

NDEP News

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Nuclear Operating Committee Meeting



(from left) Sophie Galey-Leruste, the NOC Chair, Horst Reichenbach, EBRD Vice President and Vince Novak, EBRD Nuclear Safety Director

The NDEP Nuclear Operating Committee (NOC) gathered on 31 March 2008 in the offices of the EBRD in London for its eight session. It was chaired by Sophie Galey-Leruste, Director at the French Ministry of Ecology and Sustainable Development representing France, which is so far the largest contributor to the NDEP nuclear window.

Canada, Denmark, the European Commission, Finland, France, Germany, the Netherlands, Norway, the Russian Federation, Sweden and the United Kingdom attended as contributors to the nuclear window of the NDEP Support Fund, while Belgium, Italy and Japan participated as observers. A representative of the Nordic Investment Bank, as the NDEP Steering Group Chair, was also present at the meeting.

The EBRD reported first on the decommissioning of Building No 5 in Andreeva Bay and the Lepse project. Following the signing of the Grant Implementing Agreement for Building No 5 with the Russian State Enterprise SevRAO on 1 November 2007, the procurement process is now ongoing to sign the first contract with an international consultant to support the project management unit. The Grant Implementing Agreement for the decommissioning of Lepse nuclear service ship that was used for maintenance of the nuclear ice-breakers fleet is due to be signed shortly now that a new Grant Recipient has been proposed by Rosatom.

The Strategic Master Plan received further endorsement, this time by Sergey Kirienko, Head of Rosatom who issued an Order on 26 December 2007 stating that it will be used for international and national nuclear clean-up programmes in north-west Russia.



(from left first row) Leonid Bolshov, Director of the Russian Nuclear Safety Institute IBRAE, Evgeny Evstratov, Deputy Director of Rosatom, (from left back row) Yuri Morozov, Counsellor, Russian Embassy in London, Anatoly Grigoriev, Head of Section at Rosatom

The EBRD was also pleased to report on good progress in the implementation of the first urgent projects in Gremikha and in Murmansk region. One of the four



projects in Gremikha dedicated to the Improvement of Physical Protection is now completed. Also the Enhancement of the Radiation Monitoring and Emergency Response System in Murmansk Region has been finalised. The IAEA, which had reviewed this project in November 2007, concluded in their report issued early March 2008 that the project has had “a remarkable impact on the level of preparedness for emergency response. The new system can be a model for other, similar, upgrading projects”.

The NOC studied in great detail the three new project proposals for (1) Regional enhancement of radiation monitoring and emergency response system in the Archangelsk region (€5.1 million), (2) Papa class submarine refuelling (€5.6 million), and (3) System for transportation and buffer storage of SNF at Andreeva Bay (€20 million). The NOC agreed that the remaining questions were answered and supported the proposal to seek the Assembly’s approval for grant funding through written approval procedure.

New Projects in the nuclear window – Interview with Serge Gas, EBRD Senior Programme Manager

• How were the three new projects developed?

The new proposals emerged from the Strategic Master Plan and are classified among the highest priorities. The EBRD made several missions to the sites to meet the main players and to collect information to develop them further. The United Kingdom bilateral initiative which focuses on the spent nuclear fuel (SNF) management at the Andreeva Bay helped a great deal to develop the scope of the SNF transportation system to be established there. Also, technical documentation for the Papa-class submarine defuelling was developed with the shipyards in Severodvinsk where the submarine is moored.

• What are the differences between the proposed Enhancement of the Radiation Monitoring and Emergency Response Systems in Archangelsk region and a similar project in Murmansk?

In the Archangelsk region the two main shipyards are in charge of decommissioning of the nuclear submarines located close to Severodvinsk, a city of 200,000 inhabitants. Any accidents would cause an immediate threat to the adjacent population while there is almost no emergency response system in place and only a few elements of radiation monitoring available. As the shipyards in Archangelsk region are under the supervision of Rosprom (Federal Agency for Industry) based in St Petersburg, the communication systems need to be established not only with Moscow but also with the Federal Agency.

In the Murmansk region on the other hand, the nuclear hazards - mainly located in Andreeva Bay - are not that close to the populated areas. Also initially there were more radiation monitoring systems already in place funded from other sources. The NDEP Grant Agreement in Murmansk is signed with the regional government.



