

Russian Baltic National Trends & Hot Spots

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Baltic Russia is an area of crossing many interest

- **Nice Nature with many Natural Values**
- **The most big biodiversity in Baltic Sea Region**
- **5 Nature Protected Areas/ Ramsar Sites**
- **People and old traditions**
- **Good and big Area for Industrial Development**
- **The new transport corridor across the Baltic Sea for export (logs, coal+oil, liquefied gas) and import (cars, Rad waste).**



Direction of development is unsustainable

- Disintegration of the USSR and join of Baltic States East European countries to European Union made the Russian part of the Gulf of Finland a border territory between Russia and EU. This stimulated the development of industry and transport infrastructure in the region. The new transport corridor across the Baltic Sea is used on one hand for shipping carbohydrate and fossil fuel, electric power and mineral resources from Russia on other hand all waste, including radioactive and nuclear waste, are transported in the opposite direction - to Russia.





Harmful installations/Hot spots of the South Shore of the Gulf of Finland



SOSNOVY BOR AREA

the largest Nuclear complex in the Baltic Sea
Region

- **LENINGRAD NUCLEAR POWER PLANT (LAES) with 4 reactors old Chernobyl' type;**
- **ALEXANDROV RESEARCH INSTITUTE OF TECHNOLOGIES (NITI) – center for complex testing of standard nuclear power units (NPU) for the Russian atomic fleet. The institute was founded in 1962.**
- **LENSPETSOMBINAT RADON – regional storage of medium- and low-level waste;**
- **ECOMET-S – largest in Europe plant for reprocessing radioactive metal waste;**
- **BALTIC SILICON VALLEY – chemical production of poly-crystal silicon.**



The main problem

Old LNPP RBMK-1000 reactors are not prepared for Decommissioning:

- **No money** (up to € 2,4 billion) for the decommission process. The necessary sum is not accumulated in the dedicated Russian Decommissioning Fund.
- **No solutions** for the long-term isolation of spent nuclear fuel containing Pu²³⁹.
- **No of technologies** for reprocessing 6.800 t of radioactive Carbon C¹⁴. The half-life of C¹⁴ is 5.400 years.



New Leningrad NPP-2

- 6 power units
- reactors VVER-1200
- The project cost \$10 billions.
- At present time 2 power units are under construction



Threats from New Leningrad NPP-2

LNPP-2 does not foresee environmental consequences of the project taking into account existing pollution. Construction of new NPP is planned in the conditions of considerable anthropogenic influence on the ground and water ecosystems.

Additional daily evaporation of up to 600 thousand tones of water from 6 power units via twelve 150 m-high cooling towers is comparable with the total water mass of the Kovash River flowing near Sosnovy Bor.

Acid rains can be triggered by the evaporated water interacting with nitrogen, phosphorus and sulfur oxides transferred to the LAES-2 area from Kingisepp Phosphorite Company, Estonian shale-fuelled power plants (CHPs) in Narva and local transport emissions. Acid rains threaten pine forests, traditional farming and gardening communities of the region.



Unsolved Problems and threats

- possible realistic solutions for alternative energy sources are not analyzed
- There is no economically and informational mechanism of environmental monitoring, independent from the project owner
- Problem of reprocessing (long-term storage or disposal) for the spent nuclear fuel of VVER-1200 (LAES-2) and RBMK-1000 (LAES) has not been solved.
- The simultaneous operation of old and new NPPs planned by the project developers can cause the radiological, bacteriological or chemical impact on the population of the nuclear city of Sosnovy Bor.



Harbor complexes/Hot spots



At present, the following ports are located in the Russian part of the Baltic Sea:

- Ust-Luga port.
- St. Petersburg port
- Primorsk special oil terminal
- Vysotsk port (Oil distribution terminal LUKOIL-II)
- Vyborg port

Commercial Seaport Ust-Luga



- Located in the area of Luga Bay and Luga River mouth near the Ramsar Sate Kurgalsky
- 10 terminals with total capacity up to 17 million tons per year are being built at the port: coal terminal, Forest terminal for the export of logs, Terminal for the Russia – Germany ferry service, Terminal for import of nuclear and radioactive waste and so on...
- The total turnover of goods is 35 million tons per year.



