Northern Dimension Environmental Partnership
Экологическое Партнерство Северного Измерения

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New wastewater treatment plant for Kaliningrad

In June Kalinigrad authroirities held an official event to inaugurate a new wastewater treatment plant for the city of Kaliningrad.

Until recently Kaliningrad, a city located on the Russia's Baltic coast and home to over 400,000 people, did not have a proper wastewater treatment system and discharged around 150,000 m^3 of untreated waste water into the Baltic Sea every day. This left large strips of beach near the city unused as people avoided the polluted water.

The addition of wastewater treatment facilities for Kaliningrad will therefore not only help reduce water pollution in the Baltic Sea but also provide a significant boost to tourism and quality of life for the entire Baltic region.

The opening of the new treatment plant was attended by a number of dignitaries including Peter Ericson, the Swedish Ambassador to Russia, Vygaudas Ušackas, EU delegation head in Russia;Sergey Storchak, Russia's Deputy Finance Minister, and Kaliningrad Oblast Governor Anton Alikhanov. Also in attendance were representatives of NDEP donors, the European Bank for Reconstruction and Development (EBRD), the Nordic Investment Bank (NIB), Nordic Enfironment Finance Corporation (NEFCO) and NDEP.

It is estimated the plant will help reduce phosphorus discharge in the Baltic by 120 tonnes and nitrogen emissions by 300 tonnes every year. The plant meets most of the recommendations of the Baltic Marine Environment Protection Commission HELCOM, with additional work underway to make the plant fully compliant with HELCOM recommendations. This includes the addition of a fourth line of aeration tanks to ensure nitrogen is appropriately removed from waste. Overall there are still some technical details to be adjusted and the Swedish consultant Sweco will continue to assist Kaliningrad Vodokonal in monitoring the operation of the plant.

The project was in preparation since late 1990s but put on hold unitl 2007 unitl after a revised cost estimate was approved by the State Expertise of the Russian Federation. Soon after the NDEP grant agreement for EUR 10 million was signed in 2007. The first contractor started work in 2011 and managed to bring the plant close to completion but works stopped for the duration of 2013 and 2014. A new contractor took over in 2015 to finalise the remaining scope of works. Both Swedish and German consultants have been involved in monitoring the progress and assit with technical issues.

"*The persistence to see this complex process completed after facing so many challenges is a testament to NDEP. In particular, the consistent and continuous efforts of Sweden and the Russian Ministry of Finance has to be recognised*," said Alistair Clark, Managing Director, EBRD.

The wastewater treatment plant was part of a larger €100 million investment to upgrade both water and wastewater treatment in Kaliningrad with a package of loans from the EBRD and NIB and grants from the Danish Environmental Protection Agency (DEPA), the Swedish International Development Cooperation Agency (Sida) and Nordic Environment Financial Corporation (NEFCO). The wastewater treatment plant was financed solely by the Russian government funds and grants from the NDEP and Sida.

"*A wastewater treatment plant in Kaliningrad is very good news and a necessary step towards a healthier Baltic Sea. We congratulate everyone involved in a successful completion of the wastewater treatment plant after all efforts made for many years. We want to thank the Russian counterparts and the financing organizations, especially EBRD being the lead financier, for a fruitful cooperation that finally made it possible to treat the wastewater from Kaliningrad to Helcom standard*", said Lars Eklund, Adviser to Sida.

Clean up of wastewater hotspot in Belarus begins

Work has begun to rehabilitate a vital wastewater treatment plant in the Belarusian city of Brest.

Brest has a population of 340,000 and is situated in the West of Belarus along the country's border with Poland. The city's current wastewater treatment plant is more than forty years old and in need of modernisation to improve the quality of effluent and ensure it is compliant with the standards of the Baltic Marine Environment Commission (HELCOM).

Brest's wastewater plant discharges into the Zapadny Bug river, which is part of the catchment area for the Baltic Sea. Therefore any effluent produced by the city has a direct impact on marine environment on the neighbouring countries and the aquatic health of the Baltic sea.

