POSITION PAPER – Inland Waters

September 2010

10TH MEETING OF THE CONFERENCE OF THE PARTIES TO THE CONVENTION ON BIOLOGICAL DIVERSITY

Nagoya, Aichi Prefecture, Japan, 18 - 29 October 2010

SUMMARY

Conservation International, The Nature Conservancy, Wetlands International and WWF urge Parties to strengthen work on the protection and sustainable use of inland water ecosystems, in particular by:

- Addressing the two main threats to inland water ecosystems – over-abstraction and fragmentation – especially through the adoption and implementation of adequate environmental flows and related policies and measures;
- Integrating inland waters biodiversity considerations into decision making in economic sectors;
- Integrating inland waters biodiversity into the implementation of related programmes of work, particularly biodiversity and climate change;
- Addressing the under-representation of inland waters in the global network of protected areas; and
- Facilitating cooperation for the effective and sustainable management, protection and use of transboundary inland waters.

1. INTRODUCTION

Freshwater plays a critical role in sustainable development and is essential for achieving most of the Millennium Development Goals. Healthy inland water ecosystems provide reliable, clean water for multiple uses; offer a natural defence against natural disasters, such as droughts and floods; sustain fisheries and agricultural development that are indispensable for ensuring global food security; sustain myriad life forms of great value; and are home to charismatic species, such as river dolphins, of significant cultural and economic value, including for tourism. Other ecosystems and all human beings depend on those services and functions for their very survival, livelihoods and welfare.

However, inland water ecosystems are vulnerable to a number of direct and indirect threats and drivers of change, such as overexploitation, fragmentation, and pollution, associated with various, often wasteful, water uses, poorly planned infrastructure development, agricultural runoff, and industrial and wastewater discharges. The *UN Millennium Ecosystem Assessment* underscores that freshwater ecosystems tend to have the highest proportion of species threatened with extinction, and the use of two ecosystem services – capture fisheries and freshwater abstraction – is now well beyond levels that can be sustained, even at current demands. Freshwater species are facing extinction four to six times faster than species on land or in oceans.[1] Due to over-abstraction, many mighty rivers no longer reach the sea, numerous lakes have been shrinking and recharging aquifers around the world are being exploited at unsustainable rates. At the same time, among the world's 177 rivers longer than 1,000 Km, only 64 (<40%) remain free-flowing on the mainstem (WWF, 2006). Inland waters over-abstraction and fragmentation have significant impacts not only on freshwater biodiversity, but also on the species migrating between inland waters and the sea, with grave consequences for livelihoods and human wellbeing. On our current course, more than half the world's people will face water shortages within the next 20 years.[2]

All relevant actors, at all appropriate levels, must manage, utilize and protect inland water ecosystems and related natural resources in a sustainable manner, in order for such ecosystems to continue providing essential services and functions. This is especially true in the context of a changing climate, which is likely to bring about drastic changes to the hydrological cycle.

2. STRATEGIC PLAN FOR THE POST-2010 PERIOD

Inland water ecosystems include a variety of species-rich habitats, such as lakes, rivers, wetlands, floodplains and groundwater systems.[3] At the same time, they are conduits for the delivery of water, as flow from source habitat to downstream locations, and thus influence the quality of water. Inland water ecosystems play an essential role in maintaining not just freshwater biodiversity, but also terrestrial and brackish species and habitats, including threatened terrestrial species and, of course, humans. In this sense, freshwater is a fundamental environmental factor supporting terrestrial ecosystems.

[1] Diversitas, "**World Will Miss 2010 Target To Stem Biodiversity Loss**", at http://www.diversitas-international.org/docs/DIVERSITAS%20OSC2%20First%20press%20release.pdf.
[2] National Geographic, at http://environment.nationalgeographic.com/environment/freshwater/freshwater-crisis.
[3] Millenium Ecosystem Assessment, Global Assessment Reports, Volume 1: Current State and Trends Assessment Chapter 20.

According to Doc. UNEP/CBD/SBSTTA/14/3, "the 2010 target and sub-targets for inland waters biodiversity have not been achieved. The rate of decline/loss for some populations where robust data are available has more than quadrupled over the last 10 years. The drivers of biodiversity loss remain unchanged and are all escalating." Biodiversity loss in inland waters remains amongst the fastest across biomes.

Due to their complexity, inland waters biodiversity and the ecosystems they make up have been largely ignored in conservation efforts, including in the implementation of the CBD. In this context, we propose the addition of a separate target directed specifically at the main threats affecting inland water ecosystems in order to ensure sustained political attention to the need to improve implementation of the programme of work and to mainstream its principles and guidelines into other relevant work programmes. The target speaks to the priority actions necessary to tackle the main drivers and threats with respect to inland waters biodiversity.

