

# Global Workshop on Ecosystem-based Adaptation in Transboundary Basins

29-30 April 2019

## Marketplace of case-studies and tools in ecosystem-based adaptation

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| <b>Round Table Nr 1</b>   | Presenter: <i>Ms. Oxana Nikitina, WWF-Russia</i> | <b>Round 1: Russian</b><br><b>Round 2: English</b> |
| <p><b>Adaptation to floods in the Amur River basin: considering ecosystems</b></p> <p>The Amur-Heilong flows through Russia, China and Mongolia. The catastrophic flood took place in its basin in July to September 2013.</p> <p>The Integrated Flood Risk Management System developed separately by two countries consists primarily of engineering measures and cannot provide adequate adaptation to floods. An effective Plan should allow comparing potential economic effects of various measures to minimize the risks and adapt the socio-economic systems to the environmental conditions. The Plan should take into account the floodplains potential to accumulate flood waters, as well as the objectives to preserve biodiversity and sustain ecosystem functions.</p> <p>After the flood, the Russian government appealed to assess an option of developing flood-control hydropower. Meanwhile, ecosystem services of floodplains properly managed for flood retention are lower than costs of flood-retention reservoirs. During the 2013 flood, the retention capacity of floodplain stretches of the Amur and its tributaries was 130 cubic kilometers, which was higher than the volume of any existing or proposed 6-8 hydropower reservoirs.</p> <p>Biodiversity conservation is often achieved by the establishment of protected areas, which by their legal regime are well suited to preserve natural flood retention areas from undue development. This shows a potential for synergy between biodiversity conservation and flood risk reduction.</p> |  |  |

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| <b>Round Table Nr 2</b>   | Presenter: <i>Ms. Oksana Lipka, WWF-Russia</i> | <b>Round 1: English</b><br><b>Round 2: Russian</b> |
| <p><b>Links between reforestation, river flow and climate change adaptation in the Ili-Balkhash basin</b></p> <p>Kazakhstan's Almaty Region is becoming hotter and drier with climate change. The transboundary Ili River (China and Kazakhstan) is the main water source for Lake Balkhash, the second largest saline lake in the world. For today more active glacier melting due to climate changes contributes to a higher river flow. But in future the glaciers can deplete, the temperature will increase, population and needs in water and food will grow in both countries. If Lake Balkhash's level drops, water supplies, agriculture, fisheries and human health will be seriously affected. The degraded Ili River delta no longer regulates outflow to the lake effectively due to deforestation. This project will restore the forest in 25% of the delta so that it can again retain groundwater and release it gradually, helping maintain lake level in extremely dry times. This will protect over 2,000,000 climate-vulnerable people and sequester over 11 million tons CO<sub>2</sub>e. The project will be executed by WWF partnering with government, communities and other organizations.</p> |  |  |

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| <b>Round Table Nr 3</b>   | Presenter: <i>Mr. Serik Bekmaganbetov, International Fund for Saving the Aral Sea in the Republic of Kazakhstan</i> | <b>Round 1: Russian</b><br><b>Round 2: Russian</b> |
| <p><b>Examples of ecosystem-based adaptation in the transboundary river Syr Darya</b></p> <p>An ecosystem based approach to climate change adaptation is applied by Kazakhstan to the middle and lower reaches of the Syr Darya river and the Northern Aral sea. At the end of the XX century the 4th largest lake in the world almost disappeared. The Aralkum desert was formed covering an area of 6 million hectares, putting people and nature in great danger. The projects "Regulation of the Syr Darya river bed and preservation of the Northern part of the Aral sea" aiming at expanding the forest cover of the Aral sea region, preserving biodiversity, and developing an integrated river basin management were implemented. As a result, biodiversity improved, protected areas were established, jobs were created, local communities and media became involved. New forms of public engagement were introduced, and ecological campaigns, expeditions, study tours along the Syr Darya river and to the Small Aral sea were organised. New projects were initiated.</p> |   |  |



