should be applied at the ecosystem level, whilst indicators that relate to legislative framework and capacity building are appropriately applied at the national level.

24. The liaison group examined the biodiversity components of the criteria and indicators for sustainable forest management that are being proposed, and in some cases implemented, under the six regional processes. In the opinion of the group, the scope of these is too wide for the purposes of the Convention on Biological Diversity, since their focus is much wider than

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biodiversity. The consideration of forest biodiversity in these processes is also at a very general level, and the application of forest biological criteria and indicators is on an inappropriate scale.

IPF conclusions: paragraphs 25, 80, 83, 85, 106, 107, 109 and 114

E. Research and information needs and mechanisms

25. The growing recognition over time of national and subnational responsibility for forest management and forest genetic resources has led to the development of different institutional structures to promote cooperation and information exchange between agencies and individuals, in support of national programmes. These structures comprise many mechanisms, formal and informal, bilateral and multilateral, inside and outside Governments. Some have specific responsibilities in relation to forest biological diversity, whereas for others this role is implicit within a broader mandate.

26. Such institutional structures already promote, facilitate and support cooperation in research, training, education and the exchange of information relevant to forest biological diversity and thus assist the implementation of Articles 12, 13, 17 and 18 of the Convention. Not all of these institutions and processes are well provided with resources, however. In many cases it is a lack, not of institutional structures, but of adequate and effective support for those which already exist, which most limits cooperation in research, training, education and the exchange of information relevant to the conservation and sustainable use of forest biological diversity.

27. Support is needed to national and regional research systems to promote increased interdisciplinary and collaborative research, as is cooperation in the development of technologies for the conservation and sustainable use of biological diversity and for the sharing of benefits.

28. In this context, research into traditional management systems and their relationship to forest biological diversity conservation is a priority and should be undertaken through partnerships between the holders of traditional knowledge and practitioners of "formal" science in which both sides respect and learn from the other. An element of the work programme is the development of guidelines for such collaborative research.

29. Important first steps for research are the identification of critical ecosystems for forest biological diversity conservation and the identification of traditional institutions, practices and user groups. Case studies of traditional systems have been conducted, yet further steps are needed - for example, the investigation and monitoring of the impacts of these systems on forest biological diversity and the wider application of systems supportive of conservation and sustainable use. Wider dissemination of such studies and of their application is generally lacking at the national and local levels. The establishment of appropriate research and extension centres for traditional knowledge will help promote the necessary applied research, information dissemination, monitoring and evaluation.

IPF conclusions: paragraphs 18, 38, 49, 76, 80, 81, 91, 92, 93, 95 and 96

F. Best practices and approaches for forest biological diversity

30. Forests provide multiple benefits: forest goods, both wood and non-wood; ecological services; and other non-market benefits. Not all of these are easy to quantify and undervaluation of these benefits impedes sustainable forest management. To assist the conservation and sustainable use of the components of forest biological diversity in all types of forests, further work needs to be undertaken to identify best practices for the sustainable use of different components of biological diversity and for different types of forests. This will necessitate both research and dissemination activities and involve partnerships of national authorities, forest owners, forest dwellers and managers of forest industries of all types.

31. Both traditional and modern management regimes for forests have been based on the principle of sustainable use, characterized by regulation of the level of harvest to the productive capacity of the forest. While, since the eighteenth century, "scientific" forestry has focused principally on the "sustained yield" of wood products, traditional management regimes have been concerned with a much broader range of, primarily, non-timber forest products. More recently, modern forestry has explicitly acknowledged the importance of ecosystem function and process to maintaining productivity and has sought to develop more holistic approaches to ecosystem management. Many countries are witnessing the growth of non-timber-based forest industries, including non-timber forest products and tourism.

32. Priority should be given to a scientific analysis of the ways in which human activities, in particular forest management practices, influence biological diversity, and to an assessment of ways to minimize or mitigate negative influences. Such analysis should incorporate traditional forest management systems and practices and should focus on means and measures for the development and transfer of environmentally sound silvicultural techniques, technologies and practices.

IPF conclusions: paragraphs 21, 22, 24, 25, 34, 74 and 75

II. PROPOSAL FOR A FOCUSED THREE-YEAR WORK PROGRAMME FOR
FOREST BIOLOGICAL DIVERSITY

33. Having considered the recommendations of the meeting of the liaison group on forest biological diversity, together with the substantive comments provided by the secretariat of IPF and by other relevant institutions and organizations, the Executive Secretary proposes a focused programme of work for forest biological diversity, as called for in paragraph 6 of decision III/12, which consists of priority activities identified under the five elements below.