LUGA BAY COAST

Another planned hazardous projects:

- **Gorky Eastern industrial zone**
- **Aluminium Plant**
- **Gas Liquefaction Plant**
- **New city 35.000 residents +stainless steel plants near Kingisepp**



ST-PETERSBURG SEA PORT COMPLEX

Port is developing very fast. Last year 34 stevedore companies working there processed over 41 million tons of export and import goods. The system of the Great Seaport of St. Petersburg has the following priority objectives until year 2010:

- Reaching design capacity of sea ports in the Gulf of Finland;
- Stage-by-stage completion of the construction of pipelines for transporting oil and oil products;
- Formation of technological support for cargo transit via shoreline territories of the Gulf of Finland
- Development of ports in towns of Lomonosov (military harbor) and Kronstadt
- Capacity of PeterburgNefteKomplex terminal (St. Petersburg – Rotterdam) 6-9 million tons (heavy oil, diesel fuel etc.), 150 tankers a year; 3.5 million tons (diesel fuel) are pumped via a pipeline from the town of Kirishi.



SPECIAL OIL-LOADING SEA PORT PRIMORSK



- Port was opened on December 27, 2001 and aimed at transportation of oil from Russian oil fields to EU.
- The capacity of the oil port in Primorsk is 12 million tons of oil per year. In the future it will be up to 18 million tons. Maximal total carrying capacity of oil transfer can reach up to 24 million tons per year (including 19 million tons per year of diesel fuel and 5 million tons of fuel for jet engines).
- Although Primorsk port has one of the best technical nature protection equipment in the Baltic Sea Region there are big risks of oil pollution.



VYSOTSK SEA PORT & VYSOTSK LUKOIL -II

- Vysotsk port is located on the largest island of Vysotsk Archipelago in the Gulf of Finland 90 km away from St. Petersburg and 50 km away from Russian-Finnish border. The port occupies 34.2 hectares.

- Distribution transfer complex (DTC) for oil products LUKOIL-II is intended for transferring oil and oil products from railroad to sea transport in the volume of 10.75 million tons per year, including the first block of the project with a capacity of 5 million tons per year. Further on, turnover of goods is planned to be increased to 10.6 million tons per year.



VYBORG SEA PORT



- Vyborg port was founded at the crossing of two waterways between the Gulf of Finland, navigable system of Lake Saimaa and the Vuoksa River.
- At present, it has 13 piers (total length is 1480.0 running meters) located along the shore of the Gulf of Vyborg.

Negative Impact



- *Assumed risk and negative impact of seaports on the environmental condition of the Baltic Sea on the whole are as follows:*
- *use of outdated single-hull supertankers;*
- *risk of accident increases together with the increase of traffic;*
- *very low level of financial responsibility was identified;*
- *inefficient mechanisms for penalty collection.*
- **Increase of sea oil transportation increases the risk of oil spills. In case of a serious oil spill in the Baltic Sea, neither Russian nor any international cooperation system is ready for sufficient response to the situation, first of all, in terms of decision-making and attracting necessary resources for liquidating the source and consequences of the accident.**



Conclusion

- **Russian Baltic/Russian part of the Gulf of Finland becomes a site for implementation of large projects having the potential trans-boundary impact on the Baltic Sea Habitat. Such development is not balanced by an adequate possibility for the concerned people to influence these projects and ensure safe living environment conditions.**
- **That is, the scale of environmental impact from the projects is not equal to the scale of public participation and influence on their deployment.**
- **Decisions on the implementation of those projects, which have the trans-boundary impact on the whole Baltic region, are taken on the national level, in Moscow. Municipal authorities and local community are just notified about the planned projects – that is explained by national interests. At this, the environmental safety and health of people living in the Baltic Region, which are subjected to the impact, are sacrificed to the interests of corporations implementing these hazardous projects.**
- **EU States, on one hand, interested in getting resources from Russia, on the other hand, they have no effective legal mechanisms for influencing to these trans-national projects. Russia has signed, but not yet ratified the Espoo Convention.**



Thank you for your attention!

