

Agenda item 8.10

## **Climate change and wetlands**

**Action requested:** The Standing Committee is invited to review and approve the attached draft Resolution for consideration by COP10.

### **Note by the Ramsar Secretariat**

1. Following Decision SC36-24, in which “The Standing Committee noted the progress of the STRP’s work on wetlands and climate change, encouraged the Panel to take the SC’s comments into account and develop a draft Resolution for consideration by SC37, and requested the Panel to consider how best to reflect ‘biofuel’ issues in this or a separate draft Resolution.”, the Scientific and Technical Review Panel (STRP) and Secretariat have prepared the attached draft Resolution on climate change and wetlands.
2. Following consultation with the Chair and members of the STRP, the Panel considers that it is more appropriate to bring forwards a separate draft Resolution on “biofuels” for SC37 consideration. This is being prepared by the STRP and Secretariat and will be provided in DOC. SC37-28.
3. In her report to the 36<sup>th</sup> meeting of the Standing Committee, the STRP Chair drew the attention of the Committee to the establishment intersessionally by the STRP of a thematic working group on climate change and wetlands and explained that the Panel had initiated several pieces of immediate work designed to provide Contracting Parties at the 10<sup>th</sup> meeting of the Conference of the Contracting Parties (COP10) with further briefing and background on current climate change and wetlands issues.
4. From the results of this work, the Panel is preparing to provide COP10 with two supporting Information Papers, one summarizing recent key messages and recommendations concerning wetlands, water and climate change from various relevant intergovernmental and international processes and initiatives, and the other providing key messages and conclusions of a review report currently being prepared for the Panel on the roles and importance of different types of wetland in the global carbon cycle. In addition the STRP is preparing two further climate change and wetlands-related reports planned for publication as Ramsar Technical Reports. These are on the development of simple methods for assessing the vulnerability of different wetland types to climate-driven changes in water regimes and on the role of and opportunities for wetland restoration as a tool for climate mitigation and adaptation.

## Draft Resolution X.00

### Climate Change and Wetlands

#### Prepared by the Scientific & Technical Review Panel (STRP)

1. RECOGNIZING that wetlands deliver a wide range of ecosystem services that contribute to human well-being, including those services relating to climate change mitigation and adaptation;
2. RECALLING that the text of the Convention acknowledges that the global hydrological cycle is fundamental to the maintenance of the ecological character of wetlands and stresses the “fundamental ecological functions of wetlands as regulators of water regimes”, and ALSO RECALLING that Resolution VI.23 emphasizes the “inextricable link between water resources and wetlands” and that Resolution VIII.1 highlights the importance of water allocations for wetlands in maintaining wetland ecological character;
3. RECOGNIZING that almost all of the world’s consumption of freshwater is drawn either directly or indirectly from wetlands, and ALSO RECOGNIZING the importance of wetland ecosystems in protecting freshwater supplies, as expressed in Resolution IX.1 Annex C, *An Integrated Framework for Ramsar’s water-related guidance*;
4. RECALLING Resolution VIII.3 on *Climate change and wetlands: impacts, adaptation and mitigation*, which *inter alia* recognized the potentially serious implications of climate change for ensuring the continued conservation and wise use of wetlands and called upon Contracting Parties to manage their wetlands in such a way as to increase their resilience to climate change and extreme climatic events and to ensure that in their climate changes responses such as revegetation, forest management, afforestation and reforestation, such implementation does not lead to serious damage to the ecological character of wetlands;
5. NOTING WITH CONCERN that the Intergovernmental Panel on Climate Change (IPCC) in its Fourth Assessment Report indicates that warming of the earth’s climate system is unequivocal, that most of the observed increase in global average temperatures since the mid-20<sup>th</sup> century is very likely due to the observed increase in anthropogenic greenhouse gas (GHG) concentrations, and that observational evidence from all continents shows that many natural systems, including wetlands, are being affected by regional climate changes;
6. ALSO NOTING WITH CONCERN the findings of the Millennium Ecosystem Assessment (MA) Wetlands and Water Synthesis Report that the degradation and loss of wetlands is more rapid than that of other ecosystems, that global climate change is likely to exacerbate the loss and degradation of many wetlands, that the adverse effects of global climate change will lead to a reduction in the services provided by wetlands, and that the projected continued loss and degradation of wetlands will reduce the capacity of wetlands to mitigate impacts of global climate change;
7. RECALLING that in its Third Assessment Report (TAR), the IPCC concluded that some wetlands, including reefs, atolls, mangroves, and those in prairies, tropical and boreal

forests, and arctic (including permafrost) and alpine ecosystems, are considered to be amongst those natural systems especially vulnerable to climate change because of their limited adaptive capacity and that they may therefore undergo significant and irreversible damage;

