PILOT PROJECT ON RIVER BASIN MANAGEMENT AND CLIMATE CHANGE ADAPTATION IN THE NEMAN RIVER BASIN

Proposed activities and Lithuanian experience

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Background of the project

- Transboundary Neman River Basin District (RBD);
- Importance of the assessment and prognosis of water quantity and water quality;
- A part of the programme of pilot projects.
**Project duration:** July 2010 – December 2012.

**Project funding:** UNECE Water Convention from Finland (with additional funding expected from ENVSEC).

**Project implementation:** UNECE, WMO, Zoi, IWAC.

First meeting on 14 October 2010 in Minsk, Belarus for agreement of the usefulness of the project, overall objectives and activities foreseen.
The overall objective: improve integrated RBD management and transboundary cooperation in times of a changing climate.

The project aims:
- 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;
- reach a common understanding on future water availability and water use taking into account possible climate change impacts.
Monitoring network in the Neman River Basin in Belarus
Nemunas RBD
Network of monitoring stations
in Lithuania
Project activities

1. Analysis of current situation in the Neman RBD;
2. Baseline study;
3. Assess future run-off in the entire Neman RBD under conditions of future climate change as well as different scenarios for socio-economic development;
4. Analyse the hydro-meteorological, hydro-chemical and hydro-biological monitoring systems;
5. Assess and forecast climate change future impacts on water quality.
Project activities

1. Analysis of current situation in the Neman RBD.
   1.1. Analysis of the hydrological data and trends of their change.
   1.2. Development of the proposals for harmonizing water status (ecological and chemical) indicators, criteria (values), water status classification systems and parameters.
   1.3. Analysis of water use and other human activities, assessment of pressures and impacts on the status (ecological and chemical) of water bodies in the Neman RBD, water balance calculation for current state.
   1.4. Identify priority problems.

Procedure of the project registration in Belarus.
January – July 2011
Project activities

2. Baseline study
2.1 Analysis of the models and scenarios used in riparian countries for climate change impact assessment;
2.2 Climatic data preparation and statistical analysis;
2.3 Exchange and compare the climate-relevant data list for climate change impact assessment and assessment of socio-economic development scenarios impact on the status of water bodies of the Neman RBD.

January – July 2011
Project activities

2. Baseline study

Preliminary results:
The average annual temperature increased on 1°C from 1988 on the basis of preliminary assessment in the Neman River Basin. At the same time reduction of average annual and maximum water discharges estimated from 3 to 13%.

It is planned to use Lithuanian experience including application of the global climate change simulation models ECHAM5 and HadCM3, which are probably appropriate to reflect relevant processes and feedback in Belarus as well as Lithuanian conditions.

At the same time the most realistic and practical scenarios of climate change for the Neman River Basin can be and will be developed on the base of statistical analysis of the real meteorological data.
Project activities

3. Assess future water flow in the Neman RBD under conditions of future climate change as well as different scenarios for socio-economic development:

3.1. Selection of the common methodology for the future climate change impact assessment on the Neman RBD water resources.

3.2. Harmonize the climate change and socio-economic development scenarios’ impact on the status of the Neman RBD water bodies assessments.

3.3. Agreement on different joint scenarios on the future water use.

3.4. Water balance, hydrologic and hydraulic calculations for forecast of the future water flow under conditions of future climate change.

(with use of Lithuanian experience)

April – December 2011
Project activities

4. Analysis of the hydro-meteorological, hydro-chemical and hydro-biological monitoring systems in the Neman transboundary RBD and development of the proposals for optimization these systems for monitoring climate change and extreme events.

January – August 2012
Project activities

5. Assess and forecast climate change future impacts on water quality to the degree possible.

This activity will depend on:
• the outcomes of the other activities;
• the available data;
• methodologies.

January – July 2012
Thank you for attention!