Water Management of the Narva River: harmonization and sustention

ER25 NarvaWatMan

Project Summary Report

I PERIOD

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Table of contents

Preparation phase

Eight work meetings and consultations in the Programme offices and in other places were attended in Estonia and Russia during the preparation phase. One one-day consultation was attended by Lp (TalTech) in Tartu (Estonia) and two consultations were attended by Pp2 and Pp3 (FSBI "SHI "and SC "Mineral") in St-Petersburg and Pskov (Russia). All partners together with associated partners were met twice in Narva city Municipality for two-days meetings to discuss in more details the project preparation and responsibilities of all partners/assoc. partners. Three meetings were held in St-Petersburg only for Russian partners. Six work meetings were held by on-line (skype) for more operative discussion on the LogFrame issues and final version of the project activities/responsibilities, and the budget allocation.

Management

TalTech (Lp) was responsible for the overall administrative and financial management of the project. This task included creation of management and financial plans for the first period and for the first year, and some modifications requested for these plans during the first reporting period. The management plan was also translated into Russian language by partner FSBI “SHI” (Pp2). Project management included continuous coordination of activities and tasks among project partners and ensuring communication between the Programme (JTS) and the partners via TalTech. TalTech was responsible for organization and leading the project Grant Opening (Picture 1), Kick-off and Steering Committee (SC) meetings in Tallinn, which took place on 25-26. March 2019 (30 participants in total). TalTech and FSBI “SHI” organized and conducted the field trips for data collection of the Narva river discharge (runoff) and water quality samples from Estonian and Russian sides. The start of this activity took longer than planned before. Necessary letters and confirmations, to speed up the process, were send by TalTech and FSBI “SHI” to responsible organizations in Estonia and Russia. In addition, FSBI “SHI” had to translate the Grant Contract and Partnership Agreement into Russian language, as it was requested by the Border Guard Service of Russia. In addition, 4 meetings with local authorities, educational organizations, environmental volunteers and journalists

were organized in Russia by partner "Mineral" (Pp3) in order to raise awareness and engage wider public into project activities.

Picture 1: NarvaWatMan project Grand Opening in Tallinn on 25. March 2019

Core Activities

The implementation of the project Core Activities was started with obtaining the permission for field measurements across the Est-Rus border from respective Border Guard Services of Estonia and Russia. TalTech (Lp) and FSBI "SHI" (Pp2) were involved in this activity. This process took longer than planned. The Permission for Lp was received in May 2019, for Pp2 - only on 16 of July 2019. The first water discharge measurement was organized on 30-31 of July 2019 (Pictures 2-3). The partners involved were Lp and Pp2. Totally, 15 water discharge measurements were done during the reporting period: 11 from Russian side - 4 discharges in the headrace canal and 7 in the cross-sections on the Narva river and 4 - in Narva City from Estonian side.

Pictures 2-3: First water discharge measurements on Narva River on 30-31. July 2019

Joint (harmonized) hydrological database covering the period 1986-2019 was compiled by Lp and Pp2. The database is stored on the Internet (managed by Lp). It contains of the annual, monthly and daily discharges and water levels of the Narva river for six hydrometeorological gauge stations: Narva river - v. Stepanovschina, Narva river– Kulgu, Narva river - Narva Hydroelectric Power Station (upstream and tail water), Narva river - Vasknarva, Narva river - City, Narva river – Narva-Jõesuu and temporary automated hydrological gauge station (AHGS, by SHI), opened on 31.07.2019 for the period of the project and equipped with an automated hydrological complex with a hydrostatic type water level sensor manufactured by Keller (Switzerland).

TalTech and FSBI "SHI" evaluated differences in water discharge measurements and water quality sampling methods along with calculation and analysis methods from both countries. A comparison of Russian and Estonian water discharge data of the Narva river for the period 1986-2019 showed that annual values can vary up to 25%, and for the period 2003-2014 the differences can be even larger: from 3-25% for annual values to 55% for monthly.

The first water quality samples were taken in August 2019. Water sampling was done from the boat on 3 depths (surface, bottom and middle) near left and right banks, and also close to the middle of the river. Totally, 18 (6 - from Russian side, 12 from Estonian side) water samples were taken in 2 cross sections. The partners involved were Lp and Pp2. Water samples were analysed in the laboratory of TalTech for nutrients (Ntot and Ptot) concentrations from both countries. Joint (harmonized) hydrochemical parameters database (P tot and N tot) covering the period 1992-2018 was compiled by Lp and Pp2. Analysis of irregularity in nutrients distribution has started. Analysis of the differences between Estonia and Russia approaches to water samples showed that the discrepancies, as a rule, do not exceed the measurement error. Long-term hydrochemical monitoring data analysis showed that the concentration of nitrogen and phosphorus on the Russian side of Narva river in recent years is slightly higher than on the Estonian side. Perhaps this is due to the influence of the Petrovsky island.

Estonian and Russian guidance documents for assessment of water quality (water pollution) by chemical and biological indicators were analyzed. Estonian water quality classes are based on the regulation No 44 (28.07.2009) "Procedure for the establishment of bodies of surface water and the list of bodies of surface water for which status is to be determined, the status classes of surface water bodies and values for quality indicators corresponding to the status classes and the procedure for determining status classes". Russian Federation uses Guidance document (RD) 52.24.643-2002 of Hydrometeorological Service. It is called “Method for a comprehensive assessment of the degree of pollution of surface waters by hydrochemical indicators”. It was found that no official complex index that combine chemical and biological parameters exists. Numbers of ingredients and indicators for countries are different. Parameters and their Maximum allowable concentrations in Estonia and Russia are different. All proposed parameters will be introduced and agreed by both countries' experts in the first Workshop.

Communication and visibility

Project promotion and interview on Estonian Sputnik news channel was made before the event (in Russian) (https://sptnkne.ws/mcJg) by Pp2. All project partners and associated partners were involved in the dissemination of information about the project and its opening on the partners home pages and Narva and Ivangorod cities local media portals. Presentation of the project was published in "The Environment of St. Petersburg" journal, June 2019 issue, involved partner was Pp3. In the beginning of project implementation, several options for project LOGO were developed, among which the one was chosen by partners, environmental journalists, students, members of environmental NGO's and experts from both countries. The project itself and selected LOGO were presented at the Guild of environmental journalists in St.Petersburg, involved Pp3. The poster and leaflets for project Grant Opening (involved Lp), project roll-up (Estonian-English and Russian-English versions, involved Lp and Pp3), were produced. Project website (www.narvawatman.com, involved Lp) and Open Space Platform (http://www.narvariver.pro, involved Pp3) were developed. Project pages on social networks were created by Pp3 (Facebook https://www.facebook.com/Narva-Watman-900086957008343, Vkontakte https://vk.com/public182613038, Instagram https://www.instagram.com/narvawatman). In total more than 1200 people are familiar with the project aims and interested in its results. Summer Eco-Marathon was organised by Pp3 and Lp in July 2019 (Picture 4). The three parts of Summer Eco-Marathon gathered together more than 160 participants from the both sides of river Narva - Ivangorod and Narva.

Picture 4: Summer Eco-Marathon in Narva, July 2019