

COP 4 Decision IV/4

Bratislava, 4 - 15 May 1998

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(para. 1, 4 to 5, 8, 10, and annex 1 retired)



Status and trends of the biological diversity of inland water ecosystems and options for conservation and sustainable use

The Conference of the Parties,

1. Adopts, on the basis of modified recommendation III/1 of the Subsidiary Body on Scientific, Technical and Technological Advice as contained in document UNEP/CBD/COP/4/2, annex I to the present decision as a work programme under the Convention on Biological Diversity, on the biological diversity of inland water ecosystems and the associated matters of identification and monitoring, assessment methodology and taxonomy;
2. Welcomes the recommendations on strategic approaches to freshwater management of the Commission on Sustainable Development at its sixth session and urges Parties and Governments to:
 - (a) Include information on the biological diversity of inland waters when providing voluntary national communications and reports on actions further to the recommendations of the Commission on Sustainable Development; and
 - (b) Consider inland water biological diversity in the agenda of subsequent meetings held to further the recommendations of the Commission on Sustainable Development.
3. Urges Parties and Governments to include inland water biological diversity considerations in their participation and collaboration with organisations, institutions and conventions affecting or working with inland water resources, consistent with the guidance provided to the Conference of the Parties and the Executive Secretary in part A "General", paragraphs 1-3 of annex I to the present decision;
4. Encourages the implementation of the Joint Work Plan with the Convention on Wetlands in document UNEP/CBD/COP/4/Inf.8, as recommended by the Conference of the Parties in its decision III/21 and by the Subsidiary Body on Scientific, Technical and Technological Advice in recommendation III/1, part A, section I, paragraph (b) and endorsed by the Conference of the Parties at its fourth meeting as a framework for enhanced cooperation between the Conventions through decision IV/15;
5. Urges Parties and Governments to integrate those elements highlighted by the Subsidiary Body on Scientific, Technical and Technological Advice as important for Parties, contained in annex I, sections A, B, C and D, to the present decision (respectively concerning inland water ecosystems, identification and monitoring, methodologies for assessment and taxonomy), as appropriate, into their national and sectoral plans and to implement these as soon as possible;

6. Recognizing that Global Environment Facility projects are country-driven, requests the Financial Mechanism, within the context of implementing national biological diversity strategies and action plans, to provide adequate and timely support to eligible projects which help Parties to develop and implement national, sectoral and cross-sectoral plans for the conservation and sustainable use of biological diversity of inland water ecosystems.

7. Urges Parties when requesting support, for projects related to inland water ecosystems, from the Financial Mechanism that priority be given to:

- (a) Identifying inland water ecosystems in accordance with Article 7 and Annex I to the Convention, taking into account the criteria for Wetlands of International Importance as adopted under the Convention on Wetlands;
- (b) Preparing and implementing integrated watershed, catchment and river basin management plans based on an ecosystem approach including transboundary watersheds, catchments and river basins, and those which include ecosystems identified under subparagraph (a) above;
- (c) Investigating where appropriate, the processes contributing to the loss of biological diversity of inland water ecosystems, through targeted research, such as: investigations into the impacts of harmful substances, alien invasive species and saltwater intrusions; and the identification of measures needed to address these issues where they constitute threats to inland water ecosystem biological diversity;

8. Requests the Subsidiary Body on Scientific, Technical and Technological Advice to:

- (a) Implement the programme of work respecting the relevant tasks described in annexes I and II to the present decision, taking into account the decisions adopted at the fourth meeting of the Conference of the Parties and the schedule as contained in annex II to the present decision, subject to amending the time schedule so as to immediately commence development of regional guidelines for rapid assessment for small island States, and to report on progress to the Conference of the Parties at its fifth meeting;
- (b) Incorporate, as appropriate, the outcome of the sixth session of the Commission on Sustainable Development on strategic approaches to freshwater management into its work plan and report back thereon to the Conference of the Parties at its fifth meeting;
- (c) Continue to take note of the approved work programme and results, and pursue opportunities for cooperation with, the Scientific and Technical Review Panel of the Convention on Wetlands

9. Invites all relevant organizations to support efforts by Parties and Governments to implement their national and sectoral plans for the conservation and sustainable use of the biological diversity of inland water ecosystems;

10. Requests the Executive Secretary to facilitate the programme of work outlined in the present decision, including in its annexes I and II; including implementation of the tasks outlined for the Executive Secretary in paragraphs 1, 2 and 4 of annex I to the present decision, and additionally, in particular, to begin compiling information and case studies for use by the Subsidiary Body on Scientific, Technical and Technological Advice in addressing paragraphs 8 (a) and (c) of annex I to the

present decision.

