



Convention on Biological Diversity

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CONFERENCE OF THE PARTIES TO THE CONVENTION ON BIOLOGICAL DIVERSITY

Tenth meeting

Nagoya, Japan, 18-29 October 2010

Agenda item 5.1

DECISION ADOPTED BY THE CONFERENCE OF THE PARTIES TO THE CONVENTION ON BIOLOGICAL DIVERSITY AT ITS TENTH MEETING

X/28. Inland waters biodiversity

The Conference of the Parties,

1. *Notes with concern* that the rapidly increasing pressures from the drivers of change in inland water ecosystems, the overall continuing and accelerating rate of loss of the biodiversity of these ecosystems and of associated critical ecosystem services are already resulting in significant economic, social and environmental costs, which are projected to rapidly escalate. These services include water supply and the mitigation of hydrological extremes;

2. *Expresses its concern* that major anthropogenic changes are ongoing in the Earth's water cycle at the global, regional and local scales through direct water use and land-use change; that the limits of sustainability of both surface water and groundwater resources have already been reached or surpassed in many regions; that demands for water continue to increase; that these trends are becoming more pronounced in some areas through climate change; and that water-related stresses on biodiversity and ecosystem services are rapidly escalating;

3. *Stresses* that human societies rely on numerous services from inland water ecosystems and that biodiversity underpins those ecosystem services;

4. *Notes* that water is widely regarded to be the primary global natural resource challenge and a key natural resource link between the various Millennium Development Goals (MDGs) and biodiversity;

Implementation of the programme of work

5. *Notes with appreciation* the continuing value of national reports of the Parties to the Ramsar Convention on Wetlands in providing key information on the status and trends of inland water biodiversity and drivers of change, and *expresses its appreciation* for the inputs of the Secretariat and Scientific and Technical Review Panel of the Ramsar Convention on Wetlands into the in-depth review of the implementation of the programme of work on the biological diversity of inland water ecosystems;

6. *Concludes* that the programme of work on the biological diversity of inland water ecosystems remains a good framework for implementation of relevant activities but that implementation needs to be significantly enhanced through better coherence between land-use and water-use policies and

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activities, better incorporation of water issues into other programmes of work of the Convention, including with regards to water use and the management of riparian zones and habitats, and improved recognition of the relevance of inland water ecosystem services to human health, poverty reduction, sustainable development and climate change;

7. *Notes with concern* evidence that inland water ecosystems are particularly vulnerable to invasive alien species and *urges* Parties and other Governments to refer to the work on invasive alien species when implementing the programme of work on inland water ecosystems;

8. *Urges* Parties and other Governments to develop and implement national and regional action plans, strategic environmental assessments and to enforce existing legal measures in order to halt unsustainable use to promote the conservation and sustainable use of inland waters biodiversity especially to address inland waters over-extraction and fragmentation, including their impact on fisheries;

9. *Recalling* decision IX/19, paragraph 3, *alerts* Parties and other Governments of the continuing need to further strengthen relevant international cooperative arrangements for the management of inland watercourses and water-bodies consistent with Article 5 of the Convention;

10. *Urges* Parties, other Governments and relevant organizations to reinforce their efforts for the implementation of the programme of work on the biological diversity of inland water ecosystems, taking into account the relevant goals and Aichi Biodiversity Targets of the Strategic Plan for Biodiversity 2011-2020; and *encourages* Parties, other Governments and relevant organizations to reinforce capacity for the implementation of the programme of work, including institutional coordination, with particular emphasis on the contribution of the programme of work to the achievement of sustainable development, poverty alleviation and achieving the Millennium Development Goals by, *inter alia*:

(a) Enhancing coordination and collaboration between all sectors using water and other resources associated with inland water ecosystems to avoid negative impacts on biodiversity and ecosystem services;

(b) Further incorporating biodiversity considerations into integrated water resources management and related approaches and to consider the interactions between, and inter-connectivity of, the different ecosystems that regulate surface, groundwater and coastal water resources;

(c) Reinforcing their conservation efforts including, *inter alia*, expanding protected areas and ecological networks¹ for inland water biodiversity and through designating coherent and comprehensive networks of wetland areas within river basins for the Ramsar List of Wetlands of International Importance and through international cooperation in the management of inland water resources;

