

**TRANSBOUNDARY WATERS MANAGEMENT, BIODIVERSITY AND HUMAN WELL-BEING –  
THE ROLE OF THE CONVENTION ON BIOLOGICAL DIVERSITY**

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The Convention on Biological Diversity is the world's premier international framework for the conservation and sustainable use and equitable benefit sharing of biodiversity, the variety of life on earth. Arising from the Earth Summit in Rio de Janeiro in 1992, the convention currently has 191 Parties, five States short of universal membership, with three of those currently undergoing accession. The ninth meeting of the Conference of the Parties to the CBD, Bonn, Germany, 19 – 30 May 2008, adopted decision IX/19 which strongly supported the need for strengthened international cooperation regarding the allocation and management of water, including urging Parties to ratify and implement international watercourse agreements, as a means to implement the provisions of the CBD in this area (<http://www.cbd.int/doc/decisions/cop-09/cop-09-dec-19-en.pdf>). This recent decision adds considerable legal and political weight to ongoing efforts to improve regulatory frameworks for international cooperation regarding water. It also broadens the arguments for such cooperation by highlighting linkages between transboundary watercourse management, biodiversity conservation and sustainable use and human well-being.

Here we explain why biodiversity conservation and sustainable use present a powerful argument to manage water better, how regulatory frameworks to achieve this can be improved and why doing so fulfills commitments made under the CBD. A more detailed discussion of these topics was presented at the aforementioned Conference of the Parties (Secretariat of the Convention on Biological Diversity 2008).

The equitable and sustainable allocation and management of water are crucial for maintaining the ecological function of freshwater water ecosystems. These functions sustain the significant services that these ecosystems provide to support human well-being; biodiversity underpins the functioning of these ecosystems and therefore the services provided (Millennium Ecosystem Assessment 2005). Loss of biodiversity, therefore, translates into a threat to sustained human well-being. Globally, these ecosystems are in serious decline due largely to the pressures placed upon water by its various users, and the rate of loss of biodiversity in them surpasses that from other major biomes by a considerable margin (Secretariat of the Convention on Biological Diversity 2006).

Indisputably, the major impact of climate change is on the hydrological cycle, and therefore on freshwater ecosystems and the services they provide, and these systems need to be managed better in order to meet the challenges of climate change (Breels and Coates 2007). The future scenario is for rapidly increasing demands for water in order to supply escalating human needs under rapidly changing conditions. These factors urgently call for better allocation and management of water if aquatic ecosystems are to be used wisely to achieve sustainable human development. Where water is shared between two or more countries, cooperation between the States concerned for enabling transboundary integrated water resources management has a critical role to play. This has been clearly recognised in a number of important undertakings or commitments, including the 2006 Hashimoto Action Plan supporting the achievement of the Millennium Development Goals, the World Summit on Sustainable Development, and the 2005 World Summit Outcome.

The provisions of the CBD already address the broader issues and needs, particularly through the programme of work on the biological diversity of inland water ecosystems adopted by decision VII/4, annex (<http://www.cbd.int/decisions/?m=COP-07&id=7741&lg=0>). But these general provisions need

strengthened regulatory frameworks to assist in their implementation at national and international level. In this context, we investigate the role of the UN Convention on the Law of the Non-Navigational Uses of International Watercourses (UN Watercourses Convention) and the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (UNECE Watercourses Convention) for supporting and strengthening the implementation of the CBD towards the conservation, sustainable use and equitable sharing of biological resources, in particular in regards to the CBD programme of work on the biological diversity of inland water ecosystems.

The UN Watercourses Convention is a global and flexible framework instrument prepared and negotiated under the auspices of the United Nations to govern the use, management, and protection of international watercourses. The UN Watercourses Convention was adopted by an overwhelming majority and under the sponsorship of 38 States at the UN General Assembly in May 1997. The convention is open for accession by all States and regional economic organizations. Counting the current 16 contracting States, Article 36 of the convention requires the deposit of 35 instruments of ratification or accession for its entry into force. Once in force and widely implemented, the UN Watercourses Convention will reinforce inter-State cooperation at the basin level, significantly improving global water governance, and thus enhance the legal regime under the CBD for conserving and sustainably using inland water biodiversity.