11. Notes that, while the implementation of the programme of work is subject to the availability of financial resources, particular attention should be given to early progress in the development of rapid assessment methodologies especially related to small island States.

Annex I

BIOLOGICAL DIVERSITY OF INLAND WATER ECOSYSTEMS

The Conference of the Parties,

Recalling that decision III/13 of the Conference of the Parties requested the Subsidiary Body on Scientific, Technical and Technological Advice to provide the fourth meeting of the Conference of the Parties with scientific, technical and technological advice on the status and trends of biological diversity in inland water ecosystems and the identification of options for conservation and sustainable use,

Having examined the Notes prepared by the Executive Secretary (UNEP/CBD/COP/4/2, UNEP/CBD/COP/4/4 and UNEP/CBD/COP/4/Inf.8); and the other information provided to the fourth meeting of the Conference of the Parties,

Recognizing the importance of inland water ecosystems for global biological diversity and human welfare, and also their vulnerability to human actions,

Recognizing the importance of adopting an ecosystem approach that integrates the conservation and sustainable use of biological diversity and the fair and equitable sharing of benefits of inland waters,

Recognizing the link between human communities, inland waters and biological diversity of inland waters and the importance of local community participation and awareness in achieving conservation and sustainable use of inland water biological diversity, and

Recognizing the crucial part played by technical and scientific cooperation in all aspects of biological diversity, including the transfer of technology, and recognizing also the necessity of capacity-building to enable Parties to carry out identification, monitoring and assessment of biological diversity as required by Article 7 of the Convention,

Adopts the following programme of work:

A. Assessment of the status and trends of the biological diversity of inland water ecosystems and identification of options for conservation and sustainable use

1. General

1. The Executive Secretary should continue and further develop the collaboration with organizations, institutions, and conventions working with research, management and conservation of inland water biological diversity. These include (but are not limited to) the Convention on Wetlands, FAO, the

International Center for Living Aquatic Resources Management (ICLARM), Global Water Partnership, World Water Council, UNDP, UNEP, DIVERSITAS, Wetlands International, IUCN, World Bank, Bonn Convention, et al.

2. The Executive Secretary of this Convention and the Secretary-General of the Convention on Wetlands are encouraged to elaborate a work plan that ensures cooperation, and avoids overlap between the two conventions, noting the Memorandum of Cooperation with the Convention on Wetlands, and decision III/21 of the Conference of the Parties, whereby the Convention on Wetlands would be a lead partner in inland water ecosystems.
3. The Conference of the Parties wishes to continue the close cooperation with the Commission on Sustainable Development in its development of the Strategic Approach to Freshwater Management to ensure that biological diversity issues are considered in this process.
4. The Conference of the Parties requests the Executive Secretary to develop a roster of experts on the conservation and sustainable use of the biological diversity of inland waters, and urge Governments to nominate experts to the roster, noting also that the Ramsar Bureau is establishing a similar list of experts.
5. The clearing-house mechanism should be used to promote and facilitate the exchange of information and the transfer of technology relevant to the conservation and sustainable use of inland water biological diversity.
6. Recognizing the immediate threats to the inland water ecosystems and associated biological diversity of small island States, the Conference of the Parties requests the Executive Secretary and the Subsidiary Body on Scientific, Technical and Technological Advice to pay special attention to early cooperation with the small island States in the development of rapid-assessment methodologies.
7. Recognizing that in the territories of certain States there are inland water ecosystems suffering from ecological disaster, the Conference of the Parties requests the Executive Secretary and the Subsidiary Body on Scientific, Technical and Technological Advice to pay special attention to early cooperation in assessing such disasters and mitigating activities and in developing rapid assessment methodologies within these States.