(d) Strengthening their ability to report on protected areas coverage of freshwater ecosystems, including in areas designated to protect terrestrial biodiversity;

(e) Enhancing efforts to address the drivers of inland water biodiversity degradation and loss by integrating biodiversity considerations, where appropriate, into decision-making by other sectors, for example, energy production, transport, agriculture, fisheries, industry, mining and tourism, and into regional development plans;

(f) Preventing alterations of water flows, including by direct human interventions and/or climate change, that are detrimental to biodiversity and ecosystem services;

(g) Preventing unsustainable use of groundwater;

(h) Rehabilitating and restoring degraded inland water ecosystems and their services;

¹ In the context of this programme of work, a generic term used in some countries and regions, as appropriate, to encompass the application of the ecosystem approach that integrates protected areas into broader land- and/or seascapes for effective conservation of biodiversity and sustainable use.

(i) Encouraging, as appropriate, the relevant users of land and water to improve the services provided by inland water ecosystems through schemes such as, *inter alia*, voluntary payments for ecosystem services;

(j) Ensuring the participation of relevant stakeholders in the management of inland waters in decision-making regarding policies and actions that involve the conservation and sustainable use of inland water ecosystems and contribute to the alleviation of poverty;

(k) Exploring opportunities to strengthen resource allocation for capacity-building for implementation, as might be justified by the economic benefits of improved inland water ecosystem management; and

(l) Ensuring that the connectivity of inland water ecosystems with terrestrial and marine ecosystems is maintained and where necessary restored, in order to adapt to the adverse impact of climate change and also to minimize the degradation of biodiversity;

11. *Invites* Parties, other Governments and relevant organizations to support programmes and activities at regional and national levels to address the drivers of loss of biodiversity of inland water ecosystems;

12. *Encourages* Parties and other Governments to take into full account inland water ecosystems and their values in their sectoral development plans and national accounting, as appropriate, and reporting systems;

13. *Recognizing* the importance of inland water ecosystems on islands, their often unique inland waters biodiversity and, in particular, their role in sustaining limited water supplies on islands, *urges* small island developing States, as appropriate, to give increased attention to the implementation of the programme of work;

14. *Recognizing* the importance of inland water ecosystems, such as, for example, oases in dry and sub-humid lands, *urges* relevant Parties and other relevant Governments, to ensure cross-referencing and coherence between the programmes of work on the biological diversity of inland water ecosystems and the biological diversity of dry and sub-humid lands (as per, *inter alia*, decision VII/4, paragraph 11);

15. *Recognizes* the rapidly urbanizing global population and the importance of water supplies to cities and *urges* Parties and other Governments to take measures to reduce the pressure of cities on inland water ecosystems and to strengthen attention to and support for urban authorities and other stakeholders to:

(a) Take measures to sustain the ability of ecosystems to supply sufficient water of appropriate quality thus contributing to, *inter alia*, water supply for urban areas; and

(b) To protect biodiversity and ecosystem services provided by urban and peri-urban wetlands under their jurisdiction, as a contribution to national efforts in implementing the programme of work on the biological diversity of inland water ecosystems;

16. *Notes* that there is a need to clarify the scope of, and inter-linkages between, the programmes of work of the Convention on the biological diversity of inland water ecosystems and the biological diversity of marine and coastal ecosystems in coastal areas, including regarding coverage of coastal wetlands under the Ramsar Convention on Wetlands, and *requests* the Executive Secretary and *invites* the Secretariat of the Ramsar Convention on Wetlands, subject to available resources, to undertake through the joint work plan between the two conventions an assessment of ways and means to address relevant inland water biodiversity needs in coastal areas and to report on this matter to the fifteenth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice;

17. *Encourages* Parties and other Governments, where appropriate, to ensure that their water allocation policies are based, *inter alia*, on the need to achieve the sustainable availability of water of

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adequate quantity and quality to support ecosystem functioning and the sustainable delivery of water-related or dependent ecosystem services;

18. *Requests* the Executive Secretary, in partnership with relevant organizations, including the Food and Agriculture Organization of the United Nations and the International Water Management Institute, to continue to investigate ways to reduce the negative impacts of agricultural water use and drainage on ecosystems and to enhance their ability to provide water for food production for present and future generations;