This proposal is in line with Decision IX/9, which requires that the revision of the Strategic Plan takes into account the findings of the in-depth reviews of the various programmes of work, and is justified by the very role the Parties have assigned for the Strategic Plan and its goals and targets, as described in Doc. UNEP/CBD/SBSTTA/14/10:

"Targets set under the Convention represent important political commitments by its Contracting Parties. They enable the authority responsible for the implementation of the Convention ... to engage with other sectors and departments by bringing these targets to bear in domestic planning and decision-making processes... In this way, goals and targets can serve as a tool for the mainstreaming of biodiversity. Targets are frequently perceived as the most visible and tangible elements of the Convention..."

In addition, indicators under each target are critical to measuring progress towards achieving the targets and understanding implementation needs. It will be essential that full consideration to inland water ecosystems be given as indicators are developed in order to ensure all targets will contribute to the protection and sustainable use of inland water ecosystems. Specific inland waters indicators should be developed under relevant targets (in particular, targets 6, 10, 11, 14 and 15) to provide Parties with the necessary information on changing levels of threats to inland water ecosystems and their services and to guide improved interventions to reduce those threats.

Proposed amendment to Doc. UNEP/CBD/WG-RI/3/L.9: *Updating and revision of the Strategic Plan for the Post-2010 period*

"*Annex*

STRATEGIC PLAN FOR THE PERIOD 2011-2020

...

IV. STRATEGIC GOALS AND THE 2020 HEADLINE TARGET

...

Strategic goal B. Reduce the direct pressures on biodiversity and promote sustainable use

...

Target 5 bis: By 2020, the world's inland water ecosystems are managed so that water availability, flows, connectivity, and quality are adequate to sustain biodiversity and maintain ecosystem functions and services.

3. THE INLAND WATERS PROGRAMME OF WORK

We welcome the changes incorporated into the in-depth review document after discussions at SBSTTA, in order to underscore the key drivers of change in, and threats to, inland water ecosystems, and to highlight some of the key tools available for addressing those drivers and threats. The following box contains suggestions for further strengthening the programme of work.

Proposed amendments to Doc. UNEP/CBD/SBSTTA/14/L.3: *In-Depth Review of the Programme of Work on the Biological Diversity of Inland Water Ecosystems*

"The Conference of the Parties

...

Implementation of the programme of work

8. *Urges* Parties and other Governments to promote the conservation and sustainable use of inland waters biodiversity by developing and implementing Strategic Environmental Assessments, Environmental Impact Assessments and Environmental Flows Assessments; national and regional integrated water resources management ~~action~~ plans; and ~~to enforce existing~~ relevant policy and legal measures, ~~in order to halt unsustainable utilisation,~~ especially to address inland waters over-extraction and fragmentation, including their impact on fisheries ~~and promote the conservation and sustainable use, of inland water biodiversity~~;

...

11. ...

(d) 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, e.g., energy production, transport, agriculture, fisheries, tourism, and into regional and national development plans, as well as by implementing related programmes of work, e.g., climate change, protected areas, invasive species, mountains, dry and sub-humid lands, and biofuels;

...

(h) Exploring ways and means to further develop and implement, as appropriate, the "payment for ecosystem services" approach, as well as the valuation of biodiversity and ecosystem services and the integration of this information into national accounting systems, in order to improve sectoral integration;

...

Climate change

...

24. *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 waters 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;

25. *Encourages* Parties and other Governments to take into consideration the adaptation and mitigation capacities of ~~wetlands~~ inland water ecosystems when developing their climate change adaptation and mitigation strategies;

26. *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 and in the context of transboundary water cooperation, as appropriate, to strengthen coordination between the Convention on Biological Diversity and other multilateral environmental agreements, such as the United Nations Convention to Combat Desertification, United Nations Framework Convention on Climate Change and the Ramsar Convention on Wetlands, as well as relevant global, regional and basin-specific treaties governing transboundary waters, taking into account the crucial role of Convention on Biological Diversity in this context...;

...

Scientific needs

...