2. Work plan of the Subsidiary Body on Scientific, Technical and Technological Advice

8. A work plan for the Subsidiary Body on Scientific, Technical and Technological Advice should be developed in cooperation with relevant organizations, Governments and Parties that should build upon the ongoing efforts in inland water ecosystem conservation. The work plan should include:

Status and trends:

- (a) Using existing information and drawing upon relevant organizations and experts, develop an improved picture of inland water biological diversity, its uses and its threats, around the world. The output should identify areas where the lack of information severely limits the quality of assessments. This will help to focus attention on these areas;
- (b) Developing and disseminating regional guidelines for rapid assessment of inland water

biological diversity for different types of inland water ecosystems;

Conservation and sustainable use:

(c) Compiling case studies of watershed, catchment and river basin management experiences and best practices, to synthesize the lessons that emerge from these studies, and to disseminate information through the clearing-house and other appropriate mechanisms. Areas where the Subsidiary Body on Scientific, Technical and Technological Advice should concentrate its efforts include:

- (i) Examples of watershed management that incorporate inland water biological diversity with special reference to examples that use the ecosystem-based approach to meet water management goals;
- (ii) Examples of water resource development projects (water supply and sanitation, irrigation, hydropower, flood control, navigation, groundwater extraction) that incorporate biological diversity considerations;
- (iii) Impact assessment and other methodologies that address inland water biological diversity issues in an adaptive management framework;
- (iv) Case studies of successful remedial action, including restoration and rehabilitation of degraded inland water ecosystems;
- (v) Examples of equitable sharing of benefits derived from use of inland water biological diversity;
- (vi) Examples of the impacts of invasive alien species and of programmes used to control their introduction and mitigate negative consequences on inland water ecosystems especially at the watershed, catchment and river basin level;
- (vii) Use of protected areas and their management strategies for conservation and sustainable use of inland water ecosystems;

(d) Developing methods and techniques for the valuation of goods and services of inland water ecosystems, incentives and policy reform, and the understanding of ecosystem function.

3. Recommendations to Parties

9. The Conference of the Parties recommends that Parties:

(a) Watershed management:

- (i) Encourage the adoption of integrated land and watershed management approaches based on watersheds, catchments and river basins for the protection, use, planning and management of inland water ecosystems;
- (ii) Encourage the adoption of integrated watershed, catchment and river basin management strategies to maintain, restore or improve the quality and supply of inland water resources and the economic, social, hydrological, biological diversity and other functions and values of inland water ecosystems;

(b) Appropriate technologies:

- (i) Encourage the use of low-cost (appropriate) technology, non-structural and innovative

approaches to meet watershed management goals, such as using wetlands to improve water quality, using forests and wetlands to recharge groundwater and maintain the hydrological cycle, to protect water supplies and using natural floodplains to prevent flood damage, and to use indigenous species for aquaculture;

(ii) Encourage the development of preventative strategies such as cleaner production, continual environmental improvement, corporate environmental reporting, product stewardship and environmentally sound technologies to avoid degradation and promote restoration of inland water ecosystems;

(c) Technology transfer: Emphasize more effective conservation and efficiency in water use, together with non-engineering solutions. Environmentally appropriate technologies should be identified, such as low-cost sewage treatment and recycling of industrial water to assist in the conservation and sustainable use of inland waters;

(d) Research: Encourage research on the application of the ecosystem approach;

(e) Monitoring and assessment:

(i) Identify the most cost-effective approaches and methods to describe the status, trends and threats of inland waters and indicate their condition in functional as well as species terms;

(ii) Promote the development of criteria and indicators for the evaluation of impact on inland water ecosystems from both physical infrastructure projects and watershed activities, including, *inter alia*, agriculture, forestry, mining and physical alteration, taking into consideration the natural variability of water conditions;

(iii) Initiate studies on ecological functions and services to improve understanding of effects of exploitation on non-target species;