34. In accordance with paragraph 11 of decision III/24, estimates of the likely costs of the recommendations contained in the proposed work programme on forest biological diversity have been included for each of the elements. (It should be noted that the staffing of the secretariat, as approved in decision III/24, does not include a specialist in forest biological diversity

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and in order adequately to manage the work programme the establishment of such a position (Programme Officer P-4) may need to be considered by the Conference of the Parties at its fourth meeting).

Programme element 1. Defining the ecosystem approach to forest biological diversity

35. In order to define the ecosystem approach to forest biological diversity and to be able to identify means of implementing the concept in the management of all types of forests, an integrated approach based on the following components is required:

(a) Definition of the ecosystem approach, in light of the objectives of the Convention and relevant decisions of the Conference of the Parties;

(b) Incorporation of traditional knowledge of, and practices which impact on, forest biological diversity;

(c) Development of methodologies for the assessment of ecological landscapes, the integration of protected areas in the ecosystem approach to sustainable forest management and the representativity and adequacy of protected areas networks;

(d) Development of methodologies for assessing forest ecosystem fragmentation and population viability, including mitigation options such as corridors and buffer zones;

(e) Assessment of methodologies available for conservation and sustainable use of forest resources which improve the long-term persistence of genetic variability within and between the populations of forest species.

IPF proposals for action

36. The Panel's proposals for action relevant to this programme element are those contained in paragraphs 17 (a), 46 (c), 58 (b) (ii), (iii) and (v) and 94 (a) and (b) of its report on its fourth session (E/CN.17/1997/12).

Ways and means

37. The programme element may be implemented in the following manner:

(a) Through a liaison group drawing upon relevant expertise from international and regional organizations, including relevant research institutions, non-governmental organizations, indigenous and forest-based community organizations, and private sector organizations;

(b) Through collaboration with ITFF member lead agencies.

Outputs

38. The following outputs may be expected from the programme element:

(a) Principles, definitions and guidelines for applying the ecosystem approach to forest biological diversity;

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(b) Models of species population dynamics resulting from human interventions which will make possible the prediction of impacts;

(c) Development of methodologies for reporting on the distribution of fragile species;

(d) Development of habitat management options to maintain viable populations.

Estimated cost

39. Indicative costs of implementation of the programme element are estimated as follows:

(a) Coordination of the liaison group: telecommunication expenses, reproduction and dispatch of documentation. Indicative cost: US\$ 5,000 per annum;

(b) Meetings of the liaison group:

(i) If each participant pays his or her own way, then the costs to the budget of the Trust Fund are the travel and subsistence costs of secretariat participants. Indicative costs: range from zero (meeting at the seat of the secretariat) to US\$ 5,000 (three-day meeting involving intercontinental travel) per secretariat participant per meeting;

(ii) If the Trust Fund covers the cost of participation of members of the liaison group. Indicative cost: US\$ 100,000, per meeting;

(c) Expert workshop, if required. Indicative cost: US\$ 100,000-300,000 (depending on venue, duration, number of participants and languages).

Programme element 2. Identifying the conditions for implementing Article 6 (b) of the Convention

40. In accordance with decisions II/17 and III/9, the first national reports by Parties will focus on the measures taken for the implementation of Article 6 of the Convention. These reports are to be submitted no later than 1 January 1998 and will be considered by the Conference of the Parties at its fourth meeting. At the fourth meeting, the Conference of the Parties will determine the intervals and form of subsequent national reports.

41. In decision II/7, the Conference of the Parties requested the financial mechanism to facilitate the implementation of Articles 6 and 8 of the Convention by providing financial resources to developing country Parties. Through biodiversity-enabling activities the financial mechanism supports the development of national biodiversity strategies and actions plans in developing country Parties. At its fourth meeting, the Conference of the Parties will review the effectiveness of the financial mechanism. Developed country and other Parties are also establishing national biodiversity strategies and action plans.

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42. In decision III/14, the Conference of the Parties established an intersessional process to advance further work on the implementation of Article 8 (j) and related provisions, with a view to producing a report for consideration by the Conference of the Parties at its fourth meeting.

43. Consideration of the status of the implementation by Parties of Article 6 (b) and, in particular, evaluation of the lessons learned for the establishment of an enabling environment at the national level for the integration of forest biodiversity considerations into relevant sectoral and cross-sectoral plans, programmes and policies will thus best be undertaken in coordination with future work by the Conference of the Parties on the implementation of Articles 6 (b) and 8 (j) and related provisions, in the light of its review of the financial mechanism and any further guidance to the financial mechanism on this matter and in the light of ongoing work on incentive measures.