30. *Urges* Parties and other Governments to support strengthened capacity for monitoring of the biodiversity of inland water ecosystems, including at the species level; and *encourages* Parties to adopt internationally consistent, comprehensive, and accepted methods for assessing the conservation status and change of inland waters biodiversity, such as the IUCN *Red List of Threatened Species*, allowing consistent comparison and analysis between regions and continents, for identification of priority sites for conservation action and management;

30bis. *Notes* the finding of the In-depth Review of the Programme of Work on Inland Waters Biodiversity (UNEP/CBD/SBSTTA/14/3) that agriculture accounts for 70% of all water taken from inland water ecosystems, and this pressure will continue to increase with climate change; and requests the Executive Secretary, in partnership with FAO and in consultation with other relevant international organizations, to investigate ways and means to reduce the impacts on ecosystems from water consumption for irrigation in agriculture, while ensuring food security;

...

4. INLAND WATER ECOSYSTEMS AS A CROSS-CUTTING ISSUE

One of the factors potentially explaining the slow progress in the implementation of the Inland Waters Programme of Work may be the fact that water issues have not yet been adequately integrated into other relevant sectors. In this sense, Doc. UNEP/CBD/SBSTTA/14/13 includes a recommendation for "SBSTTA and the Executive Secretary to include consideration of the implications of changes in the water cycle, and freshwater resources, where relevant and feasible, in all relevant future deliberations in all thematic and cross-cutting programmes of work..."

Indeed, water has a crucial role to play in the implementation of a number of other programs of work. In particular, such a role should not be overlooked in discussions at COP-10 pertaining to biodiversity and climate change, dry and sub-humid lands, mountain ecosystems and biofuels.

4.1 MOUNTAINS

Proposed amendments to Doc. UNEP/CBD/SBSTTA/14/L.2: *In-Depth Review of the Implementation of the Programme of Work on Mountain Biological Diversity*

"*The Conference of the Parties,*

…

Status and trends of mountain biological diversity

2. *Invites* Parties, other Governments, relevant organizations and indigenous and local communities to collect and update information periodically … and disseminate information on:

(a) Mountain biological diversity including on sites of biological, ecological and socio-economic importance, in particular the mountain biosphere reserves, on ecosystem services, on endangered and endemic species, ~~and~~ on genetic resources including in particular genetic resources for food and agriculture, and on the status of inland waters within mountain ecosystems, including environmental flows, headwaters and glaciers;

…

(c) Direct and indirect drivers of change in mountain biodiversity, including, in particular, climate change and land-use change, ~~as well as~~ tourism and sports activities, and infrastructure development;

Programme element 1: Direct actions for conservation, sustainable use and benefit-sharing

3. *Invites* Parties, other Governments, relevant organizations and indigenous and local communities to:

(a) Enhance the effectiveness of management in existing mountain protected areas, including by integrating inland waters considerations into the management plans of existing protected areas;

(b) Establish effectively and appropriately managed protected areas in line with the programme of work on protected areas to safeguard the highest priority key biodiversity areas in mountain ecosystems;

(c) Establish, *inter alia,* conservation corridors and connectivity, where appropriate, and possible and taking into account in particular endemic species, and transboundary mountain protected area systems, taking into account the need to integrate protected areas into wider landscapes and catchments, including by modifying the boundaries of existing protected areas to adequately protect inland water ecosystems;

4. *Invites* Parties and other Governments to consider the development and implementation of national and regional targets … in an effort to reduce the pressures on biodiversity from habitat change, overexploitation, pollution, invasive alien species, infrastructure development, and climate change...;

…

Programme element 2: Means of implementation for conservation, sustainable use and benefit-sharing:

8. *Invites* Parties and other Governments with mountain systems within their jurisdiction to consider the adoption of a long-term vision and ecosystem approaches to the conservation and sustainable use of mountain biological diversity by developing specific actions, timetables and capacity-building needs … and where appropriate integrating them with … overall sustainable development strategies and integrated water resources management plans in mountain regions;

9 *Encourages* Parties to use existing or establish national committees and multi-stakeholder institutional arrangements and mechanisms at national and regional levels to enhance intersectoral and cross-border coordination and collaboration for sustainable mountain development…;

…

11. *Encourages* Parties, where possible and appropriate, to develop and implement regional collaboration strategies and action plans, and international legal instruments, for the conservation of mountain biodiversity, [with assistance from international and regional organizations as needed and when requested and agreed by all Parties concerned in such collaboration], and within the framework of relevant international agreements, where appropriate;

11bis. *Encourages* Parties to incorporate mountain considerations into existing and future international water agreements and into the mandate of international river basin organizations, as a means to address the limited progress in Goal 2.3, pertaining to transboundary cooperation;