(iv) Undertake assessments in such inland water ecosystems which may be regarded as important in accordance with the terms of Annex I of the Convention. Furthermore Parties should undertake assessments of threatened species and conduct inventories and impact assessments of alien species within their inland water ecosystems;

(f) Sustainable use:

(i) Encourage valuation of inland water biological diversity;

(ii) Produce and promote guidance on the sustainable use of inland waters to maintain biological diversity;

(iii) Support the conservation and sustainable use of inland water biological diversity through the establishment and implementation of appropriate legal, administrative and incentive measures;

(iv) Consider the use and/or establishment of gene banks for fish and other species;

(g) Environmental impact assessments:

(i) Encourage environmental impact assessments (EIAs) of water development projects, aquaculture, and watershed activities including agriculture, forestry, and mining. EIAs need to gather adequate biological data to document effects on biological diversity, provide predictions on the effects of alternative project scenarios on ecosystems and consider the valuation of the goods and services of potentially affected ecosystems, and test predictions with well-designed sampling schemes that can adequately distinguish the effects of anthropogenic activities from natural processes;

(ii) Encourage EIAs which assess the impacts, not only of individual proposed projects, but also the cumulative effects of existing and proposed developments on the watershed, catchment or river basin;

(h) Alien species, genotypes and genetically modified organisms. Raise awareness of the possible problems and costs associated with the deliberate or accidental introduction of alien species, genotypes and genetically modified organisms which adversely affect aquatic biological diversity, bearing in mind the activities relating to the development of a Protocol on Biosafety under the Convention. Policies and guidelines should be developed to prevent and control such introductions, and to rehabilitate sites where possible. This work should be coordinated with the cross-cutting work being addressed in the decision regarding the work of the Subsidiary Body on Scientific, Technical and Technological Advice on alien species (decision IV/1 C);

(i) Education and public awareness. Strengthen education and awareness programmes, recognizing that responsible environmental stewardship requires an informed public. Participatory-based management approaches are most effective when people are well informed of both the economic and environmental consequences of management. Inland waters provide both a challenge and an opportunity to educate the public and policy makers about the need to take an ecosystem-based approach to management. Environmental education should be built into school curricula and should emphasize integration using inland waters as a model subject to teach problem-solving;

(j) Collaboration with broader water resource community. Promote effective collaboration among ecologists, planners, engineers, and economists (both within countries and among countries) in the planning and implementation of development projects to better integrate inland water biological diversity with water resource development when considering projects likely to have an adverse impact on inland water ecosystems;

(k) Transboundary cooperation: Develop and maintain effective cooperation for sustainable management of transboundary watersheds, catchments, river basins and migratory species through appropriate mechanisms such as bilateral and multilateral agreements;

(l) Involvement of local and indigenous communities:

(i) Involve, as far as possible and appropriate, local and indigenous communities in the development of management plans and in projects that may affect inland water biological diversity;

(ii) Implement Article 8(j) as related to inland water biological diversity;

(iii) Encourage the involvement and participation of affected parties including end-users and communities in policy-making, planning and implementation;

(m) Economic and legal instruments:

(i) Review the range and effectiveness of national incentives, subsidies, regulations, and other relevant financial mechanisms which have the ability to affect inland water ecosystems, whether adversely or beneficially;

(ii) Redirect financial support measures which run counter to the objectives of the Convention regarding the biological diversity of inland waters;

(iii) Implement targeted incentive and regulatory measures that have positive impacts on the biological diversity of inland waters;

(iv) Develop the policy research capacity needed to inform the decision-making process in a multidisciplinary and sectorally integrated manner;

(v) At appropriate levels (regional, national, subnational and local), encourage the identification of stressed rivers, the allocation and reservation of water for ecosystem maintenance, and the maintenance of environmental flows as an integral component of appropriate legal, administrative and economic mechanisms;

4. Financing

10. Guidance should be provided to the Global Environment Facility regarding the importance of projects concerning inland water biological diversity. The GEF should be encouraged to consider the importance of inland water biological diversity in its other focal areas and should provide necessary funding for inland water biological diversity projects.