IPF proposals for action

44. The Panel's proposals for action relevant to this programme element are those contained in paragraphs 17 (a), (f) and (h), 29 (a), 30 (b), 31 (c), 40, 46 (a), (d) and (e) of its report on its fourth session (E/CN.17/1997/12).

Ways and means

45. The programme element may be implemented in the following manner:

(a) Following decisions to be adopted by the Conference of the Parties at its fourth meeting in the light of its review of the information contained in the first national reports and of its review of the effectiveness of the financial mechanism, continued coordination of activities between the secretariat, the secretariat of Global Environment Facility (GEF) and the GEF implementing agencies with a view to further assisting Parties with such information, financial resources and capacity-building assistance as might be required to implement Article 6 (b), with respect, in particular, to the integration of conservation of sustainable use of forest biological diversity into sectoral and cross-sectoral plans, programmes and policies;

(b) Through collaboration with ITFF member lead agencies;

(c) In the light of the consideration by the Conference of the Parties at its fourth meeting of the report from the intersessional process on the implementation of Article 8 (j), this element of the work programme on forest biological diversity will need to be coordinated with future work on the implementation of Article 8 (j) and related provisions.

Outputs

46. The following outputs may be expected from the programme element:

(a) Continued assistance to Parties in the implementation of Article 6;

(b) Further development and dissemination of analytical tools for decision-making;

(c) Further development and dissemination of guidelines for social assessment and stakeholder involvement;

(d) Coordinated approach to the implementation of Article 6 (b) in respect of forest biological diversity and the implementation of Article 8 (j) and related provisions.

Estimated cost

47. Indicative costs of implementation of the programme element are estimated as follows:

(a) Activities under this programme element will involve the financial resources and instruments, national reports and reviews, and clearing-house mechanism units of the secretariat. The budget for the Trust Fund to be adopted for the period after 1998 will thus need to reflect this and, at a minimum, retain the staffing levels provided for in decision III/24;

(b) Coordination of liaison activities involving the secretariat, the secretariat of GEF and the GEF implementing agencies: telecommunications, reproduction and despatch of documents, travel and subsistence expenses. Indicative cost: US\$ 20,000 per annum;

(c) Preparation and dissemination of methodologies and case studies on cross-sectoral planning, analytical tools for decision-making, and methodologies and techniques for social assessment and stakeholder analysis: considerable work has been undertaken by Implementing Agencies, research institutions and non-governmental organizations, and liaison can be undertaken at minimal cost between these and the clearing-house mechanism unit of the secretariat. There may, however, be benefits from the establishment of a liaison group. Indicative costs:

(i) Coordination activities: telecommunication expenses, reproduction and dispatch of documentation. Indicative cost: US\$ 5,000 per annum;

(ii) Meetings of a liaison group:

a. If each participant pays his or her own way, then the costs to the budget of the Trust Fund are the travel and subsistence costs of secretariat participants. Indicative costs: range from zero (meeting at the seat of the secretariat) to US\$ 5,000 (three-day meeting involving intercontinental travel) per secretariat participant per meeting;

b. If the Trust Fund covers the cost of participation of members of the liaison group. Indicative cost: US\$ 100.000 per meeting;

- (iii) Expert workshop, if required: US\$ 100,000-300,000 (depending on the venue, duration, number of participants and languages).

It is assumed that expenses deriving from coordinating work under this programme element with any future programme of work on the implementation of Article 8 (j) and related provisions will be covered under the latter.

Programme element 3. Identifying and implementing criteria and indicators frameworks for forest biological diversity

48. In order to build upon existing national, regional and international criteria and indicators frameworks for sustainable forest management to provide appropriate criteria and indicators frameworks for forest biological diversity to support the objectives of the Convention, the following measures are proposed:

- (a) The definition and elaboration of key terminology for criteria and indicators frameworks for forest biological diversity within sustainable forest management, including the definition and elaboration of concepts relating to the scale of measurement:

- (i) National and regional approaches based on ecological and biogeographic classification systems; and
- (ii) Approaches based on socio-political regions;

- (b) The formulation of a global framework to promote consistency in national criteria and indicators frameworks for forest biodiversity, including criteria relating to the key aspects of conservation, sustainable use and benefit-sharing, in the light of the fact that appropriate indicators would be set at the national level;

- (c) The development of a set of guidelines for implementing forest biodiversity criteria and indicators at the levels of biogeographic and socio-political units;

- (d) The development of a programme for testing, evaluating and validating the effectiveness of such forest biological diversity criteria and indicator systems and processes, in order to assess, inter alia:

- (i) Which indicators are cost-effective and efficient in different forest types;
- (ii) Natural levels of variation in indicators over space and time;
- (iii) Possible thresholds/critical values;
- (iv) Whether the processes deliver valid and accurate information.

