



**Convention of the Protection and Use of  
Transboundary Watercourses and International Lakes  
9<sup>th</sup> meeting of the Task Force on Water and Climate  
13 December 2017**

**Progress report of global network of basins working on climate change adaptation**

In 2013, the global network of basins working on climate change adaptation was created by the United Nations Economic Commission for Europe (UNECE), in cooperation with the International Network of Basin Organizations (INBO) with the aim to promote cooperation on adaptation in transboundary basins, to compare different methodologies and approaches for adapting to climate change and to promote a shared vision between the participating basins. The network includes on the one hand several pilot basins where UNECE and partners implement activities and on the other hand additional basins which primarily work on their adaptation activities themselves in accordance with the agreed decisions of their governing bodies or with the terms of reference of international projects: The network allows for the exchange of experience, learning from each other, establishing contacts between basins and their experts, discussing challenges and lessons learnt etc. The network includes annual meetings of all basins, regular larger workshops, etc.

The following pilot projects<sup>1</sup> are supported by the UNECE secretariat in cooperation with partners such as the United Nations Development Programme (UNDP), the Organization for Security and Cooperation in Europe (OSCE), International Office for Water and others:

1. *Chu Talas Basin*, shared by Kazakhstan and Kyrgyzstan, implemented by UNDP and UNECE in cooperation with Chu-Talas Commission.
2. *Dniester Basin*, shared by the Republic of Moldova and Ukraine, implemented by UNECE and OSCE,
3. *Neman river basin*, shared by Belarus, Lithuania and the Russian Federation.
4. *Sava river basin*, shared by Bosnia and Herzegovina, Croatia, Serbia and Slovenia, implemented by the Sava River Basin Commission, International Office for Water and UNECE.

The following basins are also included in the network:

5. *Rhine basin*, shared by Austria, Belgium, France, Germany, Italy, Liechtenstein, Luxemburg, the Netherlands and Switzerland, (activities implemented by the International Commission for the Protection of the Rhine (ICPR)).
6. *The project "Dauria going dry"* in the Amur River and Lake Baikal basins, shared by the Russian Federation, Mongolia and China, implemented by Daursky Biosphere Reserve, WWF-Russia and Rivers without Boundaries International coalition.
7. *Danube river basin*, shared by Austria, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Germany, Hungary, Republic of Moldova, Romania, Serbia, Slovenia, Slovakia and Ukraine, implemented by the International Commission for the Protection of the Danube River (ICPDR).
8. *The Sahara and Sahel Observatory (OSS) / Consultation Mechanism of the North Sahara Aquifer System (SASS)*, shared by Algeria, Libya, Tunisia.
9. *Niger basin*, shared by Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Guinea, Mali, Niger and Nigeria (projects implemented by the Niger Basin Authority).
10. *Congo*, shared by Cameroon, Central African Republic, Democratic Republic of the Congo, Republic of the Congo, Equatorial Guinea and Gabon, projects implemented by the International Commission of the Congo-Oubangui-Sangha Bassin (CICOS).
11. *Senegal*, shared by Guinea, Mali, Mauritania, Senegal: projects implemented by the Senegal River Basin Development Authority.
12. *Mekong river basin*, implemented by the Mekong River Commission Climate Change Adaptation Initiative (MRC-CCAI), shared by Cambodia, Laos, Thailand and Vietnam.

<sup>1</sup> The pilot projects directly implemented by UNECE and partners and the platform for exchanging experiences are funded by Austria, Finland, Italy, the Netherlands, Switzerland and the European Commission.

13. *Drin basin*, shared by Albania, the Former Yugoslav Republic of Macedonia, Montenegro and Greece, implemented by the Drin Core Group Secretariat.
14. *Meuse river basin*, shared between France, Germany, Luxembourg, the Netherlands and Belgium, implemented by the International Meuse Commission.
15. *Lake Victoria basin*, shared between Kenya, Tanzania, Uganda, Burundi and Rwanda, joined the network in 2017, implemented by the Lake Victoria Basin Commission.
16. *Sixaola basin*, the newest member of the network joined in 2017, shared between Costa Rica and Panama.

More information about the activities and progress of the pilots and basins is included in the Annex <sup>2</sup>.

## ANNEX: Description of progress of each pilot project/ basin in the network

### 1. Chu-Talas basin

Transboundary basin: Chu-Talas basin
<p><b>1. Name and short description of the project – <i>this information will be put on the website</i></b></p> <p>The UNECE project “Enhancing climate resilience and adaptive capacity in the transboundary Chu-Talas basin” (September 2015 – June 2018) funded by the Finnish government aims to establish a framework for regular and strategic climate change adaptation action in the Chu-Talas River Basin and enable the Chu-Talas Commission and local authorities to facilitate climate change adaptation in the basin. It also aims to increase awareness and knowledge of Chu-Talas Commission and other key stakeholders of adaptation options in the river basin and the need for transboundary cooperation in adaptation as well as to implement some pilot adaptation measures.</p>
<p><b>2. Which possible climate change impacts are you already experiencing or expecting, such as floods, droughts, impacts on water quality etc.?</b></p> <p>The Chu-Talas River Basin is highly vulnerable to climate change and the overall growth of aridity and the declining availability of water resources are the most likely and serious impacts of climate change in the Basin.</p> <p>The annual precipitation remained practically unchanged on the most part of the territory of the Basin, but their variability increased significantly: in the last 30 years the annual precipitation variability was 1.5-2 times higher than in the period 1961-1990. In the semi-desert plain part of the Talas River basin there is a tendency to a significant decrease in the annual amount of precipitation. During the period of instrumental observations, the temperature in the basin increased significantly, with the most dramatic rise observed in the last 20-25 years. As a result of the climate change scenarios, glaciers in both basins may be fully exhausted by 2100.</p> <p>Climate variability and change are already affecting water resources in the region. In 2014 only half of the usual resources were available in the basin, but in 2016 the runoff was extremely high, many settlements were flooded, and several bridges destroyed. Water security is closely linked with political and economic implications (hydropower production vs. irrigated agriculture) that establish a direct link between changes in hydrological regimes and water availability and regional security. These changes are expected in the context of a significant projected increase by mid-century in the demand for water as a result of economic development and population growth. Regulation of runoff of the Chu and Talas Rivers between Kyrgyzstan and Kazakhstan is an issue already today, particularly in the growing season.</p>
<p><b>3. Concrete results achieved in 2016-2017 with regards to climate change adaptation:</b></p> <p>The project provided inputs in the development of the Transboundary Diagnostic Analysis (TDA) of the Chu-Talas River Basin under the GEF project “Enabling Transboundary Cooperation and Integrated Water Resources Management in the Chu and Talas River Basins” by drafting an analysis of climate change and its potential impacts in the Chu-Talas River Basin and outlining existing gaps based on implemented studies.</p> <p>The Annex to the TDA “The impact of climate change” was developed, that includes the following chapters: 1. Climatic features and trends; 2. Dynamics of water resources; 3. Climate Change Scenarios; 4. The impact of</p>

<sup>2</sup> Updates provided by the basins; the UNECE Secretariat is not responsible for information included in the reports. Information on the activities in the Sahara and Sahel Observatory (8), Senegal (11) and Drin (13) has not been provided at the time of preparation of this report.

<p>climate change on nature, economy and population; 5. Adaptation measures. Preliminary assessment of the costs and benefits of implementing adaptation measures in the basins of the Chu and Talas rivers was done.</p>
<p><b>4. Which major challenges did you face with regards to transboundary cooperation and climate change adaptation? How did you overcome them?</b></p> <p>The key relevant sectoral climate change adaptation plans were developed in Kyrgyzstan, including the one for the Ministry of Agriculture and Melioration, covering water resources. However, these sectoral plans were developed at a national level and do not consider transboundary issues. That is why an establishment of a framework for regular and strategic climate change adaptation actions on transboundary level is particularly timely in the Chu-Talas basin.</p> <p>Capacity of the Joint bilateral commission and local stakeholders and farmers to support climate change adaptation activities in the basin is also very limited. Lack of resources for adaptation measures implementation is the main problem.</p> <p>Poor financing of the national programmes and, as a consequence, low implementation rate of such programmes is a big challenge in implementing the planned activities.</p>
<p><b>5. Which lessons learned would you like to share with other basins?</b></p> <p>Kazakhstan's and Kyrgyzstan's cooperation on the Chu and Talas rivers is managed by a Joint bilateral commission. It is a good example of transboundary water cooperation built on a solid institutional and legal basis. It allows discussing problems and finding solutions.</p> <p>Involvement of local stakeholders on all level of discussion was crucial for defining of problems and caps in adaptation to climate change and for successful implementation of adaptation measures in the future.</p>
<p><b>6. How do you finance your climate change activities? How do you plan to finance implementation of adaptation measures?</b></p> <p>3 to 5 of priority adaptation measures for financial support of their implementation will be chosen by the UNECE and GEF projects. Having good examples, showing the economic benefits of adaptation measures, local stakeholders will try to finance them themselves, the banks will be more willing provide loans. Also, the attention of governments will be attracted to the need to incorporate adaptation measures into development plans. It will ensure replicability and sustainability of project results.</p>
<p><b>7. How did you link transboundary climate change actions to adaptation activities at other levels, such as the national level?</b></p> <p>The key relevant sectoral climate change adaptation plans were developed in Kyrgyzstan, including the one for the Ministry of Agriculture and Melioration, covering water resources. Unfortunately in Kazakhstan still no any national or sectoral adaptation plans</p>
<p><b>8. Future planned activities on climate change adaptation:</b></p> <ul style="list-style-type: none"> <li>-to implement the chosen adaptation measures in the Basin and to share the lessons learned with other basins.</li> <li>- try to incorporate the adaptation measures defined by this project to the sectoral and national development plans</li> </ul>
<p><b>9. Is water scarcity an issue in your basin? If yes, how are you addressing it or planning to address it? Which measures are you taking?</b></p> <p>The main volume of water resources of the region is formed in Kyrgyzstan and in the years of low water shortage of irrigation water is an acute problem for the agrarians of Kazakhstan.</p> <p>The solution is:</p> <ul style="list-style-type: none"> <li>-transboundary cooperation within the framework of CTWC activities on the active implementation of the adaptation measures developed in the previous draft;</li> <li>-In the Kazakhstan part of the Chu-Talas basin, the implementation of the activities of the developed program "Reconstruction of irrigation systems and restoration of irrigated lands in Zhambyl region with the use of resource-saving technologies for 2014-2020 and in perspective until 2030" to increase the technical level of irrigation systems, the use of modern water-saving technical irrigation, like sprinkling and drip irrigation. Implementation of plans for integrated water and land resources management.</li> </ul>
<p><b>10. From your perspective and considering your needs and experiences, which priorities/activities should be included in the next workplan of the Task Force on Water and Climate and the global network of basins in 2019-2021?</b></p> <p>Examples of best practices for the joint implementation of developed cross-border strategies. Examples of best</p>

practice on the use of water resources to meet the requirements for non-potable water. After cleaning, the circulating water can also be used.