11. Ways should be considered for mobilizing financial resources from other sources.

B. Provision of scientific advice and further guidance to assist in the national elaboration of Annex I of the Convention (as pertaining to inland water ecosystems)

12. The Conference of the Parties advises Parties to prepare indicative lists of inland water ecosystems using the criteria set out in Annex I of the Convention. The Conference of the Parties requests the Executive Secretary to work closely with the Ramsar Bureau and further direct the Subsidiary Body on Scientific, Technical and Technological Advice to work jointly with the Scientific and Technical Review Panel of the Convention on Wetlands to achieve desirable convergence between approaches on criteria and classification of inland water ecosystems between the two Conventions.

13. Parties should take note of the work of the IUCN as well as its recommendations in the ongoing review and application of criteria for the assessment of threatened species and populations, including the further development of such criteria for application at the regional and national levels.

C. Review of methodologies for assessment of biological diversity (as pertaining to inland water

ecosystems)

14. Parties are urged to adopt an integrated approach in their assessment, management and where possible remedial action of inland water ecosystems, including associated terrestrial and inshore marine ecosystems. Assessments should involve all stakeholders, should be cross-sectoral and should make full use of indigenous knowledge.

15. Suitable organisms should be identified as being particularly important in the assessment of inland water ecosystems. Ideally, such groups should meet the following criteria:

- (a) The group should contain a reasonable number of species with varied ecological requirements;
- (b) The taxonomy of the group should be reasonably well understood;
- (c) The species should be easy to identify;
- (d) The group should be easy to sample or observe so that density - absolute or as indices - can be assessed, used objectively and treated statistically;
- (e) The group should serve as indicators of overall ecosystem health or indicators of development of a key threat to ecosystem health;

16. In view of the great economic importance of some groups (e.g. inland water fish species), and of the large gaps in taxonomic knowledge for many species, the Conference of the Parties considers this as a specific focus of the capacity-building in taxonomy recommended by the Subsidiary Body on Scientific, Technical and Technological Advice in its recommendation II/2 and endorsed by the Conference of the Parties in decision III/10.

17. The Conference of the Parties advises Parties and relevant international organizations that issues of biological diversity and subsistence use of fisheries should be more fully addressed in fisheries reporting as regards biological diversity and in fisheries management. In particular, species composition of total catch should be reported and the contribution that indigenous species make to capture fisheries should be reported separately.

18. The transboundary nature of many inland water ecosystems should be fully taken into account in assessments, and it may be appropriate for relevant regional and international bodies to contribute to such assessments.

19. In accordance with recommendation II/1 of the Subsidiary Body on Scientific, Technical and Technological Advice, endorsed by the Conference of the Parties in decision III/10, assessments should be simple, inexpensive, rapid and easy to use. Such rapid assessment programmes will never replace thorough inventories. The Conference of the Parties takes note of the need to evaluate specific rapid assessment programmes for inland water ecosystems currently under development.

20. Assessments should be carried out with a view to implementing other articles of the Convention and, in particular, to addressing the threats to inland water ecosystems within an appropriate framework such as that included in paragraphs 39-41 of document UNEP/CBD/COP/3/12. Of

particular importance is the undertaking of environmental impact assessments on biological diversity of development projects involving inland water ecosystems.

D. The urgency of needed action on taxonomy

21. The Executive Secretary is requested to take decisive action to advance the Global Taxonomy Initiative as detailed in decisions III/10 and IV/1 D, which should be implemented as soon as possible.

Annex II

Annex II

POSSIBLE TIME-FRAME OF A WORK PROGRAMME PERTAINING TO THE ACTIVITIES OF THE SUBSIDIARY BODY ON SCIENTIFIC, TECHNICAL AND TECHNOLOGICAL ADVICE

| Implication of the outcome of the sixth session of the Commission on Sustainable Development (CSD) | | | | | |
|--|------|--|--|-------------------------------|-------|
| Activities | Year | COP* | SBSTTA** | Secretariat | Other |
| Integration of the outcome of the sixth session of the Commission on Sustainable Development (CSD-6) | 1998 | Consideration of the outcome of the CSD-6 | Consideration of the follow-up of the CSD-6 and make recommendation to the COP | Possible follow-up activities | |
| | 1999 | Consideration of the recommendation of the Subsidiary Body on Scientific, Technical and Technological Advice | Possible follow-up activities | | |