19. *Requests* the Executive Secretary, in consultation with the Secretariat and the Scientific and Technical Review Panel of the Ramsar Convention on Wetlands, and subject to available resources, to undertake an analysis of information in the fourth national reports to the Convention on Biological Diversity relevant to the status and trends of wetlands and drivers of change in wetlands, from all programme areas, and report the findings to the Scientific and Technical Review Panel and Secretariat of the Ramsar Convention on Wetlands in order to strengthen mutual information flow between the two conventions and in particular to inform, *inter alia*, the planned report on the state of the world's wetlands;

20. *Further requests* the Executive Secretary, and *invites* the Secretariat of the Ramsar Convention, to assess the status of implementation of the River Basin Initiative and to report on this matter for the information of a meeting of the Subsidiary Body on Scientific, Technical and Technological Advice prior to the eleventh meeting of the Conference of the Parties;

21. *Urges* Parties and other Governments to consider the need for joint implementation of elements of the programmes of work on the biological diversity of inland water ecosystems and of the biological diversity of marine and coastal ecosystems, taking into account the role of biodiversity in the water cycle;

Climate change

22. *Notes* the findings of the Intergovernmental Panel on Climate Change technical report *Climate Change and Water*, which concludes, *inter alia*, that the relationship between climate change and freshwater resources is a matter of primary concern as water quality and availability will be severely affected by climate change;

23. *Notes* that the carbon cycle and the water cycle are perhaps the two most important large-scale biogeological processes for life on Earth and that these two cycles are broadly linked;

24. *Notes* that inland water ecosystems are significant stores of carbon and that peatlands and other wetlands have very high carbon stocks, particularly below ground, as recognized in decision IX/16 D and in the report of the second Ad Hoc Technical Expert Group on Biodiversity and Climate Change,² which notes that peatlands and other wetlands store more carbon than the world's tropical forests;

25. *Urges* Parties and other Governments to:

(a) Recognize the prominence of changes occurring in the water cycle when considering the impacts of climate change on terrestrial, inland and coastal ecosystems and also therefore the importance of the role of the water-related services provided by ecosystems, in particular inland water ecosystems, in ecosystem-based adaptation to climate change;

(b) Ensure that their climate-change mitigation and adaptation activities are designed and implemented taking into account the needs and opportunities to sustain and/or enhance the services provided by inland water ecosystems and contribute, thereby, to the improvement of human well-being;

(c) Recognize the inter-dependence of the carbon and water cycles in their climate-change mitigation and adaptation activities and, in particular, the role of biodiversity in contributing to a

² UNEP/CBD/SBSTTA/14/INF/21.

sustained and functioning water cycle, the availability of water to support ecosystem functioning, water-related ecosystem services and carbon storage services;

26. *Encourages* Parties and other Governments to take into account the adaptation and mitigation capacities of wetlands when designing strategies for climate change;

27. *Notes* that water provides strong linkages between biodiversity, climate change and desertification and *invites* Parties and other Governments to build upon these linkages to further strengthen coherence between these subjects at the national level, as appropriate, to strengthen coordination and synergies between the Convention on Biological Diversity and other multilateral environmental agreements, such as the United Nations Convention to Combat Desertification, the United Nations Framework Convention on Climate Change and the Ramsar Convention on Wetlands and *requests* the Executive Secretary to use these linkages to strengthen collaboration within and between the Joint Liaison Group and the Biodiversity Liaison Group;

28. *Stresses* that reducing wetlands degradation and loss can provide multiple benefits for biodiversity and reduce the concentration of greenhouse gases in the atmosphere and therefore *invites* relevant bodies of the United Nations Framework Convention on Climate Change to consider the issue of wetlands degradation and loss in their framework;

Scientific needs

29. *Recognizes* the need for enhanced science-policy coordination and integration between natural and socio-economic sciences and notably between the inter-related subjects, among others, of biodiversity, terrestrial and inland water ecosystem functioning and service provision, land- and water-use practices, adequate quantity, quality and sustainable water supply, poverty reduction, sustainable development and the achievement of the Millennium Development Goals;