(photo courtesy of Sevmas.ru) Papa class nuclear powered submarine

• What are the technical challenges associated with the decommissioning of the Papa class nuclear powered submarine near Severodvinsk?

There are indeed numerous technical issues to be resolved in the decommissioning of the Papa class nuclear submarine commissioned in 1969. These are mainly due to the fact that the reactors of this submarine are of unique design that makes defuelling procedure very complex. The highly radioactive components are located at the top of the reactors and special equipment is needed to first dismantle the components and put them back together again after defuelling. The new equipment to handle the task is almost complete but needs to undergo extensive testing and certification.

Another uncertainty concerns the status of the fuel which has stayed in the reactor for more than 20 years. There could be some problems, but they will only come to light when the defuelling operations start. In addition the submarine has got buoyancy problems and special measures need to be taken to keep it afloat.

The proposed project will fund the design and construction of the missing defuelling equipment and the adaptation of the shipyard infrastructure to handle the removal of fuel, its transfer from the reactors into the transportation casks and treatment of the radioactive waste resulting from this operation. Ultimately the spent nuclear fuel will be sent to Mayak, the Russian central facility for reprocessing and recycling.

• Is the third proposed project for Spent Nuclear Fuel handling and transportation in Andreeva Bay connected to Building No 5?

Historically, Building No 5 was the wet storage facility for spent fuel discharged from nuclear submarines reactors. When leaks developed in the ponds in 1980s, the fuel was urgently transported to three temporary dry storage units nearby and has been kept there since. Subsequently however water has entered the storage units and many of the storage cells are flooded. Water analysis has shown that they are leaking into the ground.

- *What is the overall plan for handling and disposal of the nuclear fuel from the dry storage units in Andreeva Bay?*

Approximately 22,000 fuel assemblies - equivalent to about 100 reactor cores - need to be removed from the dry storage tanks, repackaged and exported from the site for reprocessing. The most difficult operation will be the extraction of SNF from the storage cells where it was stored for more than 20 years in harsh environment. In order to conduct this work safely, special remotely controlled tools are being developed. Also a special building will be erected above the storage tanks to protect the environment from radiation hazards. Discharged fuel will be conditioned inside this building and placed into special certified 40-tonne casks to ensure fuel safety during further transportation and storage in accordance with international standards of IAEA. The casks will be then transported to the pier and loaded onto the transport ship which will deliver them to the Atomflot enterprise near Murmansk. From there the casks will be transhipped to the special rail cars and transported to Mayak in Chelyabinsk Region for final reprocessing.



(photo courtesy of Nukem Ltd) Spent Nuclear Fuel Dry Storage Tanks in Andreeva Bay

- *Who are the main partners involved in this complex operation?*

It should be mentioned that the removal of SNF from Andreeva Bay is a good example of multi-lateral cooperation for resolving a complex nuclear legacy problem. The United Kingdom is funding the design and construction of major SNF management facilities. The NDEP will support SNF transportation. Norway will contribute by upgrading the site infrastructure (pier, roads, power supply and other auxiliary systems) while Italy will provide facilities for radwaste management and will construct a transport ship to remove SNF from the site. The European Commission is developing special automated tools to discharge fuel from the storages. Finally Russia will operate the site, taking care of safety and security aspects and will perform the actual work on retrieval of fuel and its transportation to Mayak.

Recent ND Events

- **The New Northern Dimension: Regional Co-operation, Business and Energy (17 January 2008)**

The Expert Seminar on "The New Northern Dimension:

Regional Co-operation, Business and Energy" was organised by the Norwegian University Centre in St Petersburg in co-operation with the Ministry of Foreign Affairs of Norway and the Ministry of Foreign Affairs of Finland on 17 January 2008. The round table discussions focused on best practices for regional co-operation and on business, energy and transport co-operation. The NDEP Manager made a presentation on "The New Northern Dimension".

- **4th Meeting of the ND Steering Group in Oslo (28 February 2008)**

Norway hosted the 4th meeting of the ND Steering Group chaired by the Barents Ambassador, Olav-Nils Thue on 28 February 2008 in Oslo. The four ND Partners: Russia, the European Commission, Norway and Iceland attended the meeting. Energy efficiency and renewable energy was one of the top issues on the Agenda. Richard Jones from the EBRD gave an overview of Bank's work in this sector promoting the potential for EBRD-NDEP cooperation in energy efficiency in the north-west of Russia. The NDEP Manager added that to expand the Partnership's activities into energy efficiency sector, new funds would be required. In this connection the Fund would look forward to a contribution from Norway based on their expertise in the energy saving measures and their knowledge of north-west Russia. Also Iceland is a country with relevant experience and ability to contribute.