| Status and trends | | | | | |
|--|-----------|---|---|--|---------------------------------|
| Activities | Year | COP | SBSTTA | Secretariat | Other |
| Using existing information and drawing upon relevant organizations and experts, develop an improved picture of inland water biological diversity, its uses and the threats to it, around the world. Identification of gap. | 1998 | Consideration of the recommendation of the SBSTTA | Consideration of ways and means for the activity | Preparation of proposal for the ways and means of the assessment | Establishing network of experts |
| | 1998-2002 | | Carrying out the activity | Assist the SBSTTA in carrying out the activity | Possible regional workshops |
| | 2002 | | Consideration of the outcome and make recommendation to the COP | | |
| | 2003 | | | | |

| Activities | Year | COP | SBSTTA | Secretariat | Other |
|--|-----------------------------------|--|--|--|-----------------------------|
| Develop regional guidelines for rapid assessment | 2002 2002-2004 2004 2005 | Consideration of the SBSTTA recommendation | Consideration of ways and means for the activity Development of regional guidelines Consideration of the regional guidelines and recommendation to the COP | Preparation of proposal for the ways and means for the development of regional guidelines Assist the SBSTTA in the development of regional guidelines | Possible regional workshops |

Conservation and sustainable use

| Activities | Year | COP | SBSTTA | Secretariat | Other |
|---|-------------------------------------|--|--|--|--|
| Compilation of case studies on conservation and sustainable use | 1998-2002 2002 2003 2003 - | Consideration of the SBSTTA recommendation | Consideration of case studies and make recommendation Activities may be continued | Compilation of case studies and make synthesis | Disseminate through the clearing-house mechanism |

| Activities | Year | COP | SBSTTA | Secretariat | Other |
|---|-----------------------------------|--|---|--|--|
| Development of methods and techniques for the valuation of goods and services of inland water ecosystems, incentives and policy reforms and understanding of ecosystem function | 2002 2002-2005 2005 2006 | Consideration of the SBSTTA recommendation | Consideration of ways and means for the activity Development of methods and techniques for the proposed topics Consideration of the methods and techniques for the proposed topics and make recommendation to the COP | Preparation of proposal for the development of methods and techniques for the proposed topics Assist the SBSTTA in the activity | Expert meetings / Liaison group meetings |

The national elaboration of Annex I of the Convention on Biological Diversity

| Activities | Year | Conference of the Parties | SBSTTA | Secretariat | Other |
|------------|------|---------------------------|--------|-------------|-------|
| | | | | | |

| | | | | | |
|--|---------------------------|--|--|--|--|
| Work closely with the Convention on Wetlands to achieve desirable convergence between approaches on criteria and classification of inland water ecosystems between the two Conventions | 1998-2001 2001 2002 | Consideration of the report of the Subsidiary Body on Scientific, Technical and Technological Advice | Work closely with the Scientific and Technical Review Panel of the Convention on Wetlands Consideration of the outcome and make report to the Conference of the Parties | Work closely with the Bureau of the Convention on Wetlands | |
|--|---------------------------|--|--|--|--|

| Urgency of needed action on taxonomy | | | | | |
|--------------------------------------|-----------|--|--|--|--------------------|
| Global Taxonomy Initiative | 1998-2001 | | | | Regional workshops |

* COP - Conference of the Parties.

** SBSTTA - Subsidiary Body of Scientific, Technical and Technological Advice.

Budget implication:

Studies for assessments: US\$ 300,000-500,000 per study

Scientific/technical meetings: US\$ 100,000-300,000 per meeting

The Secretariat will require a Programme Officer at P-4 level, specialized in the biological diversity of inland waters. The Secretariat will benefit from the services of a Junior Professional Officer (P-2) for this programme of work. However, as Junior Professional Officers are seconded by Governments, there will be no budget implications in this regard.