

Overview of the global workshop on ecosystem-based adaptation in transboundary basins

Introduction

Water-related ecosystems can be significantly impacted by climate change. At the same time, healthy and sustainable ecosystems increase our resilience to the adverse impacts of climate change because of the services they could provide. Ecosystem-based adaptation (EbA) is one of the nature-based solutions which uses biodiversity and ecosystem services as part of an overall adaptation strategy to help populations to adapt to the adverse effects of climate change.

Adopting ecosystem-based approaches are central to achieving the 2030 Agenda for Sustainable Development, as they offer a means to address the challenges posed by climate change while simultaneously delivering vital benefits to the environment, society and economy. Ecosystem-based adaptation (EbA) is promoted by global agreements including the Ramsar Convention, the Convention on Biological Diversity, the United Nations Framework Convention on Climate Change and the Paris Agreement, and the Sendai Framework for Disaster Risk Reduction.

Over 60% of the global freshwater flow occurs in transboundary basins. Transboundary water cooperation is thus a prerequisite for ecosystem and climate resilience and sustainable water management. Ecosystem-based adaptation is in many cases effective from a basin perspective as it can bring benefits for all riparians.

The Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention) addresses conservation and restoration of ecosystems as well as application of the ecosystem approach as a part of sustainable water resources management on a transboundary level. This workshop is an example of ecosystem-based adaptation support activities provided by the Water Convention.

Experiences and good practices from basins across the world

In order to build capacity on EbA, UNECE in cooperation with the International Network of Basin Organizations (INBO), the Alliance for Global Water Adaptation (AGWA), the International Union for Conservation of Nature (IUCN) and World Wildlife Fund (WWF) and under the leadership of the Netherlands and Switzerland organized a global workshop “Ecosystem-based Adaptation in Transboundary Basins” from 29 to 30 April 2019 in Geneva. The workshop was organized in the framework of the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention), serviced by UNECE.

The workshop aimed to analyse EbA in water resource management, by sharing experiences from transboundary and national basins around the world. It brought together more than 100 participants across the world from Australia to Chile to review tools, good practices, case studies and financing mechanisms focusing on transboundary aspects of ecosystem-based adaptation.

In her opening remarks, Ms. Sibylle Vermont, from the Swiss Federal Office of the Environment and co-chair of the workshop, explained how Switzerland in the past deforested slopes, channeled rivers and built ever higher dikes for the benefit of agricultural production, among others. With the growth of infrastructure and inhabitants in the lowlands this led to increasing floods in the converted floodplains. In response, the current Swiss approach is focusing on ecosystem restoration and making space for water, with funding allocated by the state and local cantons. Her lesson to the participants was that ecosystem restoration can be very costly and it is therefore highly recommended to focus on sustainable ecosystem management from the beginning. Later in the day,

during a much appreciated field visit to the Rhône river 'Third Correction' programme focused on restoration of the river for natural flood mitigation, participants had the opportunity for a first-hand experience of the Swiss river management activities.

Introducing the United Nations decade on ecosystem restoration 2021-2030, Mr. Antonio Canas Calderon from the Ministry of Environment and Natural Resources from El Salvador, highlighted how ecosystem services contribute directly to poverty reduction and SDGs. He also stressed how watersheds are interdependent, and lower parts of the basin depend on the upper parts, making holistic approaches such as ecosystem-based adaptation particularly important in transboundary basins.

The workshop evidenced that multiple experiences on ecosystem-based approaches in water resource management exist from basins across the world. A representative of Costa Rica presented the transboundary Sixaola basin management which relies on a mosaic of protected areas combined with sustainable agricultural production areas and strong participation by indigenous people's originations in the Binational River Commission. In Europe, the International Commission for the Protection of the Danube River has developed a transboundary climate adaptation strategy which was recently revised. In certain parts of the basin, river restoration works are implemented through a public-private Living Danube partnership including a Coca-Cola bottling company and WWF. The case-study from the Mekong basin showed how the concept of free flowing rivers helps to make the rivers and their deltas in particular more resilient to climate change.