The Center for Adaptation of Wild Animals to Climate Change in the Aral Sea region, and the Center for Science and Tourism (ecotourism) have been established. In addition, fish protection device and an atlas of interactive electronic maps of the Aral sea region on the basis of GIS technologies were developed. A project aiming to create a "green belt" along the Aral coast is in the process of implementation. All activities were carried out with the donor support and funding from the government. However, what has been done is figuratively "a drop in the sea". The problems of desertification, land degradation, water scarcity have been aggravated and have not been addressed fundamentally. To maximize derived benefits from the activities, the Central Asian countries have to implement integrated and multidimensional projects synchronously and logically stepwise on different parts of the transboundary rivers of the Aral sea basin, regardless of state borders. It is possible to adapt effectively to climate change through coordinated actions and joint efforts.

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| <b>Round Table Nr 4</b> | Presenters: <i>Mr. Andrian Delinschi, Ministry of Agriculture, Regional Development and Environment of the Republic of Moldova</i> | <b>Round 1: Russian<br/>Round 2: Russian</b> |
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**Ramsar sites in the transboundary (Dniester and Prut) basins for climate change adaptation and disaster risk reduction**

The transboundary Dniester river basin (shared by Moldova and Ukraine) and the Prut river basin (shared by Moldova, Romania and Ukraine) are affected by climate change, especially in the lower reaches of the basins. There are hydropower facilities producing electricity in the upper and middle reaches of both basins. Management plans for both basins have been developed and approved at the government level with the support of external partners and local experts. Currently, the plans are being implemented; an ecosystem-based approach has been considered during the development and implementation stages. The ecosystem-based approach was chosen as it is the most suitable one for these basins.

The Ministry of Agriculture, Regional Development and Environment, the Water Agency of Moldova, the Agency for Geology and Mineral Resources (groundwaters), the Institutes of the Academy of Sciences of Moldova (biology, ecology and geography), specialized non-governmental organizations helped to develop the basin management plans. In addition, external partners supported the development of the plans through different projects by inviting various experts.

The ecosystem-based adaptation was used mainly in protected areas (scientific reserves, Ramsar wetlands, etc.) for their ecological restoration. Financial resources of internal funds (the National Ecological Fund) and projects supported by external donors were used. The activities include, inter alia: reforestation, protection at legal level (development of regulations), enlargement of the area of protected wetlands (enlargement of reed and cane areas increases self-purification capacity of rivers). The plans were developed to cover a period of 5 years, after which new plans are to be developed for the same period.

The major problem is the lack of financial resources at the national level; therefore, there is a high dependence on external partners. It is important to involve neighbouring countries to address common challenges in transboundary basins. Recommendations for other basins include the development of joint basin management plans and the establishment of a joint working body (e.g. river Commission).

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| <b>Round Table Nr 5</b> | Presenter: <i>Mr. Rafik Ali Saleh, Arab Centre for the Studies of Arid Zones and Dry Lands</i> | <b>Round 1: English<br/>Round 2: English</b> |
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**Adaptation to the impacts of climate change in the Arab region**



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| <b>Round<br/>Table Nr 6</b>   | Presenter: <i>Ms. Julie McLellan, Healthy Land and Water</i> | <b>Round 1: English<br/>Round 2: English</b> |
| <p><b>Building basin wide resilience through ecosystem-based adaptation in the Lockyer Valley, southeast Queensland, Australia</b></p> <p>Queensland is the most disaster-prone state in Australia, swinging from droughts to floods - often in the same year. Recent events have seen SEQ significantly flooded 3 times in 7 years (2011, 2013 and 2017), combined with numerous local flash flooding events - destroying lives, livelihoods, property, built assets and the environment.</p> <p>The case study to be discussed at the workshop demonstrates how taking an ecosystem-based management and a basin wide approach delivers multiple benefits. The case outlines the triggers for action, the business case and the governance and legislative framework. The workshop will liken the process of investment in natural asset to any other built asset. How do we define the need? What are the co-financing opportunities? How do we achieve transboundary support?</p> <p>A short video will be shown demonstrating what can be achieved by taking a co-ordinated trans-boundary approach. This will be followed by an overview of the project and the benefits realised. Discussion will then focus on participants dissecting the case study to better understand the challenges to mainstreaming these types of interventions, what can be done differently, and how does building resilience in our natural assets support us to adapt to climate change.</p> <p><a href="https://www.dropbox.com/s/i8zt66kr6h438o9/Ports%20Australia%20-%20Partnering%20for%20the%20health%20of%20the%20Brisbane%20River.mp4?dl=0">https://www.dropbox.com/s/i8zt66kr6h438o9/Ports%20Australia%20-%20Partnering%20for%20the%20health%20of%20the%20Brisbane%20River.mp4?dl=0</a></p> |  |  |

