Russian part of Neman River Basin, Kaliningrad - an analysis for peatland management and rewetting

Introduction to river basin management plan of Kaliningrad

The Russian part of the Neman River Basin, with other rivers of Kaliningrad, all together are allocated as a single hydrographic unit: 01/01/00, Neman and the rivers of Baltic Sea Basin. The hydrographic unit 01/01/00 is comprised of three water management areas, namely:

- VHU 01.01.00.001 - Neman
- VHU 01.01.00.002 - Pregola
- VHU 01.01.00.003 - Rivers of the Baltic Sea basin in the Kaliningrad

The hydrographic unit 01/01/00 falls under the responsibility of Nevsko-Ladoga Basin Water Administration. For the protection of water resources and the regulation of anthropogenic load, with a view of future demand of water resources and directional activities to reduce negative impacts: on water, and of water on socio-economic development, The Scheme for the Integrated Use and Protection of Water Bodies (SKIOVO) of the Neman River Basin and the rivers of the Baltic Sea Basin was developed; which has been laid down across 6 books. It should be noted that this toolkit is intended for the entire region of Kaliningrad, and not specifically for the Neman River Basin. As per the SKIOVO, to accomplish the above said objectives, the differentiation of Kaliningrad region into three water management areas was insufficient. Therefore, a detailed water zoning was conducted for Kaliningrad based on a number of factors that further divided the region of Kaliningrad into 20 water management subsections. Some of the subsections from this detailed water zoning, fall across other water management zones. For instance, the upper part of river basin Sheshupe that falls under the Neman River Basin, is assigned to the Pregola River Basin in accordance to the approved water management zoning.

Analysis and Proposal for Peatland consideration

The SKIOVO states the total peat reserves as 2.5-3 billion m3, covering more than 1000 km2 of area in Kaliningrad. The importance of bogs in terms of their water conservation and regulation with habitat provision, and other provisional services has been realized very briefly in SKIOVO. However, there is still scope to narrate the importance of peatlands and their crucial role in environment in more detail under chapter 1 of Book 1, General characteristics of the river basin. In accordance to SKIOVO, many bogs over the years have been drained in the area to exploit as arable land, pastures, for peat extraction, etc. Under chapter 8 (Book 1), protected areas with plans for creation of nature reserves have been talked about, with an aim to protect and restore natural resources. An additional remark specifically can be made under the section to consider natural or near natural peatlands under protected areas.

Chapter 9 of Book 2, Assessment of the ecological state and key problems of the river basin; reflects key problems of the hydrographic unit 01/01/00. It includes the discussion about the excess concentration of pollutants in water bodies (including nutrients), of which one of the sources is diffuse pollution. It also states the problems associated with management of polder lands, and poor state of their reclamation systems for different management use, including

agriculture. This part of SKIOVO is a potential section to mention about peatland exploitation and degradation that additionally contributes to the problems discussed under this chapter. And that, the reclamation of polder areas that are originally peatlands promote to the poor state of environment and water bodies.
Book 3 discusses the target indicators, and talks about some measures to achieve improved ecological state and water protection objectives. It realizes the impacts of diffuse pollution and discusses about seeking ways to avoid pollution inflow to water bodies in order to prevent eutrophication, and to be in line with the objectives of HELCOM. One of its targets includes reduction of nitrogen and phosphorus runoff from agriculture lands, for which it demands a comprehensive scientific study to select most effective measure to achieve the target. Therefore, for an improved ecological state of water bodies it states to conduct research projects, "Carrying out scientific substantiation of measures to regulate the quality of surface water using wetlands in the Kaliningrad region" being one of them. Perhaps, SKIOVO under this section can be updated with the current research on peatland rewetting and associated areas of research to better realize the efficiency of measure. With an intent to make implementation of such measures more pragmatic for improved water quality. Similar things have also been discussed in Book 6, titled as 'List of measures to achieve the target state of the river basin'.

Conclusion

There is great scope to describe more about peatland management and rewetting or paludiculture in the SKIOVO, since the discussion and implementation of such practices would facilitate in achieving ecological stability and the water protection objectives. It is suggested to update the SKIOVO with current research revolving around peatland rewetting and paludiculture, since it is mentioned at places, such as in Book 3 and 6, about the need for scientific research to select such type of measures for improved ecological status, and to counter the nutrient flow for improved water quality; however, it lacks the specificity of measures. Perhaps an additional remark in general to the SKIOVO can be made, the structure of the toolkit is encouraged to be subdivided under three sections corresponding to the three water management areas of Kaliningrad, for a better descriptive segregation of some basin specific information and measures.

Link to SKIOVO: http://www.nord-west-water.ru/activities/ndv/scheme-of-complex-use-and-protection-ofwater-resources-in-the-neman-river-basin-and-rivers-of-baltic-sea-basin-russian-part-in-the-kaliningradregion/

Contact: wichtmann@succow-stiftung.de

About the project:

This factsheet has been elaborated by the DESIRE project, which is funded by the EU Interreg Baltic Sea Programme 2014–2020 (the European Regional Development Fund (ERDF), the European Neighbourhood Instrument (ENI) and the Russian national funding). It is a flagship project under the Policy Area "Nutri" of the European Union Strategy for the Baltic Sea Region (EUSBSR). . It is co-funded by the German Federal Environment Ministry's Advisory Assistance Programme (AAP) for environmental protection within the project SPARPAN and the Baltic Sea Foundation (BALTCF). The aim of the project DESIRE is to increase efficiency of peatlands management in the Neman catchment for reduced nutrient release to its waters and the Baltic Sea. The project is implemented within the period of January 2019 – June 2021 (30 months) by eight project partners with support of nine associated organisations from five countries – Germany, Poland, Lithuania, Russia and Belarus. They are represented by regional and national public authorities and research institutions. The DESIRE project is coordinated by the University of Greifswald (Germany) and has a total budget of € 1.8 million.