8. AWARE from the findings of the Millennium Ecosystem Assessment (MA), the 4<sup>th</sup> Global Environment Outlook (GEO-4), the World Water Development Report (WWDR 2006), and *A Comprehensive Assessment of Water Management in Agriculture* (CA) that a major driver of the continuing degradation and loss of wetland ecosystems and their services is the increasing abstraction of water especially for agriculture, that many rivers and catchments are already water-stressed, and that demand for water, particularly for irrigated agriculture as well as other uses, is projected to continue to increase;
9. ALSO AWARE from the findings of the IPCC Fourth Assessment Report
  - that the major impacts of climate change on ecosystems, including wetlands, will be expressed through changes in the distribution and amount of water;
  - that the negative impacts of climate change on freshwater systems outweigh its benefits;
  - that the beneficial impacts of increased annual runoff in some areas are likely to be tempered by negative effects of increased precipitation variability on water supply, water quality and flood risk;
  - that increases in the frequency and severity of floods and droughts and increasing temperatures will further affect the physical, chemical and biological properties of freshwater lakes and rivers, with predominantly adverse impacts on many individual freshwater species, community composition and water quality;
  - that the impacts of a warming climate have been most pronounced in the Arctic;
  - that the greatest impacts of water and food shortage will be faced by Africa;
  - and that in coastal areas sea-level rise will lead to increased salinisation of groundwater and increased flood risk, particularly affecting small islands and low-lying megadeltas in Asia and Africa;
10. AWARE that the UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes is developing guidance on water and climate adaptation;
11. ALSO AWARE that the United Nations Food and Agriculture Organisation (FAO) has established climate change as a Priority Area for Interdisciplinary Action, in order to assist countries in developing cross-sectoral policies to address the negative impacts of climate variability and change on agriculture;
12. STRESSING that the MA advised that conserving, maintaining or restoring wetland ecosystems can form a viable element to an overall climate change mitigation strategy; and NOTING that wetlands can also mitigate adverse effects such as food shortages by providing vital biodiversity resources, but CONCERNED that the continued degradation and loss of both coastal and inland wetlands is reducing the capacity of wetlands to deliver their services to support such mitigation;

13. THANKING the government of Canada for supporting the CBD/Ramsar STRP workshop on “Wetlands, Water, Biodiversity and Climate Change (Gland, March 2007) and NOTING the findings and recommendations of the report of that workshop, including that wetlands are critical to mitigating climate change and have an important and underestimated role in both carbon storage and the regulation of greenhouse gas emissions; that wetlands are more important as carbon stores than other biomes (and therefore efforts to safeguard wetland ecosystems should be expanded); and that the restoration of certain wetlands can offer a return on investment of up to 100 times that of alternative carbon mitigation investments;
14. AWARE of the increasing evidence that some types of wetland play important roles in carbon storage and cycling, including tropical peat-swamp forests, temperate peatlands (as demonstrated by the GEF-funded study *Assessment on Peatlands, Biodiversity and Climate Change*), temperate wetlands on alluvial soils, and coastal wetlands such as intertidal flats, saltmarshes and mangroves, but CONCERNED that the climate change services provided by such wetlands for climate change mitigation and adaptation are not yet being fully recognized by international and national climate change response strategies, processes and mechanisms;
15. REAFFIRMING that integrative cross-sectoral policy and planning measures are required in order to address the influence of global climate change on the interdependencies between wetlands, water management, agriculture, energy production, poverty reduction and human health;
16. EXPRESSING CONCERN about the potential for changes in energy policy, such as for increased hydropower, wind and tidal power generation, and biofuel production, to have detrimental effects on wetlands and their capacity for carbon storage and sequestration, [as is recognized in COP10 DR.00];
17. RECALLING the decision of the Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) at its eighth session concerning the need for a Joint Liaison Group (JLG) between the UNFCCC, the UN Convention to Combat Desertification (UNCCD) and the Convention on Biological Diversity (CBD), and its invitation to the Secretariat of the Ramsar Convention to share information and to participate in the meetings of the JLG as appropriate; the establishment by the Executive Secretary of the CBD of the Biodiversity Liaison Group (BLG) of the secretariats of the “biodiversity cluster” of multilateral environment agreements (CBD, Ramsar, CMS, CITES, and the World Heritage Convention); and the decision to call meetings of the Chairs of the Scientific Advisory Bodies of the Biodiversity-related Conventions (CSAB); and RECOGNIZING that these fora provide important opportunities to progress matters of common interest, including those concerning climate change;
- [18. WELCOMING the recommendations of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) to the 9<sup>th</sup> meeting of the Conference of the Contacting Parties to the Convention on Biological Diversity (CBD) that the Conference of the Parties should recognize the importance of wetlands, and in particular peatlands, in the global carbon cycle, as well as the potential for their conservation and sustainable use as a cost-effective tool to address climate change; that it should welcome the findings of the global “Assessment on Peatlands, Biodiversity and Climate Change”; that it should request the Executive Secretary in collaboration with the secretariats of relevant multilateral