12. *Encourages* Parties, other Governments and relevant organizations to safeguard, develop and restore upland-lowland interactions and upstream-downstream linkages, with the aim to strengthen~~ing~~ the conservation and sustainable use of mountain biodiversity and the well-being of people and nature, especially in lowland areas, through the uninterrupted provision of ecosystem services; this would include actions to maintain (or restore) environmental flows, migratory routes and sediment transport, and to further develop payments for ecosystems services in the context of mountain biodiversity conservation and sustainable use, including across political borders;

Programme element 3: Supporting actions for conservation, sustainable use and benefit-sharing

16. Invites Parties, other Governments and relevant organizations to develop and implement national, regional and global communication programmes, educational and awareness raising programmes highlighting the economic, ecological and social benefits of the conservation and sustainable use of mountain biological diversity for human well-being and for the provision of ecosystem services to mountain dwellers and also to lowland communities and ecosystems."

4.2 BIODIVERSITY AND CLIMATE CHANGE

There is great scope for strengthening the work on Biodiversity and Climate Change with the more explicit incorporation of inland water considerations. The relationship between water, energy and climate is at the heart of the climate change challenge. It is through water that people and nature will experience the impacts of climate change most profoundly, through changes to the quality, quantity and timing of water flows. In some places, this will mean too much all at once, with more frequent and intense floods; in others, it will mean too little water, with increased scarcity, often in places that already struggle with drought and desertification.

On the one hand, the maintenance of water flows will be essential in the context of climate change adaptation. At the same time, huge quantities of water are required in the operation of alternative energy sources and other mitigation strategies, such as biofuels, carbon capture and storage, and hydropower. Furthermore, "inland water ecosystems are significant stores of carbon and ... peatlands and other wetlands have very high carbon stocks, particularly below ground, as recognised in decision IX/16 D, and as recognized by the report of the second Ad-Hoc Technical Working Group on biodiversity and climate change (UNEP/CBD/SBSTTA/14/INF/21)..."[4]

This calls for strong integration of actions under the respective programmes of work, leading to increased consideration of water's role in sustaining biodiversity (across various biomes) and underpinning climate change adaptation and mitigation.

[4] UNEP/CBD/SBSTTA/14/L.3, p.4.

Ecosystem-based adaptation (EBA) includes a range of actions for managing, conserving and restoring ecosystems. Such actions aim to reduce the vulnerability and increase the resilience of ecosystems and communities in the face of climate change. EBA is a cost-effective and accessible means of adaptation to climate change and variability, which can help address multiple threats and local priorities, and is often more accessible to the rural poor than technology or infrastructure solutions. For example, floodplain conservation – including protection of existing floodplains or reconnection of currently disconnected floodplains – can act as green infrastructure that stores and conveys floodwaters, thereby reducing flood risks for nearby areas.

Moreover, integrated, comprehensive solutions at the basin and even regional scales, large enough to maintain functioning inland water systems are needed. Many of the lessons learned through years of implementing integrated water resources management can and should aid in climate change adaptation efforts. Many climate change adaptation actions currently being undertaken are site-specific.

Recent evaluations, however, suggest that a broader perspective is also needed. This includes the development of strategic environmental assessments and basin-wide planning, in order to protect and restore the connectivity and processes that create, maintain and interlink inland water, coastal/marine and terrestrial habitats. Such wider planning enables the development of multiple and alternative scenarios and outcomes to dam and reservoir planning, whether to secure freshwater resources, avert damage from storm events or support hydropower.

Proposed amendments to Doc. UNEP/CBD/SBSTTA/14/L.9*: In-Depth Review of the Work on Biodiversity and Climate Change*

"*The Conference of the Parties*

...

8. *Further invites* Parties and other Governments ... to consider the following guidance on ways to conserve, sustainably use and restore biodiversity and ecosystem services while contributing to climate change mitigation and adaptation:

...

Reducing the impacts of climate change on biodiversity and biodiversity-based livelihoods

...

(d) Implement activities to increase the adaptive capacity of species and the resilience of ecosystems in the face of climate change, including, *inter alia*:

...

(iii) Strengthening protected area networks including through enhancing coverage, quality, connectivity, where appropriate, through the creation of corridors and ecological networks, and through enhancing the biological quality of the matrix areas, with particular attention to currently under-represented ecosystems that are highly vulnerable to climate change, such as inland water and marine ecosystems;

(iv) Integrating biodiversity into wider catchment, sea- and landscape management;

...

(f) Develop guidelines for biodiversity conservation and sustainable catchment, land and seascape use and management for areas becoming accessible to new uses as a consequence of climate change;

...