30. *Notes* the importance of robust data on inland water species in determining the status and trends of these ecosystems, including as key underlying data for other assessments and initiatives, including, *inter alia*, the third edition of the Global Biodiversity Outlook and the 2010 Biodiversity Indicators Partnership, and new initiatives, such as the State of the World's Aquatic Genetic Resources, being undertaken by the Food and Agriculture Organization of the United Nations, and *expresses its appreciation* to these organizations, initiatives and individuals responsible for generating and maintaining the underlying datasets;

31. *Urges* Parties and other Governments to support strengthened capacity for the monitoring of the biodiversity of inland water ecosystems, including at the species level;

32. *Recognizes* the need for improved guidance on the relationships between biodiversity and water and *calls for* further policy-relevant scientific assessments of the relationships between biodiversity, hydrology, ecosystem services and sustainable development, in particular regarding, *inter alia*:

(a) The relationships between the carbon and water cycles, and policies and management interventions in each, and the ability of biodiversity to underpin both cycles; and

(b) The impact of the direct anthropogenic use of water on terrestrial biodiversity, and *vice versa*, including, *inter alia*, fluxes between soil moisture, groundwater and evapo-transpiration of plants, and shifts in local and regional precipitation, taking into account any additional water-induced stresses on ecosystems through climate change;

and *invites* Parties and other Governments to provide technical and financial support for this work;

33. *Recognizes* the need for improved incorporation of biodiversity and ecosystem-service considerations in water-resources scenario planning and *requests* the Executive Secretary and *invites* the Scientific and Technical Review Panel of the Ramsar Convention on Wetlands, subject to available resources, to strengthen efforts to contribute to ongoing processes in this regard, including, *inter alia*, the

scenario analysis being undertaken for the Fourth World Water Development Report; and *invites* Parties and other Governments to provide technical and financial support to this end;

34. *Welcomes with appreciation* the development and expanded use of tools to assist implementation of the programme of work by Parties, other Governments, international and non-governmental organizations and other partners, and *encourages* their further development and wider application, and *recognizes* the need for strengthened capacity-building efforts for their use, while *noting* that priority needs lie in the social, economic, institutional and policy arenas in order to better coordinate the management of the multiple drivers of change to inland water ecosystems so as to achieve balanced, fair, equitable and sustained delivery of their multiple services as a contribution to sustainable development;

35. *Invites* Parties and other Governments to pay attention to the increasing relevance of existing guidance available under the Ramsar Convention on Wetlands and the resolutions of the Conference of its Contracting Parties and to continue, and strengthen where necessary, consideration of this guidance and resolutions;

36. *Urges* Parties to both the Convention on Biological Diversity and the Ramsar Convention on Wetlands to take more complementary comprehensive measures for joint implementation of the two conventions at the national level, amongst other means by using the TEMATEA tool;

37. *Notes* that 2011 represents the fortieth anniversary of the negotiation of the Ramsar Convention on Wetlands, and *encourages* Parties, other Governments and relevant organizations to contribute to the celebration of this event and to utilize it as an additional opportunity to further strengthen efforts between the Convention on Biological Diversity and the Ramsar Convention on Wetlands;

38. *Urges* Parties and other Governments to consider the implications of changes in the water cycle, and freshwater resources, where relevant and feasible, in the implementation of all thematic and cross-cutting programmes of work, and with special attention to the links between hydrology, biodiversity, ecosystem functioning and sustainable development, and *requests* the Subsidiary Body on Scientific, Technical and Technical Advice to consider these aspects;

39. *Recognizing* the good synergies between the Convention on Biological Diversity and the Ramsar Convention on Wetlands, *requests* the Executive Secretary, and *invites* the Secretariat and Scientific and Technical Review Panel of the Ramsar Convention, and other relevant partners, subject to the availability of financial resources, to establish an expert working group, building upon the relevant core expertise of the Scientific and Technical Review Panel of the Ramsar Convention, to review available information, and provide key policy relevant messages, on maintaining the ability of biodiversity to continue to support the water cycle, with the terms of reference annexed to the present decision;

40. *Invites* Parties, other Governments and relevant organizations to submit to the Executive Secretary science-based and/or local-knowledge-based information and case-studies relevant to the work of the expert group, but to also note that this work should not delay immediate action, where necessary and appropriate, at national level to address the subjects in question;