The UNECE Water Convention was adopted in 1992 among the States that are members of the United Nations Economic Commission for Europe (UNECE) and became effective four years later. As the convention stands today, only UNECE Member States can become Parties to it; 35 of the 56 Member States, plus the European Community, have done so. In 2003, the Parties to the convention adopted amendments opening it for accession by non-UNECE Member States. The amendments, however, are not yet in effect. The convention sets out keystone principles and provisions for the protection and sustainable use of transboundary waters and their resources. In creating a consistent and detailed legal framework with high-level standards and stringency for transboundary water management, the UNECE Water Convention has made an important contribution to the codification and progressive development of international law in this field. Its 2006 recommendations on payments for ecosystem services (PES) in integrated water resources management (IWRM) are an example of the convention's important linkages and synergies with the CBD, especially with respect to the implementation of the ecosystem approach in the context of shared water resources.

Using such regulatory frameworks to improve international cooperation and coordination regarding transboundary watercourses can provide significant co-benefits for riparian States. In this process the conservation and sustainable use of biodiversity is not just an end in itself, but best regarded as a means to sustain ecosystem service provision for the equitable benefit of all. For lakes, all riparian States tend to suffer from unsustainable land use practices no matter where they occur in the catchment (e.g., land erosion/siltation and excessive nutrient loading/eutrophication lead to reduced water quality to the detriment of all). For rivers, due to their more linear (upstream-downstream) nature, riparian States may have different interests but they are not independent. For example, States need to cooperate over managing the impacts of water use, such as water extraction and dam building, on fisheries, including for species migrating between States and to sustain inter-State food dependency; collaboration is required regarding sustaining water quality (poor water quality is a major driver of biodiversity loss); and agriculture needs to become more sustainable by, for example, maintaining the ability of wetlands to recycle excessive nutrient inputs (particularly nitrogen). The latter is a good example of how, for rivers, downstream States can provide ecosystem services for upstream States, demonstrating the interdependency of States and the need to manage these ecosystems holistically. Similarly, upstream States can improve service provision to downstream States by, for example, rehabilitating watersheds to improve water quality. Naturally, there are complex economic and political issues regarding inter-State payments for these services. But these challenges can be best met through improved regulatory frameworks in the manner suggested.

The UN Watercourses Convention and the UNECE Water Convention share common goals with the CBD. All three conventions promote international cooperation as a crucial prerequisite for Parties to achieve their goals. However, the CBD lacks specific rules and principles governing cooperation between watercourse States and promoting the equitable and reasonable use and management of international watercourses. This represents a problem for aquatic biodiversity conservation in transboundary watersheds and the UN Watercourses Convention and the UNECE Water Convention could help address that regulatory gap.

Biodiversity considerations add significant weight to the case for the wider adoption and implementation of the UN Watercourses Convention and the UNECE Water Convention and both are mutually supportive of the CBD. Moreover, the entry into force of the UN Watercourses Convention and of the 2003 Amendments to the UNECE Water Convention would be important contributions to the CBD target, to significantly reduce the rate of loss of biodiversity by 2010 for the benefit of all life on earth, during the International Decade for Action “Water for Life” 2005-2015. Decision IX/19 of the Conference of the Parties to the CBD strongly endorses this position. It confirms that the sustainable use of transboundary waters and their living resources, to be achieved in part through enhanced international cooperation using the aforementioned regulatory frameworks, is very much a biodiversity and related human-welfare issue requiring urgent action. Adoption of this decision by the Parties to the CBD provides strong political support to compliment other measures to achieve the goal of the wise use of transboundary waters through enhanced international dialogue and consensus building.

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