(i) Recognize the role of indigenous and local community conserved areas in strengthening ecosystem connectivity and resilience across the regional catchment, landscape and seascape thereby maintaining essential ecosystem services and supporting biodiversity –based livelihoods in the face of climate change;

Ecosystem-based approaches for adaptation

...

(k) In accordance with national circumstance, integrate ecosystem-based approaches for adaptation into relevant strategies including adaptation strategies and plans, national action plans to combat desertification, NBSAPS, poverty reduction strategies, disaster risk reduction strategies and sustainable land and water management strategies;

(l) In the planning and implementation of ecosystem based approaches for adaptation, different ecosystem management options and objectives should be carefully considered, to assess the different services they provide and the potential trade-offs that may result from them;

(l)bis: Within the framework of ecosystem-based adaptation, close coordination and collaboration between countries sharing biological diversity components, especially in the case of transboundary inland water and marine ecosystems, will be essential to enable effective adaptation to climate change. International legal regimes have a key role to play to foster transboundary water cooperation and set the conditions for countries to plan and implement climate change adaptation in a transboundary context, taking into account the entire river basin;

Ecosystem based mitigation including the reduction of emissions from deforestation and forest degradation, the conservation of forest carbon stocks, and the sustainable management of forest and forest carbon stocks

...

(p) When designing, implementing and monitoring afforestation, reforestation and forest restoration activities for climate change mitigation consider biodiversity and ecosystem services through, for example:

...

(iv) Strategically locating afforestation activities within the landscape and catchment to enhance connectivity and increase the provision of ecosystem services within forest areas, taking into account the linkages between forest and inland water ecosystems, in particular the role of vegetation in protecting springs and riparian areas, as well as aquifer recharge zones;

...

Reducing biodiversity impacts of climate change mitigation and adaptation measures, including from energy production

...

Climate change and water

. *Notes* the findings of the Intergovernmental Panel on Climate Change Technical Report *Climate Change and Water* that the relationship between climate change and inland water resources is a matter of primary concern; and *invites* Parties to give special consideration to the impacts of climate change on inland water ecosystems, since it is through water that people and nature will experience the impacts of climate change most profoundly, through changes to the quality, quantity and timing of water flows;

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

. *Notes* that peatlands and other wetlands are significant storages of carbon, even more so than tropical forests, as recognised in decision IX/16 D, and in the report of the second Ad-Hoc Technical Working Group on biodiversity and climate change (UNEP/CBD/SBSTTA/14/INF/21);

. *Stresses* that reducing wetlands degradation and loss can provide multiple benefits for biodiversity and reduce greenhouse-gas emissions;

. *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 water and coastal ecosystems and the important role of the services provided by inland water ecosystems, in ecosystem-based adaptation to climate change;

(b) Recognize the inter-dependence of the carbon and water cycles in climate change mitigation and adaptation activities and, in particular, the need to sustain the water cycle in order to ensure water security for ecosystems and sustain the carbon storage services they provide;

(c) Ensure that 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

(d) Take into consideration the adaptation and mitigation capacities of inland waters, specifically incorporating water and associated floodplain management considerations when developing climate change adaptation and mitigation strategies, within the framework of integrated river basin management;

(e) Ensure that climate change mitigation strategies minimize impacts on inland water ecosystems and give due regard to the integrated management of land and water;

Valuation and incentive measures

...

9. *Requests* the Executive Secretary to:

...

(d) Compile existing and develop further tools for

...

(ii) Addressing uncertainties, which limit the ability to project climate-change impacts on biodiversity, ecosystem services, inland waters, and land systems;

...

(f) Convene, in collaboration with the Secretariat of the United Nations Framework Convention on Climate Change ~~an~~ expert workshops, with the full and effective participation of experts from developing countries, on reducing emissions from deforestation and forest and wetland degradation in developing countries with a view to enhancing the coordination of capacity-building efforts on issues related to biodiversity and ecosystem-based carbon sequestration and the conservation of forest and wetland carbon stocks;

...

(i) With effective consultation with Parties and based on their views, identify, in collaboration with the Collaborative Partnership on Forests and other relevant expert organizations and stakeholders, possible indicators to assess the contribution of reducing emissions from deforestation and forest and wetland degradation to achieving the objectives of the Convention on Biological Diversity...;

...