#### 11. Contact details

Ms. Ekaterina Sahvaeva, Department water economy and amelioration, Republic of Kazakhstan  
Tel.: +99 6312 541411, mob.: +996 5553 5046056

[tadar51@mail.ru](mailto:tadar51@mail.ru)

Ms. Svetlana Dolgikh, National Hydrometeorological Service "Kazhydromat", Republic of Kyrgyzstan  
Tel.: +7 727 267 5217

[Svetlana\\_Dolgikh@mail.ru](mailto:Svetlana_Dolgikh@mail.ru)

Indira Akbozova, Head of Kazakstan part of Secretariat of Chu-Talas Commission

Tel.: mob.+77017505694

[shutalaskz@gmail.com](mailto:shutalaskz@gmail.com)

## 2. Dniester basin

### Transboundary basin: Dniester

#### 1. Name and short description of the project – *this information will be put on the website*

Strategic directions of the adaptation to the climate changes in Dniester basin. Project "Climate changes and security in Eastern Europe, Central Asia and South Caucasus."

This project is included in pilot projects program for adaptation to the climate changes in transborder water basins. Elements of the plan for implementing of the strategic directions for adaptation to the climate changes in the basin of the Dniester river were developed within scope of the plan.

#### 2. Which possible climate change impacts are you already experiencing or expecting, such as floods, droughts, impacts on water quality etc.?

Following after 2 years' catastrophic floods (2008, 2010) are results of the climate changes in Dniester basin. Earlier, such extreme floods were repeated each 10-15 years during whole period of observations. Besides this, duration of the dry years (unpleasant for agriculture) lengthen within last two decades – every 3 of 4 years cause sufficient damage to farming. Number of low water years also increased.

#### 3. Concrete results achieved in 2016-2017 with regards to climate change adaptation:

- we prepared final version of the "Plan of implementation of the Strategic directions in Dniester basin", in attachment;
- installed 3 monitoring stations for State Water Agency of Ukraine and Ukrhydrometcenter; Doppler metering device for Hyrdomet service of Moldova Republic;
- we finished and put into operation at Ukrhydrometcenter model for prognosis of Dniester water reservoir inflow;
- we finished calculation of the water economy balance and provided training of the people using it;

#### 4. Which major challenges did you face with regards to transboundary cooperation and climate change adaptation? How did you overcome them?

Main problems in our work were connected with information awareness and data exchange. These problems we solved during seminars, meeting of the work groups and in operational order.

#### 5. Which lessons learned would you like to share with other basins?

- Consultation process with local organisations in both countries is very difficult
- Adaptation to the climat changes is not a priority in both countries due to routine, urgent matters
- There are no responsible persons for adaptations to the climate changes at the lower and middle levels of control
- We discover needs of interaction at political and expert levels
- In many cases, it is easier to reach the goal at local level, escaping bureaucracy obstacles
- Local producers are interested in quick making of profit and have no abilities for long-time strategy

<ul style="list-style-type: none"> <li>– Country-side population are far away from understanding of the climate change problems</li> <li>– We need to coordinate our actions for water-management solutions with local authorities on sites.</li> </ul>
<p><b>6. How do you finance your climate change activities? How do you plan to finance implementation of adaptation measures?</b></p> <p>During development of the Plan of control of the Dniester basin we will develop program of the actions with corresponding financing. In Ukraine, we have financing of the anti-flood actions provided by the State program of the water economy and ecological rehabilitation of the Dniester basin.</p>
<p><b>7. How did you link transboundary climate change actions to adaptation activities at other levels, such as the national level?</b></p> <p>In Ukraine we develop Strategy of the state ecological policy for period until 2030.</p>
<p><b>8. Future planned activities on climate change adaptation:</b></p> <p>Embedding of the measures for adaptations to the climate changes. Carrying out of the meetings and seminars. Informing of the people.</p>
<p><b>9. Is water scarcity an issue in your basin? If yes, how are you addressing it or planning to address it? Which measures are you taking?</b></p> <p>Water scarcity in some basins leads to the problems with supply of the certain branches of economy. The problem is solved by correction of the water usage plans.</p>
<p><b>10. From your perspective and considering your needs and experiences, which priorities/activities should be included in the next workplan of the Task Force on Water and Climate and the global network of basins in 2019-2021?</b></p> <p>We offer to include in working plan of the Task Force measures for carrying of the training for the best management practices in situation with scarcity of the water for specialist of the water resources control.</p>
<p><b>11. Contact details</b></p> <p>Lysiuk Olha Bon Aleksander Babych Mukola</p>

### 3. Neman basin

<p><b>Transboundary basin: Neman river basin</b></p>
<p><b>1. Name and short description of the project – <i>this information will be put on the website</i></b> <b><i>Pilot project on river basin management and climate change adaptation in the Neman river basin</i></b></p> <p>Aim of the project (implemented by United Nations Economic Commission for Europe under Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention) and UNDP Belarus, with funding from Finland and Sweden through the Environment and Security Initiative (ENVSEC). The overall objective of the project is to improve integrated river basin management and transboundary cooperation in times of a changing climate in the Neman river basin. The project aims to strengthen the capacity to adapt to climate change of the countries sharing the Neman river through supporting dialogue and cooperation on the needed steps to design an adaptation strategy in the transboundary context.</p>
<p><b>2. Which possible climate change impacts are you already experiencing or expecting, such as floods, droughts, impacts on water quality etc.?</b></p> <p>The climate change forecasts until 2050 for the Neman River Basin (NRB) proved of an average increase on air temperature in the basin with increase to the maximum in summer and in winter. The largest precipitation is forecast in the cold season of the year. The forecast summer surface runoff may decrease in the NRB and it may increase to the maximum in the winter season. The problem of low-water periods leading to droughts is more relevant for the NRB. The forecast reduction in the minimum runoff in the summer and autumn seasons may be more significant in the future than its reduction over the last 50 years. Low-water</p>

periods may result in deterioration of the state of the environment and recreational potential of surface water bodies and adjacent areas. In addition, the possible increase in the frequency and duration of dry seasons may increase the risk of a substantial reduction in the summer runoff of small rivers, which would result in lower water levels and deterioration of their water quality and recreational potential. Spring floods are not a priority problem in the NRB, except the Neman headwaters in Belarus, western Lithuania and Kaliningrad Oblast of the Russian Federation. However, despite the fact that the flood problem is not the most urgent as regards the larger part of the NRB, it is relevant since floods cause substantial economic damage, specifically to agricultural production.

### **3. Concrete results achieved in 2016-2017 with regards to climate change adaptation:**

Belarusian and Lithuanian experts are implementing in 2016-2017 priority actions towards preparation of the International River Basin Management Plan (RBMP) for the Neman river basin. Specifically, in the first part of 2017 detailed work was conducted on the river Schara, left tributary of Neman, as well as implementing for the rest of Neman in 2017. These activities contributed with support of the UNECE Water Convention. The main results were devoted to comparison and harmonization of the water bodies designation and typification, assessment systems of status of surface water bodies and groundwater, designation of water bodies in the NRB and their hydromorphological assessment, classification and presentation of status of surface water and groundwater bodies, identification of significant pressures and impacts of human activity on the status of surface water bodies and groundwater. Second Meeting on enhancing technical cooperation in the Neman river basin was held in Vilnius 12-13 of July 2017.

Pilot project on climate change adaptation in the Neman river basin stimulated similar research for other river basins in Belarus which supported by the Ministry of Natural Resources and Environmental Protection of the Republic of Belarus and with financing from the National budget. The monograph "Water resources of Belarus and their forecast with account to climate change" was published in September, 2017. The results of the pilot project were used during development of the management plan and program of measures of the Lithuanian part of the river Neman river basin district. The Strategy of water resources management in Belarus in account to climate change till 2030 is on the stage of development and will be elaborated by the end of 2017.

The possible medium-size GEF-funded project on the Neman and Western Bug river basins basin was prepared and can be start near few years.

### **4. Which major challenges did you face with regards to transboundary cooperation and climate change adaptation? How did you overcome them?**

The financial deficit for implementation of adaptation measures on the national levels is the major challenge on the national levels. The methodologically similar legislation in Belarus and in Lithuania in the frame of water quality assessment has some principal differences regarding biological monitoring especially. It is major challenge which is overcoming with using agreed methodology in the frame of enhancing technical cooperation in the NRB. The dominant problem in the Neman River Basin between countries in communication is different status of membership – EU and non EU members.

### **5. Which lessons learned would you like to share with other basins?**

Experience in creation of the Informational Platform in Internet included join basic meteorological and hydrological data base for assessment and forecast of climate change (Belarus and Lithuania).

### **6. How do you finance your climate change activities? How do you plan to finance implementation of adaptation measures?**

Financing of climate change activities within the entire NRB basin in the frame of international cooperation is planned under International projects.

Financing of the implementation of adaptation and other water management measure will be under realization of the NRB National Management Plans (Belarus, Lithuania) from the national budget, local budget and other not national sources including private companies and international projects.

### **7. How did you link transboundary climate change actions to adaptation activities at other levels, such as the national level?**

Project results and recommendations were considered by the hydropower sector which is vulnerable to climate change (especially for calculations of the ecological water releases in the low -water).

### **8. Future planned activities on climate change adaptation:**

Future project activities in Belarus with using Lithuanian experience are planned including harmonization of environmental objectives, comparison and harmonization of monitoring programmes, coordination of measures to reach the environmental objectives for the water bodies of the in the NRB.