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| <b>Round<br/>Table Nr 7</b>  | Presenter: <i>Mr. Fawzi Bedredine, Senegal River Basin Development Authority (OMVS)</i> | <b>Round 1: French<br/>Round 2: French</b> |
| <p><b>Restoration in the Fouta Djallon Highlands</b></p> <p>The Organization for the Development of the Senegal River (OMVS) owes its existence to the Senegal River which has its source in the Fouta Djallon Highlands (325.000 km<sup>2</sup>). The geographic location of the Fouta Djallon Highlands endows it with exceptional significance. It is the main 'water reservoir' of West Africa.</p> <p>From a biodiversity point of view, the Fouta Djallon is a sanctuary. A number of rare or endemic species find refuge there. At the same time, the development issue of the Fouta Djallon is dominated by the accelerating degradation of its natural resources due to the cumulative effects of climate change.</p> <p>In response to the persistent deterioration of these environments, the OMVS has developed an adaptation programme which main objective is conservation of this valuable ecosystem heritage.</p> <p>The following activities aim at creating ecological and socio-economic conditions that will help reverse the deforestation and soil erosion trend. They mainly include:</p> <ul style="list-style-type: none"> <li>- information, education and communication (IEC) with communities;</li> <li>- restoration of large areas through reforestation;</li> <li>- setting up of stone barriers;</li> <li>- establishment and/or restoration or forest nursery;</li> <li>- dissemination of improved stoves;</li> <li>- protection of headsprings through access restriction, reforestation and water conservation/soil protection;</li> <li>- capacity-building activities (awareness raising, training) combined with technical and biological measures against deforestation and soil erosion.</li> </ul> <p>This programme was formulated together with the beneficiaries and is implemented by NGOs. The budget is 1.5 million euros.</p> |   |  |



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| <b>Round Table Nr 8</b>   | Presenters: <i>Mr. Aminu Magaji Bala, Lake Chad Basin Commission</i> | <b>Round 1: English with French translation</b><br><b>Round 2: English with French translation</b> |
| <p><b>Examples of ecosystem-based adaptation in Lake Chad</b></p> <p>The Lake Chad Basin is considered to be the largest area of inland drainage basin in Africa, situated in parts of West and Central African regions. Its active basin constitutes an important freshwater resource shared by Cameroon, Niger, Nigeria, Chad and Central African Republic. It is a fragile environment that is changing over time in response to both slow and fast variables; thus, it has urgent needs to address the impacts of climate change on its water resources, biodiversity, wetlands and rivers ecosystems.</p> <p>The LCBC which is mandated to ensure the basin management, adopted the basin Vision 2025 the key message of which is “<i>Lake Chad - common heritage - and other wetlands maintained at sustainable levels to ensure the economic security of the freshwater ecosystem resources, sustained biodiversity and aquatic resources of the basin, the use of which should be equitable to serve the needs of the basin population thereby reducing the poverty level</i>”.</p> <p>With holistic participation of stakeholders, a Strategic Action Program evolves from the goals and objectives articulated in the Vision. The SAP lays down the principles of environmental management and cooperation, establishes a long-term vision for the sustainable development.</p> |  |  |