A representative of the Niger Basin Authority showcased an example of ecosystem-based adaptation integration into the transboundary climate resilience plan of the Niger river, covering 9 countries and with funding from the Green Climate Fund. A further example of the Niger sub-basin, the Mekrou river, showed how ecosystem restoration activities are implemented at a local level to benefit climate adaptation and overall local development.

A growing selection of tools, guidance, assessment methodologies, and communities of practice on EbA approaches are already available for practitioners and policy-makers, and some of these are targeting specifically the water resource management. For example, IUCN together with partners is developing 'EbA qualification criteria and quality standards' (<https://www.iucn.org/news/cambio-climático/201705/how-define-eba-practical-framework>), guidance on strengthening the evidence and assessing effectiveness of EbA (<https://www.iucn.org/theme/ecosystem-management/our-work/ecosystem-based-adaptation-and-climate-change/eba-strengthening-evidence-and-informing-policy>) and CLIMA checklist & tool for governance for EbA (<https://solucionesabe.org/herramienta-clima/>), while AGWA and partners have recently launched a risk-assessment tool 'Climate Risk Informed Decision Analysis CRIDA'. Ecosystem management and river resilience measures presented during the workshop included a suite of natural water retention measures, free flowing rivers, living waterways and International Resilient River Blueprint.

The workshop dedicated one full session on financing. Additionally, several presentations highlighted the cost-effectiveness of adopting ecosystem-based approaches, due to the multiple benefits ecosystems provide. For example, Ms. Elena Višnar-Malinovská from the European Commission, DG Clima noted how in the EU nature-based solutions are recognized as multi-purpose, flexible and cost-effective approach to climate adaptation. Mr. Greg Browder from the World Bank recommended the use of multi-actor multi-criteria analysis rather than cost-benefit analysis in order to capture all benefits provided by ecosystems, including those that are non-monetary.

The key challenges in implementing EbA identified by the participants at the workshop relate to inadequate governance and regulatory frameworks, lack of mainstreaming into adaptation plans and

strategies, quantifying and monitoring environmental performance, insufficient valuation of the multiple benefits provided by ecosystems, resistance to change to new approaches, and accessing sufficient financial resources.

The workshop was followed by the 10th meeting of the Task Force on Water and Climate, held on 1 May, where participants discussed inputs to global processes such as the Climate Action Summit in September 2019, the World Water Day in 2020 focused on water and climate, and how to mainstream water into the revised Nationally Determined Contributions 2020 under the Paris Climate Agreement.

Conclusions

- There is a need to aim for a low-carbon and climate resilient world, with substantial cuts in global greenhouse gas emissions and affirmative adaptation action.
- Integrating ecosystem health and management is essential for long-term sustainability of climate adaptation plans and programs, to address the multiple challenges facing the water resource management, and for achieving the sustainable development goals.
- The ecosystem approach provides benefits to the society, to the economy and to the environment. These include climate resilience, disaster risk reduction, water quality and availability, food security, raw materials, carbon storage, biodiversity, recreation, etc. These dimensions should be considered through adequate valuation of all benefits.
- Implementation of ecosystem-based adaptation offers an opportunity to initiate and/or strengthen transboundary cooperation and contribute to regional peace and integration.
- Multiple experiences on ecosystem-based approaches in water resource management exist from basins across the world and should be shared.
- Further methodologies and criteria still need to be developed to understand better the benefits and limitations of EbA as well as its application in transboundary basins.
- Ecosystem approach is acknowledged and seen as beneficial by several financial institutions and government agencies; innovative financial instruments are also emerging such as climate bonds and insurance sector. The need to mobilize funding from different sources as well as to allocate funds from state budgets for EbA was expressed.
- Key elements of successful planning and implementation of ecosystem-based adaptation in transboundary basins are appropriate policy, funding and knowledge, and above all adopting a landscape approach in planning and engaging in multi-stakeholder processes at the basin level including building partnerships between communities, governments, civil society and development agencies.
- The workshop called on participants to collaborate with other international agreements such as the United Nations Framework Convention on Climate Change (UNFCCC), the Ramsar Convention, the Convention on Biological Diversity and the Sendai Framework for Disaster Risk Reduction 2015-2030 as opportunity to work together for ecosystem-based adaptation.

More information on the workshop, presentations and background reading are available at:
<https://www.unece.org/index.php?id=50193>