<p><b>9. Is water scarcity an issue in your basin? If yes, how are you addressing it or planning to address it? Which measures are you taking?</b></p> <p>Water scarcity and ecological flow can be an issue in the Neman river basin in dry seasons due to intensive water use.</p>
<p><b>10. From your perspective and considering your needs and experiences, which priorities/activities should be included in the next workplan of the Task Force on Water and Climate and the global network of basins in 2019-2021?</b></p> <p>Support in organization of the international river basins commissions and their functioning. Cooperation over conjunctive surface and groundwater management in transboundary river basins.</p>
<p><b>11. Contact details</b></p> <p>Mr. Vladimir Korneev, Central Research Institute for Complex Use of Water Resources, Belarus Tel.: +375 17 263 4833 v_korn@rambler.ru</p> <p>Mrs. Gintarė Bevainienė Ministry of Environment, Lithuania <a href="mailto:gintare.bevainiene@am.lt">gintare.bevainiene@am.lt</a></p>

#### 4. Sava basin

<p><b>Transboundary basin:</b> Sava River Basin (Slovenia, Croatia, Bosnia and Herzegovina, Serbia, Montenegro)</p>
<p><b>1. Name and short description of the project – <i>this information will be put on the website</i></b></p> <p><b>Title:</b> <i>Outline of the Climate Adaptation Strategy and basin-wide priority measures for the Sava River Basin</i></p> <p>The International Sava River Basin Commission - ISRBC as a signatory of the Paris Pact on water and climate has requested the International Office for Water (IOWater) to support developing the Outline of the Climate Change Adaptation Strategy and priority measures for the Sava River Basin in the framework of the Global alliance for water and climate incubator platform. The process was also supported by the French Ministry of Ecological and Inclusive Transition and the UNECE.</p> <p>The purpose of the project (incubation phase) is:</p> <ul style="list-style-type: none"> <li>to develop an outline of the climate change adaptation strategy for the Sava River Basin in consistence with the ICPDR's regional adaptation strategy, and identify some priority basin-wide measures for adaptation to climate change,</li> <li>to suggest modalities and cost estimates for the full development of the strategy and of its action plan, and possibly for a pilot priority measure</li> </ul>
<p><b>2. Which possible climate change impacts are you already experiencing or expecting, such as floods, droughts, impacts on water quality etc.?</b></p> <p>The Intergovernmental Panel on Climate Change (IPCC) has indicated that the Southern Europe region, including the Sava River Basin, is highly sensitive to climate change. Recent 1981-2012 trends in annual mean temperature exceeded the global mean land trend, and the trends in precipitation suggest more precipitation in winter and less precipitation in summer giving rise to more spring floods and more summer droughts. Among other developments, the devastating floods that hit the region in May 2014 bear witness to this fact. Official counts indicate over 1.6 million people have been affected in Serbia, over 1.0 million people in Bosnia and Herzegovina and 38,000 in Croatia. Economic damage and losses was estimated to almost 4.0 billion EUR. Unfortunately, 79 casualties were reported.</p>
<p><b>3. Concrete results achieved in 2016-2017 with regards to climate change adaptation:</b></p> <p>Two major outputs are about to be finalized within the <i>Outline</i> development:</p> <ul style="list-style-type: none"> <li>The annotated outline of the CC adaptation strategy, including proposal of some possible priority adaptation measures to be incorporated into the Sava River Basin Management Plan;</li> <li>The terms of reference for the full development of the strategy and its action plan.</li> </ul>
<p><b>4. Which major challenges did you face with regards to transboundary cooperation and climate change adaptation? How did you overcome them?</b></p> <p>Although comprehensive and recent studies have been done at the Sava River Basin level, many gaps do still exist</p>

as follows:

- a number of sectors have not been addressed in the climate change context
- for the sectors that have been considered so far, potential adaptation measures have been identified and recommended, but have to be elaborated into more details for prioritization and implementation.

Finally, there is a need to integrate actions into planning activities to ensure full consistency between activities at basin and at the country levels.

#### **5. Which lessons learned would you like to share with other basins?**

Experiences from the project could be shared with other basins over the world, for example in the framework of the UNECE-INBO global network of basins working on climate change adaptation. It has already been proven that the FASRB, along with ISRBC, is a good example of transboundary cooperation on the river basin level. Such approach will make the best use of the experiences and liaisons already existing in the Sava River Basin and facilitate that the issue of climate change will be properly considered on the national and transnational level.

#### **6. How do you finance your climate change activities? How do you plan to finance implementation of adaptation measures?**

The development of the Outline of the Climate Adaptation Strategy and basin-wide priority measures for the Sava River Basin was supported by French Ministry of Ecological and Inclusive Transition, the International Office for Water and the United Nations Economic Commission for Europe (UNECE).

For activities towards the development of the full Strategy on climate Change adaptation and the Action Plan of measures we would ask international institutions such as UNDP, GEF, World Bank, the UNFCCC Adaptation Fund and the Green Climate Fund for a support.

#### **7. How did you link transboundary climate change actions to adaptation activities at other levels, such as the national level?**

The coming step consists in integrating climate change adaptation into the planning process of the Sava transboundary basin level. Therefore the main conclusions of the existing studies, including climate change adaptation strategies/policies at the state level, need to be embedded in a regional strategy document targeted at policymakers and practitioners of the 5 countries in order to provide a common orientation for actions. Basin level activities will be linked to national through the mechanisms developed within the framework of the ISRBC such as the Meeting of the Parties, ISRBC itself, expert groups of ISRBC, consultation activities in the basin including contacts with relevant national institutions.

In addition, the International Commission for the Protection of the Danube River (ICPDR) developed a Climate Change Adaptation Strategy in 2012 and is currently revising it. The Sava transboundary sub-basin approach should be coordinated and consistent with its provisions at regional level.

#### **8. Future planned activities on climate change adaptation:**

The outcomes of the *Outline* will provide supplementary information for development of future strategy on climate change adaptation and other management plans and programmes for the Sava River Basin, particularly regarding water management (Sava RBM Plan, Flood Risk Management Plan, Sediment Management Plan), and navigation development plans. It will pave the way to a full integration of the climate change adaptation measures into the 2<sup>nd</sup> Sava RBM Plan, and the next cycle of preparation of the Sava FRM Plan.

#### **9. Is water scarcity an issue in your basin? If yes, how are you addressing it or planning to address it? Which measures are you taking?**

In the 1<sup>st</sup> Sava River Basin Management Plan which was endorsed by the Parties to the Framework Agreement on the Sava River Basin the water scarcity is not designated as a significant water management issue for a time being. This might change because of the climate change in the future.

#### **10. From your perspective and considering your needs and experiences, which priorities/activities should be included in the next workplan of the Task Force on Water and Climate and the global network of basins in 2019-2021?**

The future activities regarding the climate change adaptation at the basin level consist of:

- Development of full Climate Change Adaptation Strategy for the Sava River Basin where the consistency between work being done at basin and national levels should be ensured and
- Implementation of climate change adaptation measures where is necessary to (i) identify priority climate change adaptation measures for the SRB, (ii) integrate actions into planning activities at national level and (iii) ensure integration of the measures into River Basin Management Plan.

#### **11. Contact details**

International Sava River Basin Commission



Kneza Branimira 29, 10000 Zagreb, Croatia  
 Tel.: +385 1 488 69 60, E:mail: isrbc@savacommission.org

## 5. Rhine basin

### Transboundary basin: Rhine river basin/ International river basin district Rhine (IRBD)

#### 1. Name and short description of the project

Implementation of the climate change adaptation strategy for the Rhine basin and mainstreaming it into the work of the International Commission for the Protection of the Rhine.

*Currently: Improvement of the knowledge about low water on the Rhine.*

#### 2. Which possible climate change impacts are you already experiencing or expecting, such as floods, droughts, impacts on water quality etc.?

During the 20th century and depending on the region in the Rhine catchment, temperature changes varied between +0.5°C and + 1.2°C and were thus slightly above the global average of +0.6 to +0.9°C. The rise in temperature was more distinct during the winter than during the summer and more important in low altitude (< 500 m) than in higher altitude. Precipitation during winter time has increased in the entire Rhine catchment (+ 10 to + 20%). The increase was slightly less in the Alps. Summer precipitation has hardly changed (between -5 to + 5 %).

Thus, all discharge parameters MQ (mean discharge) and NM7Q (low water discharge) at the gauging stations along the main stream of the Rhine tend to increase (mostly + 10 to + 15 % for MQ; + 15 to + 20 % for NM7Q). During summers, MQ and NM7Q decrease by up to 8 %. Mainly, this is an effect of rising temperatures (more evaporation) combined with stagnating precipitation and coincident reduced snow volume in the Alps.

The mean flood discharge (MHQ) evaluated for entire hydrological years (Nov. - Oct.) indicates an increase by about + 10 %. A close consideration of data shows that this is not due to an increase of extreme peak flows (highest mean daily runoff) but due to frequent moderate and great floods. *(see more in the last progress report)*

#### 3. Concrete results achieved in 2016-2017 with regards to climate change adaptation:

Implementation of the climate change adaptation strategy of the Rhine basin and mainstreaming it into the mandate and working program of the ICPR for 2016-2021. The 2nd River Basin Management Plan (RBMP) as well as 1<sup>st</sup> Flood Risk Management Plan (FRMP) for the international Rhine basin both include chapters/texts on effects of and adaptation to climate change. In 2016, the ICPR established a special Expert Group on Low Water". As part of the work program the ICPR has inventoried in 2017 new national knowledge or results about climate change impacts and scenarios as well as adaptation measures and strategies since the climate study of 2011 (report 188) and the climate change adaptation strategy of 2015 (report 219). The main national and international developments and recent lessons learned on climate change have been summarised in an intern progress report. According to this report, significant new lessons cannot be expected until 2018 when there will be a review on new developments.

More information on the work of the ICPR regarding climate change impacts and adaption can be found here: <https://www.iksr.org/en/topics/climate-change-in-the-rhine-catchment/>.

#### 4. Which major challenges did you face with regards to transboundary cooperation and climate change adaptation? How did you overcome them?

Our main challenge was to develop a common, interdisciplinary and transboundary adaptation strategy and to mainstream/integrate it into the RBMP and FRMP as well as the new mandate and working program 2016-2021. The next challenge will be to strengthen the integration of climate change aspects in the next versions of the RBMP and FRMP which must both be prepared by end of 2020.

#### 5. Which lessons learned would you like to share with other basins?

There are and will always be some uncertainties about climate change impacts, but the Rhine countries believe the trends to be robust enough to act and develop an (international) adaptation strategy.

So far, we have learned that a mix of top-down and bottom-up measures (from the transboundary/international

level to the national and regional level and vice-versa) is the best option when developing an adaptation strategy. It is also very important not to reinvent the wheel: try to use available, realized or planned measures, e.g. the one linked to the Water Framework Directive and Floods Directive implementation or originating from former programmes (e.g. ICPR's Action Plan on Floods since 1998).

**6. How do you finance your climate change activities within the basin? How do you plan to finance implementation of measures?**

The different States of the ICPR are financing the implementation of CC measures on their own territories. The common ICPR budget is only used for the organization of ICPR meetings of the working/expert groups working on climate change and work on the reports. Furthermore, national and municipal activities related to CC are being implemented and financed directly on the national level but benefit to the implementation of the ICPR's Climate Change Adaptation Strategy.

**7. How did you link transboundary climate change actions to adaptation activities at other levels, such as the national level?**

The climate change adaptation strategy of the Rhine basin was based amongst others on aspects included in the national adaptation strategies of the States. On the other hand, the Rhine countries can draw inspiration from the ICPR climate change adaptation strategy. Updates and progress reports are being drafted by the ICPR identifying new national developments or knowledge about CC impacts and mitigation measures/actions. Further, climate adaptation aspects are being implemented by the States through their implementation of the RBMP and FRMP of the Rhine basin.

**8. Future planned activities on climate change adaptation:**

The ICPR is coordinating the implementation of the 2nd RBMP and the FRMP (both running from 2016 to 2021) by the States containing aspects of climate change impacts alleviation. This – as well as the implementation of the CC adaptation strategy - is being translated into the working mandate and program of the ICPR for 2016-2021. The program includes also in 2017-2018 the update of the knowledge on climate change and adaptation measures as well as the drafting of a report about low water issues. Until the end of 2020, two new plans (3<sup>rd</sup> RBMP and 2<sup>d</sup> FRMP) will be prepared which have to include more climate change aspects.