41. *Requests* the Executive Secretary to: disseminate the draft results of this work to Parties and other Governments, through the clearing-house mechanism and other appropriate means, for their comment and review and in order to promote the exchange of knowledge and effective application of the outcomes of this work; distribute the final report of the group to Parties and other Governments at the earliest opportunity, and to report on progress to a meeting of the Subsidiary Body on Scientific, Technical and Technological Advice prior to the eleventh meeting of the Conference of the Parties;

42. *Notes* the role of biodiversity and ecosystems in providing services that reduce vulnerability to the impact of some natural disasters, in particular water-related impacts such as flooding and drought, and that current global changes are anticipated to increase disaster vulnerability and risk;

43. *Encourages* Parties and other Governments to recognize the role of healthy ecosystems, and in particular wetlands, in protecting human communities from some natural disasters and to integrate these considerations into relevant policies;

44. *Encourages* Parties and other Governments to conserve, sustainably use and, where necessary, restore ecosystems so that freshwater flows and water resources sustain biodiversity and thus contribute to human well-being;

45. *Requests* the Executive Secretary, subject to resources, in collaboration with partners, including the Ramsar Convention and the United Nations International Strategy for Disaster Reduction to:

(a) Undertake a gap analysis in relation to inland water biodiversity and ecosystem services and their potential role in disaster-risk reduction;

(b) Seek ways to address these gaps, as necessary, and within the mandate of the Convention on Biological Diversity, through strengthened tools and information, including policy and management guidance; and

(c) Strengthen capacity-support to these ends as a means to assist Parties to improve the contribution of inland water biodiversity and ecosystem services to natural-disaster-risk reduction;

and *invites* Parties and other Governments to provide technical and financial support to this end;

Biodiversity, water and the Strategic Plan

46. *Notes* that water provisioning, regulation and purification:

(a) Are critically important services provided by ecosystems, underpinned by biodiversity, and essential to sustainable development;

(b) Are essential for the continued functioning of terrestrial, inland and coastal ecosystems and the existence of biodiversity within these;

And that there is a clear scientific and technical basis to strengthen attention to water across all relevant interests and programmes of work of the Convention;

47. Making full use of the opportunities presented by the recognition of the role of biodiversity in water provisioning, regulation and purification, and hence sustaining water resources, *urges* Parties, other Governments, and relevant organizations to mainstream biodiversity into all sectors and levels of government and society as a contribution to the achievement of the objectives of the Convention;

Annex

TERMS OF REFERENCE FOR AN EXPERT GROUP ON THE ROLE OF BIODIVERSITY IN SUPPORTING THE WATER CYCLE AND ASSOCIATED ECOSYSTEM SERVICES

1. The expert group will review the existing literature and other relevant information, including case-studies, on the contribution of biodiversity to sustaining the water cycle, and current and potential changes occurring in this relationship, including, *inter alia*:

(a) The role of ecosystems (forests, wetlands, grasslands, lakes and other relevant biomes) in regulating water availability, including during extreme hydrological events (droughts and floods) and over more prolonged periods including inter-annually;

(b) The evapo-transpiration rates of various ecosystem types including forests, wetlands, grasslands, agricultural crops and other relevant biomes;

(c) The contribution of evapo-transpiration to sustaining local and regional water availability, ecosystem functioning and related ecosystem services;

(d) The dependency of land-cover types on groundwater availability and the relevant implications of trends in groundwater use;

(e) The relationships between green and blue water flows (partitioning) and the impacts of changes in one on the other;

(f) Human use of water and its actual or potential impacts on terrestrial ecosystems through changes to the water cycle;

(g) The implications of ongoing or projected changes in the water cycle on ecosystem services, with particular reference to carbon storage; and

(h) The likely impacts of climate-change-induced stresses on these factors.

2. The expert group will identify: the importance and scale of current and projected changes occurring; information gaps; levels of scientific certainty and risk; and needs for future policy relevant scientific work.

3. The expert group will develop knowledge based simple and easily communicated key messages for policy-makers.

4. The expert group, subject to resources, should include expertise from relevant geographic regions, and hydro-ecological zones within these (e.g., high, medium, low precipitation/humidity regions), in order to capture regional experience under differing conditions of biodiversity, water resources availability and land and water demand.

5. The work of the expert group may, subject to resources, include holding face-to-face meeting(s).
