Submission by the United Nations Economic Commission for Europe (UNECE)

Information on recent work in the area of ecosystems and water resources to inform adaptation planning and actions at the regional, national and sub-national levels submitted at the invitation of the Subsidiary Body for Scientific and Technological Advice (SBSTA) at its 44th session.[1]

Background

1. Water is the primary medium through which climate change influences ecosystems and thus the livelihood and well-being of societies. As nearly 60% of rivers and aquifers in the world cross national boundaries, transboundary cooperation is necessary to prevent negative impacts of unilateral activities and to support the coordination of adaptation measures at the river-basin or aquifer level and joint development of more cost-effective solutions. It is also essential to make sure they offer benefits to all riparian Parties, for example by sharing the costs and benefits of adaptation measures or by reducing uncertainty through the exchange of information. Transboundary cooperation can broaden our knowledge base and enlarge the range of measures available for prevention, preparedness and recovery. The need for cooperation in climate change adaptation can even be an incentive for cooperation in transboundary basins.

2. Ecosystem-based adaptation measures are beneficial from a transboundary perspective since they consider the basin as an ecosystem and usually often do not have transboundary impacts, but instead can have numerous co-benefits, for example through the maintenance and enhancement of ecosystem services crucial for livelihoods and human well-being, such as clean water, water regulation and habitat, recreational opportunities and food. Examples of ecosystem-based approaches in the water sector include disaster risk reduction through flood regulation and storm-surge protection, the use of aquifers as water storage mechanisms rather than above-ground built storage and the formal integration of riparian forests within water quality and purification processes.

Description of relevant activities and collaborating partner institution/s

2. The UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention) provides a unique legal and intergovernmental framework for supporting transboundary cooperation, also in climate change adaptation. As of 1 March 2016, all UN Member States can accede to the Convention. The Water Convention itself promotes the ecosystem approach since it obliges Parties to prevent, control and reduce transboundary impacts and to ensure conservation and, where necessary, restoration of ecosystems. Several activities on ecosystems have been implemented under the Convention.

3. The work under the Water Convention includes activities on adaptation to climate change in transboundary basins, transboundary flood risk management and strategic frameworks and instruments promoting transboundary cooperation, adaptation and disaster risk reduction. These activities are implemented at the global, regional and national levels.

4. The Convention's Task Force on Water and Climate, currently led by the Netherlands and Switzerland, has developed one of the first guidance documents on water and climate already in 2008-2009 which provides step-by-step advice on the assessment of the climate change impacts on water quantity and quality and designing and implementing appropriate adaptation strategies.[2] The Task Force meets usually every year and organizes transboundary global adaptation workshops with many partners focusing on specific adaptation issues and attracting participants from all around the world. These meetings and the online portal constitute together a

1 At its 44th session, the SBSTA invited Parties, NWP partner organizations and other relevant organizations to submit, by 25 January 2017, information on: lessons learned and good practices in relation to adaptation planning processes that address ecosystems and interrelated areas such as water resources; lessons learned and good practices in monitoring and evaluating the implementation of ecosystem-based adaptation; and tools for assessing the benefits of mitigation and adaptation to enhancing resilience and emission reductions that ecosystem-based adaptation provides.

2 Available in English, French, Russian and Spanish from http://www.unece.org/index.php?id=11658

platform for exchanging experience on adaptation in the transboundary context.[3] Ecosystem-based adaptation is often discussed at these workshops (exchange of good practices in this field, practical exercises etc).

4. The Global network of basins working on climate change adaptation, established by UNECE in cooperation with the International Network of River Basins (INBO) in 2013, promotes experience and knowledge exchange in the fields of disaster risk reduction and climate change adaptation, especially in transboundary basins. Currently the Global network includes 14 member basins, including from outside the UNECE region, such as Chu-Talas, Dniester, Neman, Rhine, Mekong, Niger, Sava, Congo, and Senegal. The network members work together to develop solutions for water management that would reduce risks of natural disasters, among other benefits.

5. Collecting experiences from the network and beyond, in 2015, UNECE in cooperation with INBO prepared a publication "Adaptation to climate change in transboundary basins: lessons learned and good practices".[4] It features 63 lessons learned that provide advice on how to develop a joint adaptation strategy in transboundary basins, while recognizing that there are differences in the level of progress in transboundary cooperation and climate change adaptation in different basins. A number of lessons are from projects related to ecosystem-based adaptation and ecosystem restoration.