**9. Is water scarcity an issue in your basin? If yes, how are you addressing it or planning to address it? Which measures are you taking?**

Due to several low flow events since the 2000's and their negative impacts, the Rhine Ministers decided in 2013 to address this issue and undertake an in-depth analysis of low flows and their consequences. In recent years there has been a shift from looking not only at the implications of floods in rivers and their impacts on ecosystems but also towards low flows. In 2016, the ICPR established a special Expert group "Low water" for analyzing the trend of low water since the beginning of the 20th century, to examine past low flow events and classify them in return periods. The ICPR is investigating the various consequences of low water for different uses of the Rhine. Furthermore, it is working on the inventory of national low water management measures as well as on low water monitoring.

On 20 and 21 September 2017, the International Commission for the Hydrology of the Rhine basin (CHR) with the support of the Swiss Federal Office for the Environment (FOEN), the International Commission for the Protection of the Rhine (ICPR) and the Central Commission for the Navigation of the Rhine (CCNR) addressed this issue in detail in the international symposium „Low flows in the Rhine catchment“ in Basel. To summarize, one of the main outcomes of the symposium is that low flows in the Rhine are not being worse than 100 years ago but are nowadays affecting numerous – more or less vulnerable - uses (navigation, industry, agriculture, energy production, etc.). More information can be found on [www.chr-khr.org](http://www.chr-khr.org) and [www.iksr.org](http://www.iksr.org).

**10. From your perspective and considering your needs and experiences, which priorities/activities should be included in the next workplan of the Task Force on Water and Climate and the global network of basins in 2019-2021?**

Integral, interdisciplinary and transboundary climate change adaptation (scale of management: (international) river basins) combined with more information exchange/close cooperation with stakeholders

**11. Contact details**

Adrian Schmid-Breton

International Commission for the Protection of the Rhine - [www.iksr.org](http://www.iksr.org)

Kaiserin-Augusta-Anlagen 15, DE – 56068 – Koblenz, Germany

Tel.: +49 261 94252 22 ; [adrian.schmidbreton@iksr.de](mailto:adrian.schmidbreton@iksr.de)

## 6. Dauria going dry project

### 1. Name and short description of the project/ activities –will be put on the website.

Dauria Going Dry pilot project, initiated by Rivers without Boundaries Coalition, Dauria International Protected Area (DIPA) and WWF under auspices of the UNECE Water Convention, aimed at harmonizing transboundary river protection and management in river basins flowing from Dauria Ecoregion (initially Eastern Dauria -the upper Amur river- basin).

The key question that the project addresses is how to prevent destruction of Daurian natural ecosystems, enhance their resilience and save globally endangered species in circumstances of intensive economic development and climatically caused periodical water deficit at the region.

The project seeks to develop and promote science-based adaptation measures to complex cycling climate of Dauria region, which is severely affected by global warming. The project addresses domestic and international policy-making, as well as selected conservation and monitoring practices in the field through:

- Strategic assessment of river management options in the light of ecosystem-based adaptation to climate change;
- Establishing wetland monitoring system;
- Enhancement of protected areas network as one of key adaptation measures;
- Awareness raising program on climate change adaptation in transboundary context and preventing maladaptive development of large infrastructure in the name of "climate adaptation measures".

From 2014 the pilot project has expanded further into the Western Dauria - Baikal Lake basin, where we cooperate with Buriat Regional Organization for Baikal (BROB), Plotina, and several other groups.)

Acute crisis in Lake Baikal water management triggered by climate change, pollution and impacts of hydropower has become obvious since winter 2014\2015 and makes essential involvement of world-wide expertise and support of international organizations to assist developing solutions.

The project mobilizes expert community and civil society to support and promote science-based adaptation measures for management of Lake Baikal, through:

- Strategic assessment of the Lake Baikal water management options in the light of ecosystem-based adaptation to climate change;
- Public participation in development of Irkutsk reservoir operational rules, other regulations governing the Lake Baikal water management;
- Public support to implementation of the World Heritage Convention, that requires to develop comprehensive management and monitoring system for the Lake Baikal;
- International cooperation to enhance Lake Baikal basin water management practices with findings and techniques developed in other lake\river basins.

### 2. Which climate change impacts are you already experiencing or expecting, such as floods, droughts, impacts on water quality etc.?

Extreme droughts and floods are more and more pronounced in the region.

In middle and lower part of the Amur basin potential increase in the frequency of dangerous weather events determines growing risk of floods, and ongoing anthropogenic development of territories in the Amur River basin results in higher damage they may cause. The most catastrophic flood during the whole period of observation took place in the Amur basin in July to September 2013, lasting for about two months. It shed light on many characteristics of the natural processes in the basin, as well as the land, water and dam management issues.

In the Upper Amur and Selenge Baikal basins the 2001-2017 has been extremely dry period, when habitats available to wetland species shrank dramatically, competition between nature and humans for water was very pronounced, aridization of huge expanses of grasslands affected agriculture, etc. Crisis is unfolding due to unpreparedness of Angara river hydropower cascade and riparian municipalities to extreme drought caused primarily by climatic changes\fluctuations on Mongolian territory in 1998-2017. Management response is haphazard and aimed at preserving status-quo, rather than protecting lake ecosystem or local communities. This is complicated by serious rise in Lake Baikal water temperature and lack of sewage treatment in coastal facilities. Since 2013 Lake Baikal near-shore waters have massive outbreak of exotic Spirogyra algae killing native sponges and other endemic water-purifying species.

In addition, fearing climate change impacts, Mongolian Government made unilateral decision to build several large reservoirs in Selenge river basin for electricity generation and inter-basin water transfers, which further threatens Lake Baikal ecosystem and well-being of local population. In 2015 Mongolia contracted French Engie and Chinese Gezhouba companies for construction of Egiin Hydro on large tributary of Selenge River.<sup>3</sup>

### **3. Which concrete results did you achieve in 2016-2017 with regards to climate change adaptation?**

#### **Eastern Dauria (Amur Basin):**

1. A book "We and the Amur Floods: Lesson (Un)Learned?" was released. It serves to explore feasible options for flood risk management in the Amur basin, considers social aspects of floods, and the role of floods in maintaining freshwater ecosystems. The pilot project contributors conducted a research, published a book and disseminated it among relevant basin organizations, national water agencies, and key stakeholders to improve water infrastructure governance and protect resilient freshwater ecosystems. The findings and conclusions of the book can be used by experts in water management to design measures for adaptation to recurrent floods. In September 2017 the book won a Bronze medal at Far-Eastern Book Fair-2017 in the nomination "Scientific Monograph".
2. Russian-Mongolian World Heritage Site "Landscapes of Dauria" was established after a long preparation process facilitated by the Government of Germany.
3. Near completion is the expansion of Daurys Biosphere Reserve to important climatic refugium and spawning site at lower Borzya river in upper Amur Basin.
4. Assisted local citizens in Buryatia and Mongolia in completing process on a scientifically and legally valid compliant to the World Bank Inspection Panel on dams planned in Selenge Basin and developed policy dialogue with various facets of WB management.<sup>4</sup> As a result of the complaint process by July 2017 feasibility studies for two dams were postponed and instead the Government of Mongolia and the WB agreed to undertake basin-wide transboundary regional environmental assessment of hydropower and water management plans. Assessment may start in 2018 and will study in detail climate change impacts on water ecosystems and water management.
5. Expert support to 30 public hearings and consultations on hydropower dam projects and reservoir management regulations in Russia and Mongolia in 2017;
6. Assisted IUCN and World Heritage Committee in preparation of decisions of the 40th and 41st Sessions of the World Heritage Committee on Lake Baikal and Landscapes of Dauria.
7. Our proposal on launch mechanisms for Strategic Environmental Assessment of hydropower and water management in Lake Baikal -Selenge Basin was supported by Russian government agencies.
8. Prepared assessments, reports and letters that assisted cancellation of 1 Bln Chinese funding of Egiin Gol Hydro in Selenge River basin.

### **4. Which major challenges did you face in this work? How did you overcome them?**

- Competition for water between Mongolia and Russia exacerbated by climate change which makes bilateral negotiations difficult. This occurs both in Ulz River and Lake Baikal basins.
  - Severe lack of ecosystem monitoring data for Baikal despite its World Heritage status.
  - Non-compliance to decisions of conventions on the part of Russia, Mongolia and China.
- We overcome challenges with communication\education efforts (e.g. highlighting advances in other countries, etc).

### **5. Which lessons learned would you like to share with other basins?**

- We successfully used WB Safeguard Policies and World Heritage Convention to assist negotiations on transboundary river issues and want to develop formal case-study to be used in other basins.
- The greatest environmental impacts may come not from climate change per se, but from shortsighted and haphazard infrastructure development for "climate adaptation\mitigation", which in a long run turn to be maladaptation.
- Proper adaptation strategy should first of all include monitoring of ecosystem biological response to hydrological changes;
- Ecosystem-based adaptation has several decisive advantages over excessive infrastructure measures: preserving option for the future, sustaining resilience of natural systems, avoiding conflicts, saving money and synergy with biodiversity preservation. In 2016 we made the AIIB include such statement in its Environmental Social Framework.

<sup>3</sup> <http://www.eghpp.mn/en/>

<sup>4</sup> [ewebapps.worldbank.org/apps/ip/Pages/ViewCase.aspx?CaseId=107](http://ewebapps.worldbank.org/apps/ip/Pages/ViewCase.aspx?CaseId=107)