IPF proposals for action

49. The Panel's proposals for action relevant to this programme element are those contained in paragraphs 17 (d), 71 (b), 89, 104, 115, and 133 (d) (iii) of its report on its fourth session (E/CN.17/1997/12).

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Ways and means

50. The programme element may be implemented in the following manner:

(a) Through a liaison group comprising relevant international and regional organizations, including the secretariats of the different forest criteria and indicators processes; through the establishment of collaborative links; and, as appropriate, commissioned studies and/or workshops;

(b) Through collaboration with ITFF member lead agencies.

Outputs

51. The following output may be expected from the programme element: Set of definitions (and maps of the areas); agreed global framework; set of guidelines; agreed programme and mechanism for development; memoranda of understanding with other processes.

Estimated cost

52. Indicative costs of implementation of the programme element are estimated as follows:

(a) Coordination of work: telecommunication expenses, reproduction and dispatch of documentation. Indicative cost: US\$ 5,000 per annum;

(b) Meetings of a liaison group:

(i) If each participant pays his or her own way, then the costs to the budget of Trust Fund as the travel and subsistence costs of secretariat participants. Indicative costs: range from zero (meeting at the seat of the secretariat) to US\$ 5,000 (three-day meeting involving intercontinental travel) per secretariat participant per meeting;

(ii) If the Trust Fund covers the cost of participation to the meeting then the indicative cost could rise to US\$ 100,000 per meeting;

(c) Expert workshop, if required. Indicative cost: US\$ 100,000-300,000 (depending on the venue, duration, number of participants and languages).

Programme element 4. Identifying research and information needs and mechanisms

53. Under this programme element (and in coordination with such future work on the implementation of Article 8 (j) and related provisions as the Conference of the Parties may determine at its fourth meeting), attention will be given to improved collaborative research and to increased international coordination of funding for research, capacity-building and dissemination, especially in the fields of conservation and sustainable use of forest biological diversity; collaborative research on questions related

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to benefit sharing involving the holders of traditional knowledge; case studies, field testing and monitoring of traditional practices; and intellectual property rights.

IPF proposals for action

54. The Panel's proposals for action relevant to this programme element are those contained in paragraphs 17 (g), 31 (a) and (c), 40, 71, 78 (c), 89 (c), 94 (a) (b) and (c) and 104 (a) (b) and (c) of its report on its fourth session (E/CN.17/1997/12).

Ways and means

55. The programme element may be implemented in the following manner:

(a) Through a liaison group comprising representatives of the implementing agencies, multilateral and bilateral donor agencies and relevant international and regional research institutions and organizations, possibly leading to a technical workshop with donor agencies;

(b) Through collaboration with ITFF member lead agencies.

Outputs

56. The following outputs may be expected from the programme element:

(a) Identification of research priorities and current gaps;

(b) Assessment of funding needs;

(c) Improved access to available information;

(d) Guidelines for effective forest biodiversity information systems

Estimated costs

57. Indicative costs of implementation of the programme element are estimated as follows:

(a) Coordination of work: telecommunication expenses, reproduction and dispatch of documentation. Indicative cost: US\$ 5,000 per annum;

(b) Meetings of liaison group:

(i) If each participant pays his or her own way, then costs to budget of Trust Fund is the travel and subsistence costs of secretariat participants. Indicative costs: range from zero (meeting at the seat of the secretariat) to US\$ 5,000 (three-day meeting involving intercontinental travel) per secretariat participant per meeting;

(ii) If the Trust Fund covers the cost of participation in the meeting, then the indicative cost could rise to US\$ 100,000 per meeting;

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- (iii) Technical workshop, if required. Indicative cost: costs should be borne by donor agencies. If not, cost to the Trust Fund of US\$ 100,000-300,000 (depending on the venue, duration, number of participants and languages).

Programme element 5. Identifying best practices and approaches in relation to forest biological diversity

58. Work needs to be undertaken to identify best practices for the sustainable use of the components of biological diversity in all types of forests, involving research, dissemination and building collaborative partnerships. These should incorporate traditional forest management systems and practices and should focus on means and measures for the development and transfer of environmentally sound silvicultural techniques, technologies and practices.