The municipal water utility Brest Vodokanal launched the first stage of rehabilitation project at an official ceremony on 8 June, and the project will take place in four stages with the plant scheduled to start operations in 2019. The reconstruction is financed by a €25 million NIB loan, €2 million in grant finance from NDEP and bilateral grants from the Swedish and Finnish governments.

Interview with Kersti Talving, Senior Manager, Nordic Investment Bank

Brest Vodokanal marked the launch of the construction works with an official ceremony on 8 June. How important is this milestone for the company and for you personally?

NIB started discussing the option of financing wastewater projects in Belarus back in 2007. The Brest wastewater treatment plant had been identified by the Baltic Marine Environment Protection Commission, HELCOM, as a major point source of pollution in the Baltic Sea catchment area.

Brest discharges into the River Bug, and from there into the River Vistula, which empties at Gdansk Bay into the Baltic Sea. The treatment efficiency of the city's current plant is insufficient, especially in terms of nutrient removal.

In 2010, after NIB and the Republic of Belarus had signed a framework agreement enabling lending operations in the country, a feasibility study was carried out with support from the Swedish International Development Agency, Sida. The study identified the priority investments needed, estimated the cost of these investments and served as basis for putting together a financing package of grants and a NIB loan.

The NDEP grant of EUR 2 million was approved by the NDEP Assembly of Contributors in late 2010. During 2011, negotiations on wastewater tariff policy with the Republic of Belarus took place, and in December 2012, NIB signed a loan agreement with the Republic of Belarus for the upgrade of the facilities in Brest and Grodno. In addition, grants from Sida and Finland were agreed in 2013 and 2015.

It took more than four years to finally start construction. This was mainly due to the fact that the preparation of a technically feasible and bankable project can take its time. The project is a large, long-term investment for the municipality. Many details, such as the procurement of international project implementation consultants (financed by Sweden), the processing of a Presidential decree for tax exemption and the preparation of the reconstruction design according to the Norms and Standards of the EU and other related issues needed to be clarified beforehand. Proper procurement documentation had to be prepared by the Brest water utility together with the consultants, followed by an international tender, tender evaluation and contract signing with the winning bidder. The winning construction company also needed to do its documentation work preparation.

It is encouraging to see the physical project implementation has finally started. I live by the Baltic Sea, and know how crucial cross-border cooperation in wastewater treatment is for the protection of our marine environment.

How crucial was the donor financing to make this project happen?

The grant from NDEP has complemented the loan from NIB and was obviously a financial incentive, but also a factor that has made the project happen. NDEP has also given grants to the wastewater projects in Grodno and Vitebsk, which had faced similar problems, and now these facilities are upgraded at the same time. In addition to the Brest project, NIB is also the implementing agency for the Grodno project. EBRD is the implementing agency for the Vitebsk project.

Projects that receive grants from NDEP frequently attract other bilateral grants and financing, in the case of Brest notably from Sweden and Finland. Finland provided a grant for Corporate Development and City/Regional Support Programme, which was used to establish a financial and operational performance improvement programme at the Brest water utility, and to support the regulatory capacity of the city in assessing the impact of tariff increases on the most vulnerable parts of the population.

The Swedish grants cover both technical assistance and finance a share of capital expenditures. The technical assistance grant finances the consultants that prepared the feasibility studies and are currently advising the wastewater companies in project implementation (from the preparations of the procurement packages until the final takeover of the reconstructed plant).

Since the first environmental assessment was carried out, the influent wastewater load had increased, and this created a funding gap for the Brest project. NIB applied for a grant from Swedish Sida, which was signed in summer 2015, to be able to reach the agreed HELCOM standards.

Is the client committed to achieving the HELCOM standards and what are the safeguards?