<p><b>6. How do you finance your climate change activities within the basin? How do you plan to finance implementation of measures?</b></p> <p>-Our work mostly funded by grants. Implementation of recommendations is reliant on state budget and WB funding. In DIPA till 2017 important parts of work was covered by UNDP Project. As it ended there is lack of funding.</p>
<p><b>7. How did you link transboundary climate change adaptation to adaptation activities at other levels, such as the national level?</b></p> <p>-Prepared recommendations to amend national planning system for reservoir management -Regularly interact with Russian-Mongolian working group on water management and other bilateral mechanisms.</p>
<p><b>A. Future planned activities. In 2018we plan to:</b></p> <p>B. Complete expansion of the Daurys Biosphere Reserve</p> <p>C. Work on preservation of natural hydrological regime in Ulz river basin facing challenges from mining and agriculture;</p> <p>D. Continue work on monitoring climate fluctuation impacts on biodiversity in Torey Lakes basin.</p> <p>E. Prepare recommendations on flow release regimes of the Middle Amur reservoirs (on the Zeya and Bureya rivers) in order to adjust to the conditions of recurrent floods and reduce impact on ecosystems;</p> <p>F. Assist planning and implementation of Strategic Environmental Assessment of Lake Baikal basin water management issues as first step of management system planning (as prescribed by WHC in 2015).</p> <p>G. Organize public participation and control in ESAs for hydropower projects and reservoir regulation rules</p> <p>H. Assist introduction of climate adaptation considerations into national policies of Russia and Mongolia and in work plans of publicly listed hydropower companies</p> <p>I. Through awareness raising mobilize international constituency for protection of the Lake Baikal in the face of climate change and growing human impacts.</p>
<p><b>8. Is water scarcity an issue in your basin? If yes, how are you addressing it or planning to address it? Which measures are you taking?</b></p> <p>Acute water scarcity is natural feature of the Ulz River -Torey Lakes basin. We plan address it through development of transboundary management plan for Landscapes of Dauria World Heritage site, occupying at least half of this basin.</p> <p>Lake Baikal basin, especially in Mongolia is experiencing water scarcity due to severe 20-year drought. We plan to address it through basin-wide SEA on water management.</p>
<p><b>9. From your perspective and considering your needs and experiences, which priorities/activities should be included in the next work plan of the Task Force on Water and Climate and the global network of basins in 2019-2021?</b></p> <p>1. Introducing holistic environmental flow norms as essential part of any transboundary basin management</p> <p>2. Public participation tools in transboundary basin management and role of grassroots CSOs in promoting the convention mechanisms</p> <p>3. Developing guidance\standards for strategic environmental assessment of investment plans into water-related projects\programs in transboundary basins.</p>
<p><b>10. Contact details:</b></p> <p><b>Dr. Eugene Simonov</b>, Coordinator, Rivers without Boundaries International Coalition. <a href="mailto:simonov@riverswithoutboundaries.org">simonov@riverswithoutboundaries.org</a>. <a href="http://www.transrivers.org">www.transrivers.org</a></p> <p><b>Oxana Nikitina</b>, Coordinator for Freshwater Ecosystem Conservation and Sustainable Hydropower, WWF-Russia <a href="mailto:onikitina@wwf.ru">onikitina@wwf.ru</a></p> <p><b>Dr. Vadim Kiriliuk and Dr. Tatiana Tkachuk</b>, Daurys Biosphere Reserve / Dauria International Protected Area (DIPA) <a href="mailto:vkiriliuk@bk.ru">vkiriliuk@bk.ru</a> , <a href="mailto:tetkachuk@yandex.ru">tetkachuk@yandex.ru</a></p> <p><b>Dr. Sergey Shapkaev</b>, Director, Buriat Regional Organization for Baikal (BROB), Ulan-ude. <a href="mailto:shapsg@gmail.com">shapsg@gmail.com</a></p> <p><b>Alexander Kolotov</b>. Plotina NGO. Coordinator Rwb-Russia. Krasnoyarsk. <a href="mailto:kolotov@plotina.net">kolotov@plotina.net</a></p> <p><b>Sukhgerel Dugersuren</b>, Director- OT Watch - Coordinator Rwb-Mongolia, Ulaan Baatar <a href="mailto:dsukhgerel@gmail.com">dsukhgerel@gmail.com</a></p>



## 7. Danube basin

<b>Transboundary basin: Danube</b>	
<b>1. Name and short description of the project: ICPDR Strategy on Adaptation to CC:</b>	In 2012, the ICPDR developed a climate adaptation strategy based on a scientific study on Climate Change in the Danube Basin, providing foundations for a common, Danube-wide understanding of future impacts of climate change on water resources and suitable adaptation measures as a basis for the development of the Danube Climate Adaptation Strategy <a href="http://www.icpdr.org/main/activities-projects/climate-change-adaptation">http://www.icpdr.org/main/activities-projects/climate-change-adaptation</a> . It was solely based on existing studies and projects, no further scenarios or model calculations were carried out. The study also includes an indication of the uncertainty of the predicted changes and impacts next to a summary of possible adaptation measures.
<b>2. Which possible climate change impacts are you already experiencing or expecting, such as floods, droughts, impacts on water quality etc.?</b>	Alongside the regional and seasonal temperature and precipitation changes expected in the course of this century, the direct and indirect effects of these changes are of essential interest. This includes impacts on different fields related to water availability, extreme hydrological events, water quality, water and land use, and ecology. Despite the high heterogeneity and the frequent low comparability of the project results, the expectations for future climate conditions and their related impacts show mostly similar trends. Hence, only qualitative information can be given for the different impact fields instead of quantitative or probabilistic statements.
<b>3. Concrete results achieved in 2016-2017 with regards to climate change adaptation:</b>	The main tool for the implementation of the ICPDR Adaptation Strategy to CC are two principle policy documents: Danube River Basin Management Plan – Update 2015 and the Danube Flood Risk Management Plan, developed under the relevant EU Directives and adopted by the ICPDR in 2015. Implementation of these two Plans are underway and a comprehensive report on their implementation will be available in 2018, comprising also information on measures derived from the Adaptation Strategy.
<b>4. Which major challenges did you face with regards to transboundary cooperation and climate change adaptation? How did you overcome them?</b>	Not directly applicable at TB level, since the implementation happens mostly at national level. The undergoing update of the scientific study being developed for the update of the Adaptation strategy points to a lack in getting more elaborate/advanced answer to scientific knowledge in comparison with the original 2012 study.
<b>5. Which lessons learned would you like to share with other basins?</b>	Cooperation of all countries on the development of the strategy; principle of lead country (countries); use and proper analysis of science; adaptive management (update of the strategy underway for 2018); incorporation of the results/recommendations into principle policy documents the DRBM and the DFRM Plans. <a href="http://www.icpdr.org/main/management-plans-danube-river-basin-published">http://www.icpdr.org/main/management-plans-danube-river-basin-published</a>
<b>6. How do you finance your climate change activities? How do you plan to finance implementation of adaptation measures?</b>	Except for the update of the Adaptation Strategy (with contribution of one of the lead countries Germany) and development of the next cycle of the DRBM and DFRM Plans, all activities, including implementation of relevant measures is financed national level.
<b>7. How did you link transboundary climate change actions to adaptation activities at other levels, such as the national level?</b>	The national RBM and FRM Plans are being developed in coordination with the Danube Basin ones, therefore the relevant measures at national level derive from, where appropriate, the DRB Plans.
<b>8. Future planned activities on climate change adaptation:</b>	Finalisation of the update of updated scientific study in Jan 2018; ICPDR adaptation workshop with ICPDR Cps, observers and key stakeholders in Mar 2018; development and adoption of the updated ICPDR Adaptation strategy in Dec 2018 by the ICPDR.
<b>9. Is water scarcity an issue in your basin? If yes, how are you addressing it or planning to address it? Which measures are you taking?</b>	Water scarcity becomes an emerging issue in the DRB, particularly after the droughts witnessed in 2015. Therefore, in Dec2016 the ICPDR adopted a 2015 Drought report on the impacts of droughts in the DRB in 2015, the measures taken and lessons learned. <a href="http://icpdr.org/main/issues/droughts">http://icpdr.org/main/issues/droughts</a>

**10. From your perspective and considering your needs and experiences, which priorities/activities should be included in the next workplan of the Task Force on Water and Climate and the global network of basins in 2019-2021?**

**11. Contact details:** [ivan.zavadsky@unvienna.org](mailto:ivan.zavadsky@unvienna.org), [icpdr@unvienna.org](mailto:icpdr@unvienna.org)

## 9. Niger basin

**Transboundary basin: Niger river Basin Authority (NBA)**

**1. Name and short description of the project – *this information will be put on the website***  
**Investment Plan for the Strengthening of Resilience to Climate change in the Niger Basin (CRIP) and its component projects: (i) “Integrated Program for Development and Adaptation to Climate Change in the Niger Basin”** (African Development Bank, AfDB) and (ii) **“Developing resilience to climate change in the Niger Basin”** Project (2<sup>nd</sup> phase of the World Bank (WB) Program for Development of Water Resources and Sustainable Management of Ecosystems in the Niger Basin, WRDSEM / APL 2B)

**2. Which possible climate change impacts are you already experiencing or expecting, such as floods, droughts, impacts on water quality etc.?**

water stress, flooding, soil degradation, degradation of the grazing land, degradation of the ecosystems, deterioration of the water quality, Measures targeting vulnerability linked to the rising sea-level, socio-economic insecurity

**3. Concrete results achieved in 2016-2017 with regards to climate change adaptation:**

More than US\$ 600 million raised by the African Development Bank (AfDB) and the World Bank (WB)

**4. Which major challenges did you face with regards to transboundary cooperation and climate change adaptation? How did you overcome them?**

- a) Framing of a sound strategy and investment Plan for fund raising;
- b) Designing consistent CCA projects portfolios ;
- c) Engaging member Countries for endorsement ;
- d) Preparing projects’ implementation with relevant technical and ESIA studies;
- e) Setting up institutional and organisational arrangements for projects running.

**5. Which lessons learned would you like to share with other basins?**

- a) A good knowledge of the impacts of climate change on the natural resources and investment projects is required for a good strategy and better planning of development, especially, the actions of adaptation to climate change; thus, there is need for studies, sound technical and scientific information compiling, sharing and validation basin-wide and beyond;
- b) Combining national and transboundary planning instruments, setting up and agreeing on a set of criteria to select transboundary level relevant issues and projects, suiting with a transboundary river basin Organisation like the NBA (principle of subsidiarity);
- c) Need for negotiation, flexibility and compromises with the donors when packaging the portfolios (upscaling some issues and projects);
- d) Need for time (anticipation) and concrete lobbying materials to get engaged the member countries for allocating national counterpart funds ;
- e) Need for anticipation by preparing projects with good technical (engineering) and ESIA studies;
- f) Agree on institutional and organisational arrangements suitable including a strong regional capacity and coordination for smooth and quick delivery of the projects products.

**6. How do you finance your climate change activities? How do you plan to finance implementation of adaptation measures?**

- a) national counterpart funds (10% of the total amount of each member country portfolios);
- b) multilateral ou bilateral donors (AfDB, WB, KfW, FDF,...) comprising sometimes (i) loans from dedicated national envelopes and (ii) grants from regional funds (transboundary river basin) from

<p>some funding mechanisms in water sector and/or in climate change adaptation;</p> <p>c) local beneficiaries' financial and/or mankind (labor) contribution;</p> <p>d) others ways of funding under investigation: PPP's ; levees by charging fees to some water users like hydropower generation or navigation companies or industries using raw water and/or polluting it;</p>
<p><b>7. How did you link transboundary climate change actions to adaptation activities at other levels, such as the national level?</b></p> <p>Yes, we did. They include some actions of :</p> <p>a) member countries' National Adaptation Programmes of Action (NAPAs) ;</p> <p>b) National Adaptation Plans (NAPs);</p> <p>c) Other country proposals.</p> <p>See also point 5. above</p>
<p><b>8. Future planned activities on climate change adaptation:</b></p> <p>a) Finalising the studies and implement the "<i>Integrated Program for Development and Adaptation to Climate Change in the Niger Basin</i>" (AfDB) starting by filling up knowledge gap relevant for action;</p> <p>b) Preparation of the new "<i>Developing Resilience to Climate Change in the Niger Basin</i>" Project (WB) and implementation starting by filling up knowledge gap relevant for action;</p> <p>c) Lobbying and fund raising for other big infrastructure investment in the framework of the Operational Plan (OP) of the Strategic Plan 2016-2024.</p>
<p><b>9. Is water scarcity an issue in your basin? If yes, how are you addressing it or planning to address it? Which measures are you taking?</b></p> <p>a) Making operational of dedicated water and natural resources governance bodies (Sub-Basin Commissions, Standing Technical Committee, Independent Panel of Experts, Regional Advisory Group) planned in the Niger Basin Water Charter;</p> <p>b) Improving water planning and forecasting tools (water allocation and forecast models in near real time, detailed modelling tools for some parts and for big reservoirs,...)</p>
<p><b>10. From your perspective and considering your needs and experiences, which priorities/activities should be included in the next workplan of the Task Force on Water and Climate and the global network of basins in 2019-2021?</b></p> <p>a) Contribution to stock-taking on climate change and adaptation in the Niger Basin ;</p> <p>b) Contribution to a knowledge compendium on climate change and adaptation in the Niger Basin to to pave the road of an efficient implementation of the Investment Plan for the Strengthening of Resilience to Climate change in the Niger Basin (CRIP);</p>
<p><b>11. Contact details</b></p> <ul style="list-style-type: none"> <li>• <a href="mailto:touptab@gmail.com">touptab@gmail.com</a> (NBA Executive Secretary)</li> <li>• <a href="mailto:abdou.guero@gmail.com">abdou.guero@gmail.com</a> (NBA Technical Director):</li> <li>• <a href="mailto:compaore00891@almuni.itc.nl">compaore00891@almuni.itc.nl</a> (NBA Environment Specialist)</li> <li>• <a href="mailto:secretariat.abn@gmail.com">secretariat.abn@gmail.com</a> (NBA Executive Secretariat)</li> </ul>