- **3rd HELCOM Stakeholder Conference on the Baltic Sea Action Plan (4 March 2008)**

Almost 200 delegates representing governments, scientific and business communities of the Baltic Sea coastal countries, as well as the European Community, CBSS and other major regional organizations took part in the 3rd HELCOM Stakeholder Conference in Helsinki on 4 March 2008 to discuss the new Baltic recovery programme, Baltic Sea Action Plan (BSAP), aiming to reduce pollution and reverse the degradation of the Baltic marine environment. The first session of the conference was dedicated to the implementation of the BSAP; the possible sources of funding, involvement of the international financial institutions and the private sector as well as how to prepare a project pipeline to maximise the investments for the benefit of the Baltic Sea environment. The NDEP Manager was invited to moderate the session on "How to prepare successful projects to ensure and increase the investments for marine environmental protections" under Financing of the Implementation of the HELCOM Baltic Sea Action Plan. Jaakko Henttonen also made a presentation on lessons learned and recommendations by the IFIs to be considered when preparing a project for funding.

- **9th International Environmental Forum "Baltic Sea Day" in St Petersburg (12-13 March 2008)**

The city of St Petersburg hosted the 9th International Environmental Forum "Baltic Sea Day" which took place on 12 and 13 March 2008. Up to 500 participants from the Baltic Sea countries, including government officials, business and science leaders, together with representatives of major regional organizations and NGOs attended the event. The forum was established to support and promote the work of HELCOM by raising public awareness of the marine environment of the Baltic

Sea and to enhance political attention to existing problems and to boost initiatives for protection of the Sea. This year's forum focused on the implementation of the HELCOM's Baltic Sea Action Plan, which aims to restore the ecological balance of the Baltic marine environment by 2021. The NDEP Manager made a presentation and co-chaired the round table session on the "Involvement of financial mechanisms for realisation of the BSAP on the basis of bankable projects".

• EBRD Vice President on ND mission to Finland

As in-coming NDEP Steering Group Chair, Horst Reichenbach, the EBRD Vice President, met with Johnny Åkerholm the NIB President and CEO to discuss current and future issues for NDEP non nuclear window. The priorities included replenishment, new project pipeline and obtaining urgent decisions on the current projects in St Petersburg and Kaliningrad. During his meeting with Anne Christine Brusendorff, HELCOM's Executive Secretary, Horst Reichenbach had an opportunity to be briefed on the HELCOM's Baltic Sea Action Plan and possibilities of cooperation with the EBRD and NDEP within the framework of the new plan. The EBRD Vice President also met with the Finnish Ministry of Foreign Affairs: Pekka Huhtaniemi, the Undersecretary of State and the Ambassadors Ole Norrback and Petri Salo. Horst Reichenbach assured the Ministry of the EBRD's commitment to promoting environmental investments in the north-west of Russia and in the Baltic Sea region in particular.

For more information on the programmes of the events, participants and NDEP presentations, please check the website:

<http://www.ndep.org/news.asp?type=nh&pageid=14&cont=newsart&show=articlelist>

Progress of NDEP projects in Leningrad Oblast

At present over €1million of NDEP grant funds have been contracted within the framework of the Leningrad Oblast Municipal Development Programme and contracts for additional €0.4 million are to be signed shortly. The Project Monitoring Unit is working closely with the Leningrad Oblast Government, cities and local Vodokanals on the allocation proposals for the remaining €2.6 million of NDEP funds.

Tikhvin Vodokanal has finally contracted the supply of re-circulators for the city's water purification plant in the amount of RUB 3,150,000. The remaining €75,000 of NDEP funds gained as savings after extensive negotiations on the contracts for re-circulators are planned to be used for the procurement of gate/check valves for the city's water supply system.

Pikalevo Vodokanal has recently contracted equipment and materials for the rehabilitation of water intake and water and sewage networks in the city in the amount of €621,200. This represents the largest part of NDEP financing for the city; the remaining funds of €240,084 are expected to be contracted later this summer.