59. This involves, inter alia, identifying means to enhance collaboration with the private sector in research, cooperation, and technology development and transfer, including innovative approaches to encouraging private sector involvement in non-consumptive forest services research, participatory management in private sector operations and assessing intellectual property rights in the development and transfer of technology.

60. In accordance with the ecosystem approach to be developed under programme element 1 above, forest management practices based upon site and region-specific ecological concepts, such as ecological and biogeographic classification systems, natural disturbance regimes and regeneration mechanisms, edaphic factors and biotic interactions, should be assessed and developed.

IPF proposals for action

61. The Panel's proposals for action relevant to this programme element are those contained in paragraphs 17 (a) and (g), 29 (a), 30 (b), 31 (a) and (c), 40 (a), 58 (b) (ii) and (iii), 69 (d), 71, 77, 78, 104, 131 and 132 of its report on its fourth session (E/CN.17/1997/12).

Ways and means

62. The programme element may be implemented through a liaison group, comprising ITFF members, private sector organizations, international and regional research institutions and non-governmental organizations:

- (a) To assist the Secretariat to identify data and case studies for dissemination through the clearing-house mechanism; and

- (b) To identify the need for the development of guidelines for best practice according to type of forest and to different forest industries and to advise on options for dissemination and capacity-building for Governments, forest owners and managers of forest industries, possibly through regional technical workshops and other means.

Outputs

63. The following outputs may be expected from the programme element:

- (a) Development and transfer of silvicultural techniques, technologies and practices that take biological diversity into account;
- (b) Development and dissemination of guidelines on best practice;
- (c) Identification of relevant technologies that could be transferred in accordance with the provisions of the Convention.

Estimated cost

64. Indicative costs of implementation of the programme element are estimated as follows:

- (a) Coordination of the liaison group: telecommunication expenses, reproduction and dispatch of documentation. Indicative cost: US\$ 5,000 per annum;
- (b) Meetings of the liaison group:
 - (i) If each participant pays his or her own way, then the costs to the budget of the Trust Fund are the travel and subsistence costs of secretariat participants. Indicative costs: range from zero (meeting at the seat of the secretariat) to US\$ 5,000 (three-day meeting plus intercontinental travel) per person per meeting;
 - (ii) If the Trust Fund covers the cost of participation of members of the liaison group. Indicative cost: US\$ 100,000 per meeting;
- (c) Expert workshop, if required. Indicative cost: US\$ 100,000-300,000 (depending on the venue, duration, number of participants and languages).

Table 2

Summary of programme elements and budget implications

PROGRAMME ELEMENT	TIME	WAYS AND MEANS	BUDGET (US dollars)
General	1998 onwards	Specialist programme officer	\$120,000 p.a.
1. Ecosystem approach	1998-2000	liaison groups	(a) \$5,000 p.a. (coordination) (b) zero to \$5,000 per meeting (c) \$100,000-\$300,000 per expert meeting
2. Implementing Article 6 (b)	1998-2000	to be coordinated with future work on the implementation of Articles 6 and 8 (j)	
3. Criteria and indicators	1998-2000	liaison group	(a) \$5,000 p.a. (coordination) (b) zero to \$5,000 per meeting (c) \$100,000-\$300,000 per technical workshop
4. Research and information	1998-2000	liaison group technical workshop	(a) \$5,000 p.a. (coordination) (b) zero to \$5,000 per meeting (c) \$100,000-\$300,000
5. Best practice	1998-2000	liaison group regional technical workshops	(a) \$5,000 p.a. (coordination) (b) zero to \$5,000 per meeting (c) \$100,000-\$300,000 per technical workshop

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III. RECOMMENDATION

65. In accordance with paragraph 9 of decision III/12, SBSTTA is requested to contribute advice on this draft programme of work and to report back to the fourth meeting of the Conference of the Parties.

66. SBSTTA is also directed, in the light of the proposed work programme and taking account of the research and technical priorities already identified in its recommendation II/8, to advance its scientific, technical, and technological consideration of forest biological diversity by initially focusing on the synthesis and development of scientific information in the following research areas:

(a) Methodologies necessary to advance the elaboration and implementation of criteria and indicators for the conservation of biological diversity as part of sustainable forest management;

(b) Scientific analysis of the ways in which human activities, in particular forest management practices, influence biological diversity and an assessment of ways to minimize or mitigate negative influences.

67. The Conference of the Parties also requested SBSTTA to bear in mind for possible future action, inter alia, the remaining forest research priority items listed in its recommendation II/8.

68. SBSTTA may also wish to provide advice on appropriate synergies and collaborative action between the Convention and relevant institutions, processes and programmes in order to implement the proposed work programme.