Climate change and the biodiversity of dry and sub-humid lands

10. *Invites* Parties and other Governments and relevant organizations to develop down-scaled climate change models that combine temperature and precipitation information with multi-stressor biological models in order to better predict the impacts of drought on biodiversity, taking into account the uncertainty inherent in these models, especially in the case of long-term changes to the hydrological cycle, and the need for iterative vulnerability assessments and monitoring to enable adaptive management;

4.3 DRY AND SUB-HUMID LANDS

Proposed amendments to Doc. UNEP/CBD/SBSTTA/14/L.17: *Biodiversity of Dry and Sub-humid Lands: Follow-Up to Requests of the Conference of the Parties in Decision IX/17*

"*The Conference of the Parties*

...

4. *Further invites* Parties and other Governments, where appropriate, to:

…

(b) Integrate issues related to dry and sub-humid lands into relevant national strategies, plans and programmes, in particular, revised national biodiversity strategies and action plans, national action programmes to combat desertification, (NAPs), integrated water resources management plans, and national adaptation programmes of action (NAPAs) with a view to improving ~~improve~~ and harmonizing implementation where possible, with the full participation of indigenous and local communities;

…

(e) Develop and implement best-practice guides for integrated planning between dry and sub-humid lands and inland waters, ~~wetlands~~ with a view to contributing to the conservation and sustainable use of the biodiversity of dry and sub-humid lands;

…

(g) Better integrate the management of land and inland waters, including with respect to the recharge of aquifers, and through addressing inland waters over-abstraction and fragmentation, in order to prevent extreme drought conditions; adopt water allocation policies that take into account the need to safeguard environmental flows; and implement economic instruments that promote water use efficiency and conservation; and

(h) Promote the conservation of dry and sub-humid lands in the context of international water agreements and through the work of international and domestic river basin organizations;"

4.4 BIOFUELS

Proposed amendments to Doc. UNEP/CBD/SBSTTA/14/L.19: *Agricultural biodiversity – biofuels and biodiversity: consideration ways and means to promote the positive and minimize the negative impacts of the production and use of biofuels on biodiversity*

"*The Conference of the Parties,*

...

[*Recognizing* that given the scientific uncertainty that exists, and the recent information that has emerged, significant concern surrounds the potential intended and unintended impacts of biofuels on biodiversity and impacts on biodiversity that would affect socio-economic conditions, inland water flows, and food and energy security resulting from the production and use of biofuels [as well as impacts on land security] and on indigenous and local communities;]

[*Also recognizing* the need for improved monitoring, scientific assessment, open and transparent consultation, with the full and effective participation of indigenous and local communities, and information flow are crucial for the continuing improvement of policy guidance, and decision making, to promote the positive and minimize or avoid the negative impacts of biofuels on biodiversity and impacts on biodiversity that would affect socio-economic conditions, inland water flows, and food and energy security resulting from the production and use of biofuels [as well as impacts on land security];]

…

2. *Invites* Parties, other Governments and relevant organizations and stakeholders to examine, and as appropriate, to further develop … voluntary conceptual frameworks…; in further developing such voluntary conceptual frameworks, an effort should be made to focus the framework on the impacts of biofuel on biodiversity, and impacts on biodiversity that would affect socio-economic conditions, inland water flows, and food and energy security resulting from the production and use of biofuels, as decided by the ninth meeting of the Convention of the Parties in decision IX/2;

4.

Option A

[*Requests* the Executive Secretary, subject to the availability of financial resources, to:

(a) Compile [and analyse] information on tools [and develop a toolkit] for voluntary use consisting of available standards and methodologies to assess direct and indirect effects and impacts on biodiversity of the production and use of biofuels, in their full life cycle as compared to that of other types of fuels, and impacts on biodiversity that would affect socio-economic conditions, inland water flows, and food and energy security resulting from the production and use of biofuels [as well as impacts on land security];

…

(c) Disseminate the tools [and the toolkit] through the clearing-house mechanism and other relevant means in order to assist Parties, the business sector and relevant stakeholders in applying ways and means to promote the positive and minimize or avoid the negative impacts of biofuel production and use on the conservation and sustainable use of biodiversity and impacts on biodiversity that would affect socio-economic conditions, inland water flows, and food and energy security resulting from the production and use of biofuels [as well as impacts on land security];]

Option B

[*Requests* the Executive Secretary …. to compile, organize and disseminate information on tools for voluntary use … on ways and means to promote the positive and minimize the negative impact of biofuel production and use on biodiversity and impacts on biodiversity that would affect socio-economic conditions, inland water flows, and food and energy security…;]

…

7. *Invites* Parties, other Governments and relevant organisations to submit to the Executive Secretary experiences and results from assessments of biodiversity and of the impacts on biodiversity that would affect socio-economic conditions, inland water flows and food and energy security resulting from the production and use of biofuels...;