## 10. Congo basin

<p><b>Transboundary basin: International Commission of the Congo-Oubangui-Sangha Basin (CICOS)</b></p> <p><b>1. Name and short description of the project – <i>this information will be put on the website</i></b></p> <p><b>Project for developing a transboundary climate change adaptation plan (PTACC).</b></p> <p>In accordance with the mandate conferred on the International Commission of the Congo-Oubangui-Sangha Basin (CICOS), which in the Founding Agreement of 1999, first aimed at promoting inland navigation through the harmonization and coordination of a uniform river regime in the basin, and which was then expanded by the 2007 Additional text to the implementation of Integrated Water Resources Management (IWRM) the CICOS Committee of Ministers has adopted, the CICOS Water Development and Management Master Plan (SDAGE). The SDAGE was developed through a participatory approach and includes the following units:</p> <ul style="list-style-type: none"> <li>✓ Water sector Status Report in the Congo Basin;</li> <li>✓ Shared Vision of the water sector development in the basin to the year 2035.</li> </ul>
--



This Shared Vision is entitled *“The Congo Basin in 2035, a regional integration area where united and emerging nations strengthen their capacity to turn water into an engine of economic growth and a source of well-being, while safeguarding the quality of the ecosystems by adapting the uses to climate change and by fostering the sharing of costs and benefits”*;

- ✓ Programme of Measures 2016-2020 aiming to turn water into a real factor of sustainable development and growth for all within the basin. The Programme of Measures will be implemented by CICOS and its Member States in order to pursue its mandates, meet the challenges identified in the Status Report and progress towards the realization of the 2035 Shared Vision.

The Programme of Measures adds to the national water resources development, poverty-reducing, socio-economic growth programmes, in a consultative framework coordinated at basin level. It is complementary to another CICOS planning tool, the Strategic Action Plan for Inland navigation within the Congo Basin (PAS – intérieure), adopted by Decision N° 06/CICOS-CM.13, by the 13th regular session of CICOS Committee of Ministers.

In the Programme of Measures, a “measure” is a set of activities that need to be carried out in order to achieve one or various results that we hope will make CICOS and its Member States progress towards a Shared Vision 2035 and help it become a “Shared reality” in twenty-years time.

The Programme of Measures essentially aims at implementing the missions entrusted to CICOS by the Member States in the 2007 Additional text. It includes about thirty measures, to be carried out during the period 2016-2020, identified and included, according to the 2035 Shared Vision objectives and strategic focuses, by the Member States representatives during the National Concertation Platforms workshops and validated in November 2015 in Kinshasa, during the 3rd Consultation Regional Platform workshop.

Having raised many discussions concerning its causes and impacts, the climate change is nowadays subject to a very large consensus, even though locally, models can still be diverging or insufficiently detailed.

A measure sheet has been developed and entitled *“Measure sheet – Action n°1.2.6: Identify and disseminate climate change adaptation methods for the different uses”*. This measure aims at developing a transboundary climate change adaptation plan (PTACC) in the Congo Basin. **Project for developing a transboundary climate change adaptation plan (PTACC).**

## **2. Which possible climate change impacts are you already experiencing or expecting, such as floods, droughts, impacts on water quality etc.?**

The Congo Basin is very vulnerable to climate changes. Expected climate change effects include the increase of temperature, climatic variability and extreme events such as flows and floods. Water-related sectors such as navigation and agriculture are now adversely affected. Development cooperation in the basin could help select the measures that are useful from the basin perspective, share experience and collect data and resources, etc. Therefore, it will be included in the Congo Basin Management plan, developed by the Congo Basin Commission and adopted in 2016, in order to develop an adaptation strategy/plan for the whole basin.

## **3. Concrete results achieved in 2016-2017 with regards to climate change adaptation:**

**Draft TDR:** Project for developing a transboundary climate change adaptation plan (PTACC) in the Congo Basin.

## **4. Which major challenges did you face with regards to transboundary cooperation and climate change adaptation? How did you overcome them?**

By also using the information system to be developed under the first main component of this project, this component will foster a common understanding of future water availability among riparian countries, given the climate change and other pressures on water resources. This will result in a common vision on how to jointly adapt to climate change in the basin, namely an adaptation strategy/plan which is already foreseen in the basin management plan. The project will thus increase the adaptation capacity of riparian countries and facilitate the coordination of actions in the selected basin.

<p><b>5. Which lessons learned would you like to share with other basins?</b></p> <p>The lessons learned will be shared with the other basins of the UNECE-INBO network.</p>
<p><b>6. How do you finance your climate change activities? How do you plan to finance implementation of adaptation measures?</b></p>
<p><b>7. How did you link transboundary climate change actions to adaptation activities at other levels, such as the national level?</b></p> <p>The project will be carried out in close cooperation with the Congo Basin Commission and other relevant actors from all CICOS countries that will be consulted on the vulnerability assessment and adaptation strategy.</p>
<p><b>8. Future planned activities on climate change adaptation:</b></p> <p>The following activities are foreseen :</p> <ol style="list-style-type: none"> <li>1. A basic analysis of Congo riparian countries climate change impacts, vulnerability, needs, climate change activities already underway, etc.</li> <li>2. The common climate change impact and vulnerability assessment by means of different scenarios and involving the authorities, scientists, etc. of all the countries of the basin.</li> <li>3. A transboundary adaptation strategy developed in a interactive and participative manner</li> <li>4. Prioritizing adaptation measures</li> </ol>
<p><b>9. Is water scarcity an issue in your basin? If yes, how are you addressing it or planning to address it? Which measures are you taking?</b></p>
<p><b>10. From your perspective and considering your needs and experiences, which priorities/activities should be included in the next workplan of the Task Force on Water and Climate and the global network of basins in 2019-2021?</b></p> <p>The lessons learned will be shared with the other basins of the UNECE-INBO network.</p>
<p><b>11. Contact details</b></p> <p>Ms. ENAW née EFUNDEM AGBOR Judith.  CICOS Secretary-General  Email: <a href="mailto:efundemjudith@gmail.com">efundemjudith@gmail.com</a>  M. Blaise – Léandre TONDO  Water Engineer – Economist  Senior Expert at CICOS  Email: <a href="mailto:blaisetondo@yahoo.fr">blaisetondo@yahoo.fr</a>  +243812958225</p>

## 12. Mekong basin

<p><b>Transboundary basin:</b> Mekong River Basin</p>
<p><b>1. Name and short description of the project – this information will be put on the website</b></p> <p>Climate Change and Adaptation Initiative of the Mekong River Commission  The overall objective of MRC's Climate Change Adaptation Initiative (CCAI), 2011-2016, is to guide climate change adaptation planning and implementation through improved CC impacts assesments and improved strategies and plans at different scale in the Lower Mekong Basin. It has supported LMB governments in introducing and improving strategies and plans for adaptation at various levels and their integration with appropriate development plans. CCAI has also ensured that adaptation performance and the status of climate change is monitored and reported on a regular basis. Besides, CCAI developed the Mekong Climate Change Adaptation Strategy and Action Plan.</p>
<p><b>2. Which possible climate change impacts are you already experiencing or expecting, such as floods,</b></p>

**droughts, impacts on water quality etc.?**

CCAI conducted a series of basin wide assessments of climate change impacts on water and water-related resources under several climate change and development scenarios: in hydrology, flood & drought patterns, hydropower production, ecosystem & biodiversity, food security and socio-economics. Specific and unique methodologies have been developed for each of these assessments, mostly based on numerical modelling tools. To illustrate some of these findings: regarding food production, for example, the projected impacts of climate change on crop yields are negative for both rice and maize with greater impacts on rice. Projected impacts on fisheries are positive or negative depending on the scenario. The flood zone habitats are likely to experience greater changes than rice paddy habitats. In term of ecosystem, substantial changes in bioclimatic conditions are projected across the LMB's ecoregions. By 2060, up to 100% of some ecoregions may experience completely novel bioclimatic conditions. Species are highly vulnerable to climate change with large numbers of fish particularly at risk due to their sensitivity to hydrological cues. The range of possible changes in hydrology is enormous. The largest ranges of predicted impact at one specific location (Kratie) associated with climate change and 2060 development scenarios are: the range of annual river flow change is estimated as -38% to +28%; flood season peak flow -30% to +43%; minimum 1-day flow -21% to +79%. Without adaptation there will be significant deterioration of the flood conditions with more losses and people affected. The Mekong delta is impacted by both upstream increases in flow and sea level rise, affecting the largest number of people in the region. Basin development will interact with the impacts from climate change, in some cases exacerbating the change and in some cases mitigating against it. The projected impact of climate change on floods depends in large part on the model applied. Under both the wetter overall model and the increased seasonal variability model the flooded area is projected to increase for floods of all return intervals in a range of 4.6% to 27.3% increase. The biggest proportional changes are projected to occur for the smaller floods with return intervals of 1 in 2 years and 1 in 5 years: under the highest emissions scenario for the wetter overall model, the change projected to 2060 is an increase in flooded area of 38% for a 1 in 2 years flood and of 28% for a 1 in 5 years flood. Under the medium emissions scenario and wetter overall model, the flooded area is projected to increase 27% for a 1 in 2 years flood and 20% for a 1 in 5 years flood.

**3. Concrete results achieved in 2016-2017 with regards to climate change adaptation:**

- Finalise basin-wide assessment of climate change impact on water and water related resources and sectors, including seven components namely hydrology, flood, drought, hydropower, ecosystem, food security and socio-economics. This process of the finalization has got an involvement of number relevant stakeholders in consultation meeting and forum.
- Finalise Status report of climate change and adaptation in the Lower Mekong Basin (LMB)
- Finalise Mekong Adaptation Strategy and Action Plan (MASAP)  
The MASAP is a "Statement" of the LMB countries setting out the MRC's Strategic Priorities at basin level to address climate change risks and strengthen basin-wide resilience. The added values of the MASAP are ensured by addressing critical climate change adaptation aspects that need transboundary cooperation and by enhancing the capacity of the Member Countries in implementing their own national strategies. An action plan has been developed for the implementation of the MASAP.