The client, Brest Vodokanal, and the borrower, the Republic of Belarus, have shown a serious commitment to meeting the HELCOM requirements. The re-design and the re-dimensioning of the plant have been done to comply with HELCOM standards after commissioning. Currently, Belarusian national effluent requirements differ from HELCOM standards, especially with regards to permitted phosphorus emission levels. A commitment to HELCOM is a requirement in NIB's loan agreement, and therefore needs to be met at least until the loan is repaid in 2027. However, both the grant donors and NIB are in good faith that the commitment to HELCOM levels continues beyond 2027.

Brest City has 300,000 inhabitants. To reflect the environmental impact of the project after the reconstruction of the Brest water utility is completed, the discharge of phosphorus into the Baltic Sea catchment area will be reduced by 217 tonnes annually and nitrogen by 921 tonnes annually. In comparison, in 2016, the City of Stockholm with a population of 1.2 million, discharged about 26 tonnes of phosphorus and 1,300 tonnes of nitrogen into the Baltic Sea.

A major challenge is the dynamically growing local industry in Belarus and especially in Brest. Brest is a free economic zone, and while this may generate economic growth, the high phosphorus concentration in the influent wastewater is caused by industrial pollution due to the fact that the industrial enterprises in Brest or elsewhere in Belarus do not have pre-treatment units for their wastewater. This in turn creates extra costs - in the form of both investment and operating costs - for the publicly owned Brest water utility.

What are the next major milestones and are you confident that the plant will be ready for the 1000th Anniversary of the City of Brest?

The construction work is carried out by the Czech company Metrostav, and will consist of four phases. These include the reconstruction and enlargement of the existing facility and building new process units. Specifically, new aeration and secondary sedimentation tanks will be set up, and new equipment for mechanical processing will be installed. We have to bear in mind that the Brest water utility is a working plant and it has to keep operating during the reconstruction period.

The next major milestone that NIB is closely monitoring is the implementation of the Reject Water Treatment Unit (RWTU) project at the neighbouring biogas plant, the Brest Solid Waste Treatment Plant. The tendering and contract signing is to take place in late 2017. The RWTU is a sort of pre-treatment unit and is important in order to stabilise and reduce the nitrogen load entering to the Brest water utility from the biogas plant, so that the wastewater plant can meet HELCOM standards. Brest City is financing that part of the project from local sources and has in addition also applied for an investment grant (capex grant) from the EU Poland, Ukraine and Belarus Transborder Cooperation Fund. The implementation of the RWTU project will be conducted in parallel with the reconstruction of Brest wastewater facilities.

The Brest wastewater treatment plant is scheduled to be completed in 2019. I hope the time schedule can be met, as it coincides with the 1000th anniversary of the city of Brest, and commissioning the new facility would be a good way to celebrate.

First shipment of used nuclear fuel safely transported from Andreeva Bay

In a remarkable example of international cooperation to protect the environment, on 27 June the first shipment of spent nuclear fuel left Andreeva Bay in north-west Russia to be transported to the specially-constructed nuclear reprocessing plant of Mayak near the Ural Mountains.

The Andreeva Bay base currently stores some 22,000 spent nuclear fuel elements in old, run-down concrete tanks close to the shore of a fjord. It is a dangerous environmental legacy of the former Soviet Union's nuclear-powered submarines.

However under an international initiative financed by the Nuclear Window of the NDEP all the used nuclear fuel will be safely retrieved, packaged and removed from the site. The process is being carried out by SevRAO, part of Russia's state atomic energy corporation Rosatom.

The strategy for removing the spent fuel was developed in the context of the Strategic Mater Plan financed by NDEP and prepared by Russian and international experts. Donor assistance was provided by the EU, Belgium, Canada, Denmark, Finland, France, Germany, Italy, the Netherlands, Norway, Sweden and the United Kingdom.