environment agreements and other relevant partners to review opportunities for further action to support the conservation and sustainable use of tropical forested peatlands as well as other wetlands; and that it should invite the Ramsar Convention to take a leading role in the development of relevant guidance and policies concerning climate change and wetlands;]

[Note: This paragraph will be updated following any decision on these matters adopted by the CBD 9<sup>th</sup> Conference of the Parties to be held in Bonn, Germany, in May 2008.]

19. RECALLING that Objective 4.1 of the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* is “to use Ramsar sites as baseline and reference areas for national, supranational/regional, and international environmental monitoring to detect trends in the loss of biological diversity, climate change, and the processes of desertification”, but CONCERNED that mechanisms may not be in place for reporting such trend assessments, and ALSO CONCERNED that adequate wetland inventory and assessment information at regional and global scales is not available to support and interpret such trend assessments; and
20. THANKING the Scientific & Technical Review Panel (STRP) for its renewed attention to wetlands and climate change issues during the 2006-2008 triennium, including: on developing simple methods for assessing the vulnerability of different wetland types to climate-driven changes in water regimes; on the role of and opportunities for wetland restoration as a tool for climate mitigation and adaptation; on the role and importance of different wetland types in the global carbon cycle; on recent key messages and recommendations concerning wetlands, water and climate change from relevant intergovernmental and international processes and initiatives, and for making this work available to Contracting Parties and others through Ramsar Technical Reports and the information on these matters provided to Contracting Parties in COP10 DOCs [XX-XY];

#### THE CONFERENCE OF THE CONTRACTING PARTIES

21. AFFIRMS that this Resolution wholly updates and supersedes Resolution VIII.3 on *Climate change and wetlands: impacts, adaptation and mitigation*;
22. CALLS UPON Contracting Parties to manage wetlands in such a way as to remove existing pressures on them and increase their resilience to climate change and extreme climatic events, and to reduce the risk of flooding and drought in vulnerable countries by promoting wetland and watershed protection and restoration;
23. ALSO URGES Contracting Parties to ensure that the necessary safeguards and mechanisms are in place for maintenance of the ecological character of wetlands, particularly with respect to water allocations for wetland ecosystems, in the face of climate driven changes and predicted changes in water distribution and availability;
24. ENCOURAGES Contracting Parties to ensure that the restoration of river basins and their wetlands is recognized as a vitally important aspect of policy related to climate change mitigation and adaptation, and in this regard DRAWS ATTENTION to the Convention’s consolidated guidance on integrating wetlands into river basin management [DRX.00] and the STRP technical paper on wetland restoration and climate change;

