10th Meeting of the Conference of the Parties to the Convention on Wetlands (Ramsar, Iran, 1971)

"Healthy wetlands, healthy people"

Changwon, Republic of Korea,
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Agenda item XV **Ramsar COP10 DR 24**

Draft Resolution X.24

Climate change and wetlands

(see also COP10 DOC. 25 "Additional STRP information on climate change and wetlands issues")

Submitted 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* (2005);

4. RECALLING Resolution VIII.3 on *Climate change and wetlands: impacts, adaptation and mitigation* (2002), 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 change responses such as revegetation, forest management, afforestation and reforestation, such implementation does not lead to serious damage to the ecological character of wetlands;

5. ALSO 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;

6. 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-20th 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;

7. 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;

8. ALSO AWARE of the increasing evidence (including as reported in COP10 DOC. 25) that some types of wetlands play important roles in carbon storage and cycling, such as 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 are not yet fully recognized by international and national climate change response strategies, processes, and mechanisms;

9. 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;

10. AWARE from the findings of the Millennium Ecosystem Assessment (MA), the 4th 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;

11. NOTING that the climate change mitigation and adaptation policies of a number of countries, provinces, and cities include measures such as increasing energy supplies from hydropower and biofuels and more water storages and inter-basin water transfers, and STRESSING the need to implement Ramsar's water-related guidance (Resolution IX.1 Annex C and [COP10 DR19]) so as to ensure that such climate policies avoid significant impacts on the ecological character of wetlands;

12. AWARE that the UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes is developing guidance on water and climate adaptation and mitigation;

13. 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;

14. 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;

15. 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 that 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;

16. RECOGNIZING that the wise use and restoration of wetlands may attenuate natural disasters expected with climate change, such as the use of restored floodplain wetlands to reduce risks from flooding;

17. 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;

18. EXPRESSING CONCERN about the potential for changes in energy policy, such as for increased hydropower production, 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 DR25];

19. RECALLING the decision (Decision 13/CP.8) 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;

[20. WELCOMING the recognition by the 9th Conference of the Contracting Parties to the Convention on Biological Diversity (CBD) in Decision IX/16 of the importance of the conservation and sustainable use of the biodiversity of wetlands and in particular peatlands in addressing climate change; ALSO WELCOMING, in line with the lead implementation role of the Ramsar Convention for CBD for wetlands and the terms of the fourth CBD/Ramsar Joint Work Plan, the CBD COP9 invitation to the Ramsar STRP to further assess the contribution of climate-change mitigation and adaptation in peatlands and other wetlands; and FURTHER WELCOMING the invitation in CBD COP9 Decision IX/16 to the IPCC to participate in CBD and Ramsar processes of preparing future technical studies on climate change and biodiversity, particularly wetlands;]

21. 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

22. 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 DOC. 25;

THE CONFERENCE OF THE CONTRACTING PARTIES

23. AFFIRMS that this Resolution wholly updates and supersedes Resolution VIII.3 on *Climate change and wetlands: impacts, adaptation and mitigation*;

24. 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 impact of flooding and drought in vulnerable countries by promoting wetland and watershed protection and restoration;

25. URGES Contracting Parties to ensure that the necessary safeguards and mechanisms are in place to maintain 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 due to the direct impacts of and societal responses to climate change;

26. 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 [draft Resolution X.19] and the STRP technical paper on wetland restoration and climate change;

27. 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 increase the adaptive capacity of society to respond to the changes in these ecosystems due to climate change;

28. 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;

29. REAFFIRMS the need for Contracting Parties to make every effort, when implementing the UNFCCC and, as appropriate, its Kyoto Protocol, to consider the maintenance of the ecological character of wetlands in climate change mitigation and adaptation policies, including policies for Reducing Emissions from Deforestation in Developing Countries (REDD) and revegetation and forest management, afforestation and reforestation and policies related to increased energy supplies from hydropower and biofuels, more water storages and interbasin water transfers, so as to ensure that their 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, VIII.2 and [DR X17], as well as Article 4.1 of the UNFCCC and Article 2.1 of the Kyoto Protocol, as appropriate;

30. ENCOURAGES Contracting Parties, the private sector and other stakeholders to pay attention to the allocation of funds towards the maintenance and restoration of wetland ecosystem character as an effective option for investing in carbon sequestration and mitigation through carbon accounting;

31. 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;

32. 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;

33. 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;

34. REQUESTS the Ramsar Secretariat and the STRP to work together with relevant international conventions and agencies, including CBD, UNCCD, UNEP, UNDP, FAO and the World Bank, and especially UNFCCC and IPCC, to develop a working partnership 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;

35. 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;

36. 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;

37. 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;

38. ALSO REQUESTS the STRP to establish ways of collaborating with the IPCC and of contributing to its future work in order 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;

39. 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 the carbon cycle, and URGES Contracting Parties and others to disseminate these reports widely, 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;

40. INSTRUCTS the STRP to continue 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, working with the IPCC and others, which should include *inter alia*:

    i) building on initial work done in the 2006-2008 triennium, the further development of methods for assessment of hydro-ecological impacts of climate change on wetlands, including the testing of such methods in data-poor areas;
    ii) updating, in the light of new information available, the STRP's report to COP8 on climate change and wetlands: impacts, adaptation and mitigation (COP8 DOC. 11);
    iii) 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;
    iv) 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 (including the management of loss of ecological character of Ramsar sites and options for relocating wetland biota threatened by climate change); and
    v) guidance for Contracting Parties on the role and economic benefits of wetland management and restoration in contributing to improving adaptation to climate change;

41. STRONGLY URGES STRP National Focal Points to engage in and contribute to this work in order to bring in national and regional issues and expertise from their in-country networks of wetland scientists and other experts; and

42. INVITES the national focal points of other multilateral environmental agreements (MEAs) to take note of this Resolution, and ENCOURAGES Contracting Parties to promote collaborative work between the national focal points of MEAs in support of its its implementation.