**4. Which major challenges did you face with regards to transboundary cooperation and climate change adaptation? How did you overcome them?****Challenges:**

- Different level of climate change impacts and adaptation priorities of each Member Country
- Data monitoring and sharing
- Seeking fund for the transboundary adaptation projects

**Overcomes:**

- Enhance regional and international cooperation and partnership on adaptation;
- Support access to adaptation finance;
- Enhance monitoring, data collection and sharing;
- Strengthen capacity on development of climate change adaptation strategies and plans; and
- Improve outreach of the MRC products on climate change and adaptation

<p><b>5. Which lessons learned would you like to share with other basins?</b></p> <ul style="list-style-type: none"> <li>• Strong leadership to address climate impact at regional level</li> <li>• Inclusion consultation process with both internal and external stakeholders</li> <li>• Challenge of defining what transboundary adaptation is and of identifying relevant and feasible actions</li> <li>• Challenge of convincing countries about the added value of the regional level, on top of existing national levels</li> <li>• Multiplicity of initiatives and actors in the field of CCA</li> </ul>
<p><b>6. How do you finance your climate change activities? How do you plan to finance implementation of adaptation measures?</b></p> <p>The project has been received financial support from development partners: Australia, Denmark, Finland, Luxembourg, Germany, Sweden and EU.</p>
<p><b>7. How did you link transboundary climate change actions to adaptation activities at other levels, such as the national level?</b></p> <p>The regional adaptation strategy and actions will be mainstreamed into relevant national strategies, policies and plans. The methodologies and tools that have been developed at the transboundary level can be replicated and/or downscaled at national/local level. The capacity building program targeted the national levels.</p>
<p><b>8. Future planned activities on climate change adaptation:</b></p> <ul style="list-style-type: none"> <li>• Climate proof MRC sectoral strategies 2016-2020 and the next Basin Development Strategy;</li> <li>• Promote mainstreaming of Basin-wide assessment findings and MASAP's adaptation strategic priorities at national level; and</li> <li>• Promote and facilitate exchanges of good practices between Member Countries on Climate Change Adaptation;</li> <li>• Strengthen and/or institutionalize partnership between MRC and international climate change communities.</li> <li>• Consolidate the existing MRC transboundary projects with climate change adaptation measures and develop further initial ideas of new transboundary adaptation projects</li> <li>• Identify approaches/mechanisms of access to climate change adaptation finance by the Member Countries and MRC</li> <li>• Regular reporting on status and trends of Climate Change Adaptation indicators;</li> <li>• Enhance early forecast, warning on extreme events</li> <li>• Promote and support at national level the application of the MRC climate change scenarios, climate change impact and vulnerability assessment approach, methods and tools;</li> <li>• Formulate and implement Capacity Building Activities.</li> <li>• Maintain and update MRC CCAI website, data portal and social media;</li> <li>• Disseminate MASAP and other CCAI products at relevant events including the Mekong Forum.</li> </ul>
<p><b>9. Is water scarcity an issue in your basin? If yes, how are you addressing it or planning to address it? Which measures are you taking?</b></p> <p>Yes. Drought is a major issue in the LMB, the recent El Nino event had important consequences in terms of crop yields and water access. Future drought patterns under CC scenarios have been analysed under CCAI. In order to address the challenges, the forecasting and planning need to be improved. MRC is currently developing a regional transboundary drought forecasting system.</p>
<p><b>10. From your perspective and considering your needs and experiences, which priorities/activities should be included in the next workplan of the Task Force on Water and Climate and the global network of basins in 2019-2021?</b></p> <ul style="list-style-type: none"> <li>• How to identify good proxy for CCA indicators (climate, impacts &amp; adaptation indicators)</li> <li>• Ideas for innovative/ attractive communication/ education campaigns on CC impacts</li> <li>• How to increase synergies between national and regional CCA policies &amp; plans?</li> <li>• Transboundary adaptation measures: is it worth the effort?</li> </ul>
<p><b>11. Contact details</b></p>

<p>1. Dr. An Pich Hatda Director of Planning Division, Mekong River Commission Secretariat P.O. Box 6101, 184 Fa Ngoum Road Unit 18, Ban Sithane Neua, Sikhottabong District, Vientiane 01000, Lao PDR</p> <p>2. Dr. Nguyen Dinh Cong Climate Change Adaptation Specialist, Planning Division, Mekong River Commission Secretariat P.O. Box 6101, 184 Fa Ngoum Road Unit 18, Ban Sithane Neua, Sikhottabong District, Vientiane 01000, Lao PDR</p> <p>3. Dr. Anne Chaponniere GIZ Advisor, MRC-GIZ Cooperation Program, Mekong River Commission Secretariat P.O. Box 6101, 184 Fa Ngoum Road Unit 18, Ban Sithane Neua, Sikhottabong District, Vientiane 01000, Lao PDR.</p>
--

## 14. Meuse basin

<b>Transboundary basin: Meuse</b>
<p><b>1. Name and short description of the project – <i>this information will be put on the website</i></b> The project AMICE, ‘Adaptation of the Meuse to the Impacts of Climate Evolutions’ 2009 – 2014 provided substantial information on climate change evolutions, consequences, possible measures and a road map for a transnational adaptation strategy in the Meuse basin. <a href="http://www.amice-project.eu/en/">http://www.amice-project.eu/en/</a> In Dec. 2014 the IMC adopted a Climate Change Action Plan specifying the tasks and CC related activities of the IMC Working Groups. Tools for implementing CC Adaptation measures : the WFD Management Plan, Roof Report Meuse Basin <a href="http://www.meuse-maas.be/CIM/media/Rapport-faitier-dec-2015/Rapport_faitier_Maqua_15_1rev11_f_.pdf?ext=.pdf">http://www.meuse-maas.be/CIM/media/Rapport-faitier-dec-2015/Rapport_faitier_Maqua_15_1rev11_f_.pdf?ext=.pdf</a> and the Flood Risk Management Plan, Roof Report Meuse Basin. <a href="http://www.meuse-maas.be/CIM/media/DI/PGRI%20-%20d%C3%A9c%202015/pr-PGRI_Minond_15_4rev2_f_.pdf?ext=.pdf">http://www.meuse-maas.be/CIM/media/DI/PGRI%20-%20d%C3%A9c%202015/pr-PGRI_Minond_15_4rev2_f_.pdf?ext=.pdf</a> Both plans were adopted in Dec. 2015 covering the period 2016 – 2021. The Homogeneous Monitoring Network Meuse has been updated - made CC proof – in 2015, including Monitoring Water Temperature. Evaluation and actualization is foreseen every three years, i.e. in 2018. An Action Plan for Exceptional Low Flows in the Meuse Basin – including the consequences for water quality - is in preparation.</p>
<p><b>2. Which possible climate change impacts are you already experiencing or expecting, such as floods, droughts, impacts on water quality etc.?</b> The Meuse is a rain fed river and particular sensitive for Climate evolutions. Consequences of CC are for more than 90% water related. AMICE estimations (2050 – 2100): increase water temperature 2.5° – 5° ; increase extreme discharges 15% - 30% ; decrease low flows 10% - 40%.</p>
<p><b>3. Concrete results achieved in 2016-2017 with regards to climate change adaptation:</b> Countries and regions members of IMC are elaborating national / regional CC adaptation plans. Information exchange about the progress in the IMC working groups. In October 2016 a joint Meuse (IMC) – Scheldt (ISC) workshop on CCAdaptation has been organized, an important exchange of knowledge and experience between contracting parties (countries and regions). Experiences and conclusions have been discussed and validated in the IMC Plenary meeting in Dec. 2016. From week 23 to week 44 weekly reports on actual water flows at 23 sites in the Meuse basin are prepared and exchanged.</p>
<p><b>4. Which major challenges did you face with regards to transboundary cooperation and climate change adaptation? How did you overcome them?</b> Management of exceptional low flows in the Meuse basin, taking into account the water quality aspects</p>

<p>and the interests of water user functions.          How to use water surplus in winter to balance lack of water in summer.          Manage the (notably) downstream interest of surface water users.          Importance of Flash Floods in paved surface (in cities) and in hilly surroundings.</p>
<p><b>5. Which lessons learned would you like to share with other basins?</b>          CCAadaptation is more than 90% water related: adapted water management and adapted water use.          The importance of a permanent exchange of knowledge and experience between countries and regions.          Information exchange between basins and river basin commissions.          Exchange of good practices.</p>
<p><b>6. How do you finance your climate change activities? How do you plan to finance implementation of adaptation measures?</b>          Activities of the IMC secretariat (personal costs) and facilitating activities (meetings, translation etc.) are paid by the commission based on the contributions of the members (states and regions).          The real costs are the costs of policies and measures by the countries/regions; these are financed by themselves.</p>
<p><b>7. How did you link transboundary climate change actions to adaptation activities at other levels, such as the national level?</b>          The Roof Reports of WFD and the Inundation Risks Directive are the Linking Pins, i.e. tools to connect national/regional activities and multilateral aspects of the river basin commissions.          Create network and confidence between experts of the member countries.</p>
<p><b>8. Future planned activities on climate change adaptation:</b>          Finalisation Low Water Management Plan, including relation with Water Quality and Water Use during periods of scarcity;          Build up data and information about CChange related issues: temperature, relation pollution (concentrations) and low flows;          Start-up of next cycle WFD Management plan and Management Plan Risk Inundations (start 2018-2019)</p>
<p><b>9. Is water scarcity an issue in your basin? If yes, how are you addressing it or planning to address it? Which measures are you taking?</b>          See nrs. 1, 2, 3 and 4.</p>
<p><b>10. From your perspective and considering your needs and experiences, which priorities/activities should be included in the next workplan of the Task Force on Water and Climate and the global network of basins in 2019-2021?</b>          Exchange of experiences about (Exceptional) Low Water Management          Exchange of experience about relation Low Water and Water Quality</p>
<p><b>11. Contact details</b>          Willem Schreurs; International Meuse Commission <a href="http://www.meuse-maas.be/Accueil.aspx">http://www.meuse-maas.be/Accueil.aspx</a>  <a href="mailto:schreurs@meuse-maas.be">schreurs@meuse-maas.be</a>; GSM +32479294912</p>

## 15. Lake Victoria basin

<p><b>Transboundary basin: Lake Victoria basin</b></p>
<p><b>1. Name and short description of the project – <i>this information will be put on the website</i></b></p> <p><b>There are two projects that funding is already available and the implementation will start early next year:</b></p>

**(i) LVB Climate Change Adaptation Project applied through UNEP (USD 5 Million) Adaptation Fund:**

The overall objective of this project is to “reduce vulnerability to the negative effects of climate change in the five Lake Victoria Basin countries, namely Burundi, Kenya, Rwanda, Tanzania and Uganda, by building climate resilience”. There are five components which include:

- a) Strengthened institutional capacity to integrate climate resilience into transboundary water catchment management.
- b) Improved delivery of accurate and timely climate information – with an emphasis on transboundary water catchment management – to regional and national policymakers, technical officers and local communities.
- c) Climate change adaptation technologies transferred to communities to reduce their vulnerability to climate change.
- d) Regional resilience to climate change promoted through innovative, community-based projects.
- e) Improved knowledge management frameworks for the collection and maintenance of regional knowledge in transboundary water catchment management and climate change adaptation practices.