8. *Recognizes* the need to include ways and means to promote the positive and minimize or avoid the negative impacts of biofuel production and use in national plans, such as national biodiversity strategies and action plans (NBSAPs), integrated water resources management plans, and national development plans...;

9. *Invites* Parties to develop and implement policies that promote the positive and minimize or avoid the negative impacts on biological diversity, in particular by assessing … the impacts on biodiversity that would affect related socio-economic conditions, inland water flows and food and energy security resulting from the production and use of biofuels;

10. *Invites* Parties, acknowledging different national conditions, other Governments and relevant organizations:

…

(b) To elaborate supportive measures to promote the positive and minimize or avoid the negative impacts of the production and use of biofuels on biodiversity and impacts on biodiversity that would affect socio-economic conditions, inland water flows and food and energy security resulting from the production and use of biofuels, as a contribution to the achievement of the revised Strategic Plan of the Convention beyond 2010;

11. *Encourages* Parties and other Goverments to develop and implement land-use and water [policies] [strategies], acknowledging different national conditions, that promote the positive and minimize or avoid the negative impacts on biological diversity, in particular inland water biodiversity, in particular by addressing direct and indirect land-use and water-use changes affecting, amongst others, areas of high value for biodiversity and areas of cultural, religious and heritage interest, and by securing the flow regimes needed to maintain inland water ecosystems and the services they provide, as part of their policy frameworks for the sustainable production and use of biofuels [and bearing in mind effects on ecosystem services in a landscape/catchment perspective];

[12. *Urges* donor countries and agencies and relevant organizations to provide technical and financial support to developing countries ... to develop policy frameworks for the sustainable production and use of biofuels including land-use and water policies that promote the positive and minimize or avoid the negative impacts on biological diversity and impacts on biodiversity that would affect socio-economic conditions, inland water flows and food and energy security resulting from the production and use of biofuels, and to perform their impacts assessments of biofuel production and use at the national level;]

13. *Encourages* Parties and other Governments to develop and use environmentally-sound technologies, and support the development of research programmes and undertake impact assessments, which promote the positive and minimise or avoid the negative impacts of biofuel production and use on biodiversity and impacts on biodiversity that would affect related socio-economic conditions, inland water flows and food and energy security resulting from the production and use of biofuels;"

5. INLAND WATERS AND PROTECTED AREAS

Aside from providing essential services for biodiversity protection, climate change responses and sustainable development, protected areas can also make a meaningful contribution to inland waters conservation. Of the world's 100 largest cities, more than 40 percent rely on runoff producing areas that are fully or partially protected as sources for drinking water. In Venezuela, water supply from national parks provides total benefits at the value of US$112.5 million, over 30 years, for public irrigation systems on agricultural lands. The benefit to private irrigation schemes is estimated at US$202.5 million over the same period. In Peru, 60% of the hydroelectricity produced in the country comes from rivers in six protected areas, with a total approximate value of US$320 million.

There are approximately 120,000 terrestrial protected areas in the world covering about 13% of the land surface. Inland waters are critical for humanity. Yet, inland water ecosystems remain severely under-protected and underrepresented in that global network of protected areas. Protected areas have generally not been designed with the goal of protecting inland water systems. As a result, protection of inland waters is often an incidental and incomplete service of protected areas.

Furthermore, many protected areas are in the middle or lower portions of inland water systems. These areas – and the ecosystems they aim to protect – are often vulnerable to upstream activities external to those protected areas' boundaries and not directly affected by their management plans. This suggests that, in order to be effective, inland waters protected areas should be designed and managed within the framework of integrated river basin management and planning. Integrated river basin management is a form of the ecosystems approach, which countries have committed to implement through the CBD.

Finally, as per Doc. UNEP/CBD/SBSTTA/14/3, "the condition of many of even the premier sites [of inland waters protected areas] is degrading over time. There are also gaps in coverage of protected areas by specific wetland type," even though the total coverage of protected wetlands has increased considerably.

Comments and proposed amendments to Doc. UNEP/CBD/SBSTTA/14/L.5: *In-Depth Review of the Implementation of the Programme of Work on Protected Areas*

"The Conference of the Parties

A. Strategies for strengthening implementation

1. National level

1. *Invites* Parties to:

...

(d) Promote the application of the ecosystem approach that integrates protected areas into broader catchment, land and/or seascapes for effective conservation of biological diversity and to ensure sustainable use of protected areas;

...