25. CALLS UPON relevant Contracting Parties to take action to minimize the degradation, as well as promote restoration, and improve management practices of those peatlands and other wetland types that are significant carbon stores, or that have the ability to sequester carbon and to increase the adaptive capacity of society to respond to the changes in these ecosystems due to climate change;
26. ENCOURAGES Contracting Parties to promote cross-sectoral coordination in developing and implementing national policies related to water management, agriculture, energy production, poverty reduction, and human health, in order to ensure that sectoral objectives are mutually supportive in addressing the likely negative impacts of climate change and that such objectives are consistent with the need to protect the ecological character of wetlands and maintain wetland services that are important in mitigation and adaptation to climate change;
27. REAFFIRMS the need for Contracting Parties to make every effort, when implementing the UNFCCC and, as appropriate, its Kyoto Protocol, including policies for Reducing Emissions from Deforestation in Developing Countries (REDD), including revegetation and forest management, afforestation and reforestation efforts, to ensure that this implementation does not lead to serious damage to the ecological character of their wetlands; ENCOURAGES Contracting Parties to utilize the role of forested wetlands in carbon storage and sequestration to contribute to the delivery of such mechanisms; and ALSO ENCOURAGES Contracting Parties to use, where appropriate, strategic and other forms of environmental impact assessment and risk assessment, taking into account Resolutions VII.10, VII.16 and [DR X.00], as well as Article 4.1 of the UNFCCC and Article 2.1 of the Kyoto Protocol, as appropriate;
28. URGES Contracting Parties to develop and implement policies that promote opportunities to take advantage of the climate regulatory services already provided by wetlands and other ecosystems, while at the same time contributing to improving human livelihoods and meeting biodiversity goals, and to communicate progress, successes and best practices to the Convention;
29. ENCOURAGES Contracting Parties and other organizations to undertake, where possible, studies of the role of wetlands in carbon storage and sequestration, in adaptation to climate change, including for flood mitigation and water supply, and in mitigating the impacts of sea-level rise, and to make their findings available to the Convention;
30. URGES Contracting Parties and others to make full use of the existing Ramsar guidance on wise use of wetlands (Wise Use Handbooks), much of which is applicable to many of the threats and impacts on wetlands arising from climate change, in developing their policy and management responses relating to climate change;
31. REQUESTS the Ramsar Secretariat and the STRP to develop a leading role with relevant international conventions and agencies, including CBD, UNCCD, IPCC, UNEP, UNDP, FAO and the World Bank, in the development of a coordinated programme of work to investigate the potential contribution of wetland ecosystems to climate change mitigation and adaptation, in particular for reducing vulnerability and increasing resilience to climate change;

32. ALSO REQUESTS the Secretariat and the STRP to establish ways and means of working with the UNFCCC and other relevant bodies to develop guidance for the development of mutually supportive adaptation and mitigation programmes that recognize the critical role of wetlands in relation to water and food security as well as human health;
33. URGES Contracting Parties and other countries, and the secretariats and scientific and technical subsidiary bodies of environment conventions, to improve integration on biodiversity and climate change at the international level through capacity building, resourcing and implementation of collaborative work programmes, including through the aegis of established mechanisms including the Joint Liaison Group of Rio conventions and the Biodiversity Liaison Group;
34. REQUESTS the STRP and its Chair to bring wetlands and climate change issues to the attention of the Chairs of the Scientific Advisory Bodies of the Biodiversity-related Conventions (CSAB) at the next available opportunity, and to utilize this forum to encourage enhanced scientific collaboration related to climate change;
35. ALSO REQUESTS the STRP to establish ways of collaborating with the IPCC and of contributing to its future work so to raise the awareness of the climate change community regarding the importance of wetlands, including through the preparation and publication of relevant scientific reports on wetlands and climate change in order to support this collaboration;
36. WELCOMES the current STRP initiatives on assessing vulnerability of wetlands to hydro-ecological impacts, wetland restoration and climate change, and review of roles of different wetland types in carbon cycle; and URGES Contracting Parties and others to disseminate widely these reports, once published, amongst their colleagues in other sectors; to make use of these reports for CEPA purposes; and to adapt the findings and apply them for local situations and national policy development regarding mitigation and adaptation to climate change;
37. INSTRUCTS the STRP to continue to its work on climate change and wetlands, as a high priority, including establishing a thematic work area for its programme of work, and developing a future programme on climate change and wetlands, which should include *inter alia* building on the work described in paragraph 36. above including the further development of assessment methods for hydro-ecological impacts of climate change on wetland types and their testing in data-poor areas; reviewing wetland distribution in relation to land use and population distribution trends, in order to demonstrate potential effects on human health if wetlands are lost due to climate change impacts; developing guidance for Contracting Parties on the latest knowledge of the current and potential impacts of climate change on wetlands and on appropriate policy and management responses for addressing these impacts; and on how wetland management and restoration can contribute to improving adaptation to climate change;
38. STRONGLY URGES STRP National Focal Points to engage in, and contribute to, this work so as to bring in to it national and regional issues and expertise from their in-country networks of wetland scientists and other experts; and

39. INVITES the national focal points of other multilateral environmental agreements to take note of this Resolution and to collaborate with their counterpart focal points of the Ramsar Convention in its implementation.