**(II) Engaging Private Sector for Green Growth in the Lake Victoria Basin Project applied through the World Bank: (USD 3.65 Million) : Nordic Development Fund**

The Project Development Objective is to increase use of and investment in resource-efficient and cleaner production technologies by private enterprises in the Lake Victoria Basin. The project aims to expand on this engagement, leveraging successful partnerships to bring in new elements, such as sustainable supply chains and industrial symbiosis which are expected to play a major role in the scale-up of sustainable land management within the basin (as many of the local industries are agro-processors) and the joint adaptation and mitigation impacts that accompany it. This is based on the past experience that the scale of the Basin, and its environment and climate-related challenges, cannot be adequately addressed through public funding alone, but the success of the RECP pilot program to date has revealed the catalytic power of private sector investment, once their financial and corporate social and environmental interests are aligned.

**2. Which possible climate change impacts are you already experiencing or expecting, such as floods, droughts, impacts on water quality etc.?**

Reduced rainfall volume and increased variation in rainfall patterns;

Increased the frequency of flooding events; Across the LVB, a number of prolonged drought events have occurred, specifically in 1983/1984, 1991/1992, 1995/1996, 2004/2005;

Deterioration of the water quality in the Lake Victoria.

Increased annual temperatures have resulted in heat stress in livestock, which reduces growth rates, reproductive rates, milk production etc.

The fisheries sector in the LVB has been adversely affected by the changes in distribution and/or quantity of freshwater resources.

Fluctuations in the volume of water in Lake Victoria affected the generating capacity of hydropower facilities and infrastructure within the LVB.

**3. Concrete results achieved in 2016-2017 with regards to climate change adaptation:**

**There are three major results that we have achieved:**

- (i) Mobilised resources of about USD 8.7 for the two projects mentioned above;
- (ii) Finalisation of the Lake Victoria Basin Climate Change Strategy and Action Plan and development of the East Africa Climate Change Policy;
- (iii) Created awareness to East African Parliamentarians, Policy Makers, Communities and other stakeholders on issues related to Climate Change and Adaptation;
- (iv) Participated in various National, Regional and International forums and share LVBC experiences and challenges on issues related to Climate Change

**4. Which major challenges did you face with regards to transboundary cooperation and climate change adaptation? How did you overcome them?**

- (i) There are many stakeholders with various interests; this makes it difficult in agreeing in activities that are to be undertaken e.g. Farmers, fishermen, water utilities, industries, livestock keepers etc; This makes consultation process with the stakeholders long and difficult;
- (ii) Unavailability and unreliability of data is another challenge in the region;
- (iii) Countries put their national priorities first and the regional priorities come last;
- (iv) Lack of knowledge on climate change and adaptation to local communities.

Some of the solutions we have undertaken is to develop instruments eg data and information sharing protocol; increased awareness especially to members of parliaments and policy makers; undertake training and capacity building as well as encouraging countries to invest in data collections. Data exchange. They were discussed and a solution was proposed.

#### 5. Which lessons learned would you like to share with other basins?

- (i) Preparation of key documents (Vulnerability Impact Assessments, Climate Change Strategy, etc) is one of the key requirements before applying for the Climate Change Funds;
- (i) Options for funding are limited when compared with sovereign states, with climate funds such as the Green Climate Fund (GCF) only available to those projects agreed to by National Designated Authorities (NDAs)[
- (ii) River Basin Organization generated projects are seen as 'competition' by National Institutions;
- (iii) Development of CC Strategies in Basins is a complex process requiring an extensive multi-layered stakeholder consultation and participation, time consuming;
- (iv) Need to link National and Regional Climate Change Policy; and Strategy; and Action plans/ initiatives; and address transboundary issues;
- (v) Partnering with CC experienced International organisation like UNEP, World Bank, UNDP helps to develop well bankable CC projects

#### 6. How do you finance your climate change activities? How do you plan to finance implementation of adaptation measures?

Our Climate activities are financed through our Development Partners with support of International Institutions. Current funding is from Nordic Development Fund and Adaptation Fund.

Adaptation measures developed through our LVB Adaptation Strategy and Action Plan will be financed through our Development Partners as well as in kind contributions from the Partner States of the East African Community.

#### 7. How did you link transboundary climate change actions to adaptation activities at other levels, such as the national level?

The LVB Climate Change Strategy was developed jointly and with the participation of all the Six Countries of the EAC. Various consultations were undertaken and considered all available national policies. Based on this the Regional/ LVB CC strategy and Action Plan was developed. The activities proposed in the Action Plan were agreed by all the Countries and ranked accordingly.

#### 8. Future planned activities on climate change adaptation:

Future activities include:-

- (i) Review and approve the EAC CC strategy to accommodate new areas agreed internationally;
- (ii) Mobilize Resources for the Implementation of the LVBC Climate Change Strategy and Action Plan;
- (iii) Up scaling of the current programme on the Adaptation Fund through UNEP
- (iv) Up scaling of the activities on the Nordic Development Fund focusing on the Public Private Partnership;
- (v) Improve existing Climate Change tools developed and used in LVB.
- (vi)

#### 9. Is water scarcity an issue in your basin? If yes, how are you addressing it or planning to address it? Which



**measures are you taking?**

Yes, water is scarce in the Region. Some of the measures we have undertaken is formulation of various policies such as the new Water Release and Abstraction Policy for the Lake Victoria Basin; Sustainable land Management Strategy; the on-going EAC/ LVBC Water Resources Management Bill etc; We are also implementing activities related to watershed and provisional of alternative livelihood to the communities. In future we are planning to develop the LVB Water Resources Management Plan and LVB Decision Support System.

**10. From your perspective and considering your needs and experiences, which priorities/activities should be included in the next workplan of the Task Force on Water and Climate and the global network of basins in 2019-2021?**

- (i) Hold a Donors Conference in February to Mobilize Resources for the Implementation of the LVBC Climate Change Strategy and Action Plan;
- (ii) Prepare at least one Proposal for funding on the CC Adaptation through African Development Bank (AfDB);
- (iii) Follow up the Implementation LVB Climate Change Programme and the Private Sector for Green Growth in the Lake Victoria Basin Project.

**11. Contact details**

Eng. Omari R. Mwinjaka  
 Water Resources Management Officer  
 East African Community  
 Lake Victoria Basin Commission  
 13th Floor, Prosperity House, Kenyatta Road  
 P.O. Box 1510 - 40100 Kisumu, Kenya  
 Off.Tel: +254-57-2026344/2023873/2023894, Off.Fax: +254-57-2026324  
 Email.mwinjaka@lvbcom.org, Website: www.lvbcom.org

**16. Sixaola basin****Transboundary basin: Sixaola River Basin**

- 1. Name and short description of the project – *this information will be put on the website***  
**The Binational Commission of the Sixaola River Basin. (CBCRS, Spanish acronym)** is a binational and transboundary governance body for the integrated management of the Binational Sixaola River Basin. It covers and works in conjunction with the **Executive Secretariats of the Costa Rica-Panama Agreement on Cooperation for Border Development**. The CBCRS was created in 2009 as the supreme body for the project on strategic management 'Integrated Management of Ecosystems in the binational Sixaola River basin (Binational Project)'.
- 2. Which possible climate change impacts are you already experiencing or expecting, such as floods, droughts, impacts on water quality etc.?**  
 Decrease in rainfall and basin water flows, boat navigation problems in the basin due to a higher sedimentation in the rivers. Floods at certain times of the year affected by climate variability. Supply of drinking water scarcity to dwellings in the basin territory. Changes in phenology of fruit and forestry trees. Incidence of some crop pests, such as pejiyabe.
- 3. Concrete results achieved in 2016-2017 with regards to climate change adaptation:**  
 Formulation of a pilot project on family agriculture, with a focus on integrated farms models aimed at improving food security for families and contributing to agricultural diversification. Environmental

<p>education process with young people and children in order to raise awareness and teach protection and preservation of the environment that will contribute to reducing the impacts of climate change.</p>
<p><b>4. Which major challenges did you face with regards to transboundary cooperation and climate change</b> Greater involvement of municipal and local governments. To strengthen the environmental education process in order to enhance awareness on climate change impacts and adaptation measures. Resource management to promote sustainable development models in the Binational Sixaola Basin.</p>
<p><b>5. Which lessons learned would you like to share with other basins?</b> Motivation and commitment of institutional actors, local governments and civil society are crucial to ensure good governance in shared basins. In our case, it is essential to have a signed Agreement for Border Development between governments of the two countries (Costa Rica and Panama), as it constitutes an essential legal instrument for taking actions in the Binational Commission of the Sixaola River Basin. The commitment placed in the coordination structures of the CBCRS is important for the proper functioning of the Commission.</p>
<p><b>6. How do you finance your climate change activities? How do you plan to finance implementation of adaptation measures?</b> An international cooperation project has been successfully developed. The institutional platform ensures the provision of resources for the development of activities of the CBCRS. A strategic plan has been drawn up and, in so doing, a resource mobilization strategy has been created to establish an investment plan for the transboundary territory of the Binational Sixaola River Basin.</p>
<p><b>7. How did you link transboundary climate change actions to adaptation activities at other levels, such as the national level?</b> The strategic plan is in liaison with local, regional and national plans of governments from both countries.</p>
<p><b>8. Future planned activities on climate change adaptation:</b> Environmental education, projects contributing to sustainable development and considering adaptation measures based on ecosystems. To strengthen coordination and governance structures that help improve the management and financial sustainability of the CBCRS.</p>
<p><b>9. Is water scarcity an issue in your basin? If yes, how are you addressing it or planning to address it? Which measures are you taking?</b> The problem does not focus on scarcity; it mainly lies in the poor water distribution and use to secure the supply for the population. The basin is one of the most important sources in terms of availability of water resources, however, there is no good supply planning.</p>
<p><b>10. From your perspective and considering your needs and experiences, which priorities/activities should be included in the next workplan of the Task Force on Water and Climate and the global network of basins in 2019-2021?</b> To strengthen the education and awareness process on environmental protection and the importance of conservation in order to guarantee water supply for future generations. To ensure good governance and the principle of good neighborliness among the inhabitants of the basin. Practical and concrete actions to mitigate the impacts of climate change based on the improvement of family farming and food security by promoting models of sustainable agriculture and forestry production.</p>
<p><b>11. Contact details</b> Juan Carlos Barrantes Barrantes, Coordinator de the CBCRS. Email <a href="mailto:shulakma@hotmail.com">shulakma@hotmail.com</a> Telephone: 00-506-83192573</p>