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| <b>Round Table Nr 9</b>  | Presenter: <i>Mr. Antonio Canas Calderon, Ministry of Environment and Natural Resources</i> | <b>Round 1: Spanish</b><br><b>Round 2: Spanish</b> |
| <p><b>Case study El Salvador: Ahuachapán Sur</b></p> <p>Ahuachapán is located in the south-west region of El Salvador. It covers four small basins, including the river Paz which is the limit border with Guatemala. Its topography presents abrupt changes over short distances, so that the case includes the management of very diverse landscapes, including mangroves, coastal plains and mountain areas of between 1500 and 1800 meters high.</p> <p>Multiple economic activities coexist in this area, all of which are dependent on the ecosystem services: coffee production for export, basic subsistence grains (corn, beans, sorghum), sugar cane (for the sugar industry) and small-scale fisheries of various species.</p> <p>One of the main challenges in Ahuachapán is to articulate visions and interests of a multiplicity of actors and productive activities. As a way of illustration, some activities aim to cover subsistence needs of the people involved, whereas others are linked to exportation.</p> <p>The case shows the importance of the landscape vision for the adequate management and sustainable articulation of different ecosystems. It emphasizes the importance of overcoming the conceptual rigidities, which are obstacles to the transformations that it intends to promote. It also indicates that “inter-basins” management should be preferred over a solely basin approach, which is usually not enough to adaptation purposes.</p> <p>The focus of the discussion is not related to the traditional problems arising from the management of transboundary basins.</p> |   |  |

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| <b>Round Table Nr 10</b>   | Presenter: <i>Ms. Lorena Martinez Hernandez, IUCN Environmental Law Centre</i> | <b>Round 1: Spanish</b><br><b>Round 2: English</b> |
| <p><b>CLIMA: a rapid self-assessment guide on governance frameworks for EbA</b></p> <p>CLIMA is a tool to assess policies, legal and institutional frameworks for adaptation to climate change and the integration of the ecosystem approach. It comprises an indicative list of 16 questions meant to guide users in the diagnosis and analysis of challenges and gaps in governance for an effective and sustainable implementation of EbA. CLIMA encourages users to carry out transparent, open, inclusive and visionary dialogues, among the various stakeholders, on the strengths and weaknesses of existing governance arrangements.</p> |  |  |



Once the questionnaire is completed, CLIMA offers some general recommendations that are intended to guide the design of an action plan. The guide is aimed at: governmental institutions on climate change and management of natural resources and ecosystems, at the EbA community of practice, at the civil society organisations and at students interested in analyzing regulatory frameworks for adaptation.

CLIMA will soon be available in its WEB version at [www.SolucionesAbE.org](http://www.SolucionesAbE.org). Contact information: [lorena.martinezh@iucn.org](mailto:lorena.martinezh@iucn.org).

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| <b>Round Table Nr 11</b> | Presenter: <i>Mr. Alex Mauroner, Alliance for Global Water Adaptation (AGWA)</i> | <b>Round 1: English</b><br><b>Round 2: English</b> |
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**Assessing and addressing risks through CRIDA**

*Climate Risk Informed Decision Analysis*, or CRIDA, is a five-step water resources planning framework that supports decision making when uncertainty about future conditions exists, high levels of confidence in quantitative solutions are necessary, and/or low levels of tolerance to failure are present. CRIDA is a means for implementing holistic climate-resilient water resources solutions — especially around infrastructure investments and water resources management.

CRIDA published in October 2018, but the methodology has already been applied in at least 19 countries to date. Issued by UNESCO’s International Hydrological Program (IHP), CRIDA was developed through the sustained efforts of the International Center for Integrated Water Resources Management (ICIWaRM), the Dutch Water and Infrastructure Ministry, Deltares, the Alliance for Global Water Adaptation (AGWA), and SESYNC.

CRIDA provides a structured, stepwise process for technical professionals to navigate the decision making spaces between senior decision makers and stakeholders. Based on the level of future uncertainty, CRIDA supports the development of robust and/or flexible solutions. CRIDA also explicitly acknowledges the critical significance of governance and eco-hydrological systems to achieving holistic, sustainable, and resilient solutions.

The tool is currently available in English, and a Spanish version is in preparation (<https://AGWAGuide.org/CRIDA>).