For further information, please check the EBRD website: event: http://www.ebrd.com/news/2017/first-shipment-of-spent-nuclear-fuel-leaves-andreeva-bay.html

NDEP Projects in brief (in million EUR)

Project	Lead IFI	Total cost	NDEP grant	Progress
1. St. Petersburg Southwest Wastewater Treatment Plant	NIB	193.6	5.8	Completed - in operation
2. St. Petersburg Flood Protection Barrier	EBRD	2000	1	Completed - in operation
3. St. Petersburg Northern Incinerator	EBRD	90.4	6.35	Completed - in operation
4. Leningrad Oblast Municipal Programme	NIB	23.2	4	Completed - in operation
5. Komi Syktyvkar Municipal Services	EBRD	31.8	6	Completed - in operation
6. Kaliningrad District Heating Rehabilitation	EBRD	21.8	7.3	Completed
7. Archangelsk Municipal Water Services Project	EBRD	25.5	8.2	Completed
8. Novgorod Water and Wastewater Rehabilitation	NIB	23	3	Completed – in operation
9. St. Petersburg Neva Programme	NIB	563	24	Full completion in 2017
10. Kaliningrad Water and Environmental Services	EBRD	110	10	Completed – in operation
11. Vologda Municipal Water Services	EBRD	20	5.18	Completed - in operation
12. Kaliningrad Project Implementation Unit	EBRD	3.8	3	Completed
13. Sosnovyi Bor Municipal Water Services	NEFCO	3.3	0.5	Completed - in operation
14. PIU for Poultry Farms in Leningrad Oblast	NEFCO	3.5	2	Completed
15. Petrozavodsk Water and Wastewater Rehabilitation	NEFCO	32	5	Under implementation
16. Ten Suburban WWTP in St Petersburg	NEFCO	16	3.75	Completed - in operation
17. Petrozavodsk Solid Waste Management	NEFCO	8.5	1.5	Approved by Assembly
18. Pskov Water/Wastewater Infrastructure Rehabilitation	EBRD	27.4	6.5	Under implementation
19. Vologda District Heating	EBRD	17.8	2	Under implementation
20. Gatchina Wastewater Treatment Plant	NEFCO	2.5	0.5	Under implementation
21. Vyborg Wastewater Treatment Plant	NEFCO	6.5	1.25	Approved by Assembly
22. Kaliningrad District Heating Phase 2	EBRD	22	5	Approved by Assembly
23. Solid Waste Management in St Petersburg	KfW	18.4	3.7	Approved by Assembly
24. Gatchina District Heating	NEFCO	4	0.5	Approved by Assembly
25. Vitebsk Wastewater Treatment Rehabilitation	EBRD	21.2	2	Under implementation
26. Grodno Water/Wastewater Treatment Rehabilitation	NIB	25.1	2	Under implementation
27. Brest Water and Wastewater Treatment Rehabilitation	NIB	18.4	2	Under implementation
28. Lida Water and Wastewater Treatment Rehabilitation	EBRD	10.2	3	Approved by Assembly
29. Polotsk Water and Wastewater Treatment	EBRD	14.6	4.21	Approved by Assembly
30. Energy Efficiency for District Heating in Minsk	NEFCO	5.8	1.02	Approved by Assembly
31. Baranovichi Street Lighting	NEFCO	1.5	0.3	Approved by Assembly
32. Belarus Environmental Investment Programme	NEFCO	23.07	7	Approved by Assembly
TOTAL		**€3.4 billion**	**€137 million**	

The **Northern Dimension Environmental Partnership (NDEP)** was set up in 2001 in response to calls from Russia and the international community for a concerted effort to address environmental problems in the Northern Dimension Area (NDA). The most pressing actions relate to water, wastewater, solid waste, energy efficiency and nuclear waste.

The NDEP Support Fund is managed by the EBRD and provides grant financing to key investments in environmental and nuclear safety projects in the Northern Dimension Area. NDEP projects are implemented by the EBRD, NIB, NEFCO, EIB, the World Bank and KfW.

The European Union, Russia, Belarus, Belgium, Canada, Denmark, Finland, France, Germany, the Netherlands, Norway, Sweden and the United Kingdom are the sponsors of the NDEP Support Fund, which currently stands at close to €348 million.

For more information, visit www.ndep.org, or contact:
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