2. Regional level

4. Invites donor countries, non-governmental organizations and other funding organizations to support regional initiatives, including marine and inland water protected areas, as well as regional initiatives and transboundary sites under the Ramsar Convention;

…

5bis. Encourages Parties to, in creating an enabling environment for transboundary cooperation, consider the adoption, ratification and implementation of international legal instruments, as well as the role of international natural resources management organizations in supporting the management of protected areas;

6. Encourages Parties to use existing international legal instruments, guidelines, best practices and tools to improve the effectiveness of transboundary protected-area cooperation as well as to explore the suite of standards to evaluate the quality of such cooperation;

3. Global level

7. …

(a) Continue to hold regional and subregional capacity-building workshops, with special attention to element 2, and other identified priorities with specific timetables for planning and funding, ~~developing~~ in cooperation with international natural resources management organizations and regional integration bodies ~~regional and subregional convention agreements~~, IUCN-World Commission on Protected Areas, technical networks and other partners;

...

B. Issues that need greater attention

...

2. Climate change

13. *Invites* Parties to:

(a) Achieve target 1.2 of the programme of work on protected areas by 2015, through concerted efforts to integrate protected areas into wider landscapes, catchment and seascapes and sectors, including through the use of connectivity measures such as the development of ecological networks and biological corridors including free-flowing rivers, where appropriate, and the restoration of degraded habitats and ecosystems ~~landscapes~~ in order to address climate-change impacts and increase resilience to climate change;

...

(e) ... link improved design and management approaches for comprehensive and integrated protected area systems (including buffer zones, corridors and restored habitats and ecosystems ~~landscapes~~) into national strategies and action plans for addressing climate change, including through ~~existing~~ regional and national adaptation strategies and plans;

...

6. Inland water protected areas

22. *Encourages* Parties to increase the coverage, quality, representativeness and connectivity where appropriate of inland water ecosystems and their key hydrological features in their protected-area systems through ~~the designation or extension of inland water protected areas and to maintain or enhance their resilience and sustain ecosystem services including through~~, *inter alia*:[5]

(a) Establishing and managing new protected areas and networks to conserve representative and intact inland water ecosystems, in order to maintain their resilience to climate change and sustain ecosystem services, including through the use of existing designation mechanisms available and being applied under biodiversity related Conventions, such as the World Heritage Convention and the Ramsar Convention on Wetlands;

(b) Modifying the boundaries of existing protected areas (e.g., for including headwaters or for including riparian buffers on both sides of a river that previously acted as the boundary), as feasible and necessary, in order to adequately protect inland water ecosystems and sustain ecosystem services;

(c) Integrating inland water considerations into the management plans of existing protected areas, including marine, where appropriate;

. *Encourages* Parties to implement a range of governance types for inland waters protected areas, such as indigenous and community conserved areas and transboundary protected areas, taking into account the need to safeguard environmental flows and secure adequate groundwater recharge.

. *Invites* Parties to consider designating priority river tributaries or river stretches as protected areas, in order to inform the sustainable planning of infrastructure development and preserving river systems as much as possible as 'free-flowing'."

...

[5] See IUCN Resolution 4.065, Freshwater biodiversity conservation, protected areas, and management of transboundary waters, *available at* http://intranet.iucn.org/webfiles/doc/IUCNPolicy/Resolutions/2008_WCC_4/English/RES/res_4_065_freshwater_biodiversity_conservation_protected_areas_and_management_of_transboundary_waters_.pdf.

9. Programme element 2 on governance, participation, equity and benefit-sharing

26. *Encourages* Parties to:

(a) Enhance coordination at the national level between the programme of work on protected areas and other related processes under the Convention on Biological Diversity, including, *inter alia*, inland waters, forests, marine, access and benefit-sharing and Article 8(j) working groups and the processes related to the Addis Ababa and Akwe: Kón Guidelines for exchange of information on implementation of these programmes and recommendations on possible joint actions for enhanced implementation;

For further information, please contact:

Lina Barrera
Director, Biodiversity and Ecosystem Services Policy
Center for Conservation and Government
Conservation International
Tel: +1 202 258 2187
Email: lbarrera@conservation.org

Sarah Davidson
International Freshwater Policy Advisor
The Nature Conservancy
Tel: +1 703 841 8183
Email: sdavidson@tnc.org

Rolf Hogan
CBD Advisor
WWF International
Tel: +41 22 364 0661
Email: rolfhogan@yahoo.com

Kemi Seesink
Senior Policy Officer
Wetlands International
Tel: +31 318 660922
Email: kemi.seesink@wetlands.org