6. Since 2010, the Task Force facilitates transboundary adaptation through a programme of pilot projects which support the development of transboundary vulnerability assessments and adaptation strategies. Pilot projects are/ have been implemented by UNECE mostly in the framework of the Environment and Security Initiative (ENVSEC) in cooperation with partners such as OSCE and UNDP in the following river basins:

1) Chu Talas Basin, shared by Kazakhstan and Kyrgyzstan, implemented by UNECE, in cooperation with an UNDP GEF project.
2) Dniester Basin, shared by the Republic of Moldova and Ukraine, implemented by UNECE and OSCE.
3) Neman Basin, shared by Belarus, Lithuania and the Russian Federation, implemented by UNDP and UNECE.
4) Sava basin, shared by Bosnia and Herzegovina, Croatia, Serbia, Slovenia in cooperation with the Sava River Commission (project ended in 2014).
5) Dauria going dry

Results:

7. The pilot projects strengthened the capacity of countries and basins to adapt to climate change and created positive examples demonstrating the benefits of and possible mechanisms for transboundary cooperation on adaptation. A common understanding on how to adapt to climate change at the basin level has been achieved in the pilot projects on the Chu-Talas, Dniester, Neman and Sava Basins. The programme of pilot projects has led to the preparation of some of the first transboundary adaptation strategies worldwide. Such strategies were developed in a consultative process in the Dniester and Neman basins, and endorsed by the basin stakeholders. For instance, the Strategic Framework for Adaptation to Climate Change in the Dniester River Basin includes consideration of the ecosystems-based adaptation measures.[5] In the Neman basin, the project has led to a revival of transboundary cooperation between Lithuania and Belarus.

8. In the Dniester basin, adaptation measures beneficial from the transboundary perspective have been implemented including activities on ecosystems-based flood management. In spring 2016, a pilot restoration project for a small watercourse connecting the Dniester floodplain and the main course of the Dniester delta in the Lower Dniester National Nature Park was conducted. The project supported the restoration of the physical connection (water exchange) between the Dniester per se and the floodplains in a part of the Dniester delta (Zastoyny yerik), which was previously broken by the road Odessa-Reni. This was done by silt and vegetation extraction of the historical connecting channel accompanied by creation of the closures, islands and a shallow reservoir at the end of the channel.[6] In addition, a drawing contest for children was organized, dedicated to the

[3] https://www2.unece.org/ehlm/platform/display/ClimateChange/Welcome
[4] Avaiable in English, French and Russian from http://www.unece.org/index.php?id=39417&L=0
[5] Available from http://dniester-basin.org/ru/materials/navodneniya-i-izmenenie-klimata/
[6] For details see http://www.osce.org/secretariat/246376

topic of ecosystem restoration as a measure to adapt to climate change. Reforestation was also conducted in order to reduce flood damage.

9. In the Dauria going dry project on the Amur basin, an initial analysis was conducted and recommendations for basin-management were prepared for the transboundary Kherlen River Basin focusing on ecosystem-based adaptation issues and avoiding negative transboundary impacts (2014-2015). In addition, ecosystem-based measures for climate change adaptation and flood risk reduction were assessed by preparing reports such as the first report on strategic assessment of river and wetland conservation and management in the light of climate adaptation in Dauria: "Adaptation to climate change in the river basins of Dauria: Ecology and Water Management" (in Russian, English and Chinese).

Key challenges and lessons learned:

- Transboundary cooperation in climate change adaptation is particularly needed for coordinating impact and vulnerability assessments and adaptation strategies at the basin level. Riparian countries need to agree on the overall directions for adaptation measures, while measures are usually implemented at the national and/or local levels. These steps can help to improve trust and willingness to cooperate between riparian countries. Cooperation on climate change adaptation can thus motivate transboundary water cooperation in general, as shown by some pilot projects.

- It is important to establish links between the political and experts' level, e.g. through creation of a working group and regular meetings.

- Institutional and cultural differences can be overcome through focusing on less-political common interests, such as biodiversity conservation, expert cooperation etc.

- While preparing vulnerability assessment and adaptation strategies, it can be very useful to implement already some low- and no-regret adaptation measures involving the population: ecosystem- based adaptation measures can be suitable in this case since they involve local citizens, have co-benefits and often do not require large funding.

- It is difficult, but important to link basin-wide adaptation activities to the national level, need for coordination and mainstreaming. National adaptation (and mitigation planning) documents (NDCs, NAPs etc.) can also have transboundary dimensions. It can therefore be useful to cooperate with neighbouring countries in developing these documents. Existing transboundary institutions such as river basin organizations can provide a platform for such coordination and cooperation, but also for supporting their member states in adaptation issues.

Future plans

- Continuation of the mentioned pilot projects
- Global workshop on water scarcity, droughts in relation to both transboundary basins and sanitation (12-13 December 2017)
- Training on developing project proposals for climate change adaptation in transboundary basins in cooperation with banks, such as EIB, World Bank etc. (May 2017, Africa)
- Development of a words into action guide on disaster risk reduction, river basin management and transboundary cooperation
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Conclusions:

UNECE activities on jointly adapting water management to climate change in transboundary basins have clearly shown the benefits of such cooperation and the added value of ecosystem-based adaptation, such as involvement of the local population and awareness-raising, including youth. Ecosystem-based adaptation measures such as wetland restoration or reforestation should thus be included in basin-wide planning documents such as transboundary adaptation strategies, NDCs, river basin management plans etc.
Finally, the Water Convention provides an intergovernmental platform supporting countries with the above issues through guidance, exchange of experience and projects on the ground.