In Gatchina, the local Vodokanal has successfully tendered and contracted equipment for rehabilitation of

the main part of the city wastewater treatment plant and has begun the rehabilitation of the main wastewater pumping station. Finally, Kirovsk Vodokanal is now launching a procurement process for the rehabilitation of wastewater pumping stations.

Overall there has been good progress in all the four cities in the Leningrad Oblast since 2007, especially with Tikhvin Vodokanal practically completing all of its projects identified in the current investment plan. Over €6 million of bilateral donor grant funding (70% of pledged total) from the NDEP, DEPA, Sida, Finnish Ministry of the Environment and NEFCO has been paid out. Almost €1.5 million of loan funding has been disbursed so far with about €3.3 million planned to be paid out in 2008. The Leningrad Oblast, the project cities and Vodokanals have so far contributed over €4 million to the programme



(Above) Rehabilitated sewer pumping stations in Tikhvin



(Above) Construction of a water main in Tikhvin

NDEP Projects in brief

Project	Lead IFI	Total cost	NDEP grant	Progress
1. St. Petersburg Southwest Wastewater Treatment Plant	NIB	€193.6 million	€5.8 million	Project completed - plant in operation
2. St. Petersburg Flood Protection Barrier	EBRD	€1000 million	€1 million	Under construction
3. St. Petersburg Northern Wastewater Treatment Plant Incinerator	EBRD	€90.4 million	€6.35 million	Project completed - plant in operation
4. Municipal Environment Investment Programme in the Leningrad Oblast, Phase 1	NIB	€23.2 million	€4 million	Under construction
5. Komi Municipal Services Improvement Project	EBRD	€31.8 million	€6.035 million	Under construction
6. Kaliningrad District Heating Rehabilitation	EBRD	€21.8 million	€7.3 million	Approved by Assembly Grant yet to be signed
7. Archangelsk Municipal Water Services Project	EBRD	€25.5 million	€8.2 million	Under construction
8. Murmansk District Heating Project	NIB	€29.6 million	€5 million	Approved by Assembly Grant yet to be signed
9. Novgorod Cross Municipal Rehabilitation	NIB	€14 million	€2 million	Approved by Assembly Grant yet to be signed
10. Kaliningrad Solid Waste Management Project	NIB	€49.2 million	€10.1 million	In preparation
11. St. Petersburg Neva Closure of Direct Discharges of Untreated Wastewater	NIB	€700 million	€30 million	In preparation
12. Ladoga Environmental Programme	NIB	€100 million	n/a	Under construction
13. Kaliningrad Water and Environmental Services	EBRD	€110 million	€10 million	Under construction
14. Vologda Municipal Water Services	EBRD	€18.4 million	€3.5 million	Approved by Assembly Grant yet to be signed
15. Kaliningrad Project Implementation Unit	EBRD	€3.8 million	€3 million	Grant signed Implementation started

Also note...

- The NDEP Steering Group will be held on **4 June 2008** in Helsinki in the offices of the NIB
- **16 April 2008** – NDEP visit to the Latvian Ministry of Environment
- **17-18 April 2008** – meeting in Kaliningrad for enhanced nutrient removal with John Nurminen Foundation
- **18-19 May 2008** – EBRD Annual Meeting in Kiev
- **13-14 May 2008** – ND Conference in St Petersburg
- **22-23 May 2008** – HELCOM Baltic Sea Action Plan Stakeholders Meeting for in Kaliningrad
- **3-4 June 2008** – Energy and Efficiency Conference in Archangelsk
- The NDEP brochure is available on request. Write to info@ndep.org with your name, organisation and postal address to receive a copy.

The **Northern Dimension Environmental Partnership** was developed in response to calls from the Russian Federation and the international community for a concerted effort to address environmental problems in Northwest Russia. The most pressing relate to water, waste-water, solid waste, energy efficiency and nuclear waste.

The NDEP evolved from this initial idea into a fully established partnership whose Support Fund, managed by the EBRD, provides grant co-financing to key investments in environmental and nuclear safety projects in this area. NDEP projects are implemented by the EBRD, the NIB, the EIB and the World Bank.

The European Union, the Russian Federation, 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 €243 million.

For more information, visit www.ndep.org, or contact Jaakko Henttonen at Henttonj@ebrd.com or NDEP Secretariat at Manike@ebrd.com