

Management of the Neman River basin with account of adaptation to climate change

Vladimir Korneev
Sergei Zavyalov



Global Network of basins working on climate change adaptation, the third meeting

Geneva, 6-7 April 2016

SHORT INTRODUCTION

The Neman River Basin (NRB) territory is characterized by a large population size, a high concentration of industrial enterprises and other facilities, including oil/product/gas pipelines, a brisk growth of the hydropower engineering and agricultural sectors and active use of water resources.

This will changes in NRB-flow due to climate change resulting increased risks of dangerous hydrometeorological phenomena, including rain floods and droughts. The problem of low-water periods leading to droughts is more relevant for the NRB.

Main aim of the project

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 through supporting dialogue and design of the adaptation strategy in transboundary context to reach a common understanding on future water availability and water use taking into account possible climate change impacts.

CONCRETE RESULTS IN THE PAST YEAR

Final versions of the Strategic Framework for the Neman River Basin Adaptation to Climate Change is published in Russian, in Lithuanian and in English.

Results of the pilot project were presented in the Seventh World Water Forum in April 2015 (Republic of Korea) and in the United Nations Publication “Water and Climate Change Adaptation in Transboundary Basin: Lessons Learned and Good Practices” (2015).

Results of the Pilot Projects and future activities were discussed in meetings with participation of scientists, experts and decision-makers from Belarus, Lithuania and the Kaliningrad oblast of the Russian Federation.

CONCRETE RESULTS IN THE PAST YEAR

The following meetings were organized in 2014-2015:

- Stock-taking conference on 19-20 June 2014 Vilnius, Lithuania;
- Enhancing technical cooperation in the Neman river basin – expert meetings for representatives of Lithuania and Belarus:
 - 30-31 October, 2014, Vilnius, Lithuania;
 - 16-17 December 2015, Minsk, Republic of Belarus.

TRANSBOUNDARY COOPERATION

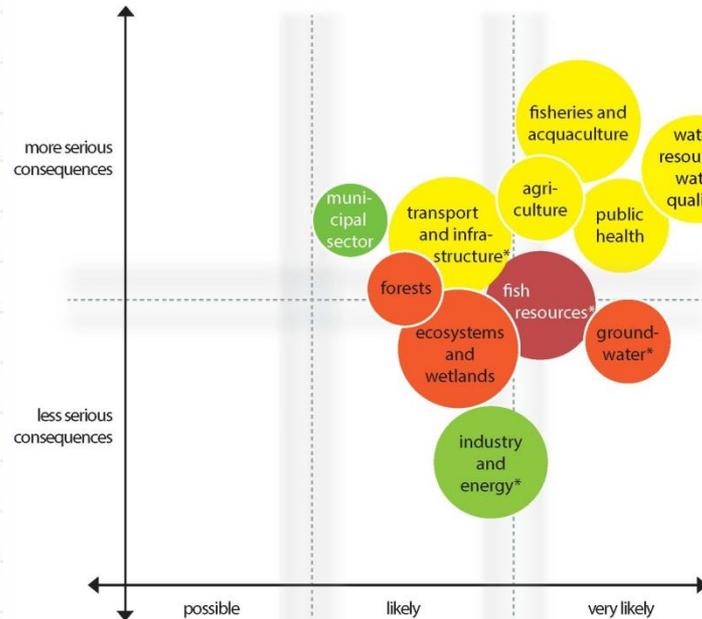
The financial deficit for implementation of adaptation measures on the national levels is the major challenge.

There were no significant challenges in cooperation on the expert level , ministerial level and regional level in general.

Some problems in communication between countries caused by different status of membership – EU and non EU members with additional procedures for visa application etc.

OUTCOMES OF THE PROJECT

- Climate change assessment, forecasting and mapping for the Neman River Basin with using multi-model ensemble CMIP5 based on the latest IPCC results of research - 2013 and with A1B and B1 scenarios (IPCC – 2007);



Current adaptation potential:

- high
- medium
- low

* (coordinated) basin-level actions are needed



Example of the multi-model map with summer runoff forecast until 2050

- Vulnerability assessment of the NRB to climate change;

OUTCOMES OF THE PROJECT

- Development and updating of the common information platform (Internet database) (www.cricuwr.by/neman);
- Development of the list of measures within the framework of Strategy of Adaptation to Climate Change in the Neman River Basin (NRB);
- Technical Protocol on cooperation in the field of water resources protection and use in the NRB between the Ministry of Environment of the Republic of Lithuania and the Ministry of Natural Resources and Environmental Protection of the Republic of Belarus was prepared, discussed and preliminary approved;
- Definition, discussion and preliminary approval of the list of joint actions (Belarus-Lithuania) for cooperation in 2016-2017 in the development of the joint international management plan for the Neman River Basin.

LESSONS LEARNT

Common (Belarus-Lithuania) assessment and forecasting of meteorological and hydrological characteristics for the Neman River Basin.

Common understanding of the problems concerning water resources management with account to climate change and necessity of cooperation on the basin-wide and regional levels and implementation of agreed adaptation measures.

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).

FUTURE PLANS (general content)

Implementation of the Strategic Framework for the Neman River Basin Adaptation to Climate Change including realization of the next main activities:

- Setting up an International Commission for the Neman River Basin;
- Development and implementation of the joint international management plan for the Neman River Basin;
- Improvement of water use and farming technologies in the context of the climate change;
- Development and improvement of water supply and sanitation systems and improvement of economic mechanisms in this field;
- Improvement and harmonization of the monitoring networks and monitoring programs including setting new automated hydrometeorological stations, information exchange and early warning systems;
- Development of generating capacities using renewable energy sources.

FUTURE PLANS (short-term and medium-term content)

Joint actions (Belarus-Lithuania) for cooperation in 2016-2017 in the development of the joint international management plan for the Neman River Basin including:

- 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;
- 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;
- 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.

QUESTION TO THE OTHER PILOT PROJECTS?

Experience in implementation of the measures on adaptation to climate change including decision-making process, basin-level institutions, mechanisms' of financing and cooperation.

Thank you for attention



River Neman on the transboundary district (Belarus-Lithuania)