



Nord Stream 2

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Facts and Figures: Environmental Impact Assessment in Russia

Nord Stream 2 AG | Nov-17





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Environmental Impact Assessment in Russia

1. General Information

Nord Stream 2 has finalised the environmental impact assessment (EIA) report for the project in Russia and submitted the documentation to the Russian Environmental Inspectorate (Rosprirodnadzor) for state environmental expert review.

The development of the final EIA report followed **the public consultation process**. Many comments and recommendations received from experts and public during the consultation period have been taken into consideration.

The EIA procedure for the project in Russia was launched in April 2017. The draft EIA report was disclosed for public review on August 4, 2017. A public hearing was then held on September 4 in Kingisepp and the 60 day-long public consultation procedure was completed on October 4.

2. Contents of the Project Documentation

The full package of documentation for the Nord Stream 2 project in Russia comprises 138 volumes, including:

- > 50 volumes of initial data and survey results, including 21 volumes with a detailed account of engineering and environmental survey findings;
- > 16 volumes of the environmental impact assessment materials, including:
 - 8 EIA volumes with appendices;
 - 8 volumes of reinstatement programme, sanitary protection zone planning, onshore and offshore monitoring programmes for the construction and operation phases;
- > 4 volumes of public discussion materials.

3. EIA Based on Comprehensive Surveys

Nord Stream 2 has performed **the most detailed and complete ecological surveys** within the proposed construction corridor ever carried out. Research and survey campaigns took about five years and will continue throughout the construction and operational phase of the project.

Best-in-class specialists with PhDs and other prestigious academic qualifications in biology, geography, economics and technology from St Petersburg State University and the Russian Academy of Sciences have been involved in the surveys campaign.



- > Facts and figures on **offshore surveys**:
 - 75 hydrobiological, 77 hydrochemical and hydrological stations
 - 8,000 sea water laboratory tests
 - 9,000 sea bottom sediments laboratory tests
 - 11 field trips, including aerial surveys, to study birds and sea mammals

- > Facts and figures on **onshore surveys**:
 - Research covered 1500 hectares
 - 3,000 soil quality laboratory tests
 - 45 kilometres of zoological routes
 - More than 200 vegetation description sites
 - 170 measurements of physical factors, 126 air quality tests
 - 360 radiation measurements, 180 measurements of radon exhalation

- > In addition, the company completed a comprehensive biodiversity survey across the entire Kurgalsky peninsula. The results are being prepared for publication.

4. Public Consultation on the Draft EIA Report in Russia

As part of public consultation process, Nord Stream 2 held a series of meetings with the local communities, environmental NGOs and experts to discuss the draft EIA report and the environmental surveys that have been carried out.

- > In May 2017, a round table discussion on route selection and biodiversity conservation was organised.
- > Between May and August 2017, information meetings were organised with individual experts on the route selection.
- > In August 2017, four focus-group meetings on specific environmental topics were held with environmental scientists, experts and environmental NGO representatives.
- > In summer 2017, the project was presented in nine communities in the Kingisepp district, where more than 200 residents took part in the information meetings organised by the regional and municipal authorities.

During the public consultations and public hearing on the draft EIA, the company received:

- > 14 written statements from environmental NGOs (Greenpeace and Monitoring BTS), one research institute (Botanical institute) as well as individual experts and the public;
- > additional recommendations following meeting with regional experts and the public.

These documents contained in total around 400 questions, comments, remarks and recommendations. Half of them were comments that were implemented in the final EIA report as corrections and clarifications:

- > All feedback was documented and responded to in detail in the project documentation.
- > Overall, public consultation materials comprise 4 volumes (about 700 pages).



5. Final EIA Documentation Prepared with Due Consideration of Comments Received

The final EIA report **has taken into account comments and suggestions** received during the public consultation process and has been revised and updated to include, among other points, the following:

- > a more detailed impact assessment on the entire area of the Kurgalsky reserve and its ecological characteristics;
- > a detailed and aligned list of rare and protected species and their distribution onshore and offshore;
- > more detailed information on the breeding birds species and communities, including information on colonies and nesting spots;
- > supplementary 2017 research data and Helcom BALSAM data on marine mammals;
- > information on the ice conditions in the Narva Bay to accurately assess the impact on the Baltic ringed seals in the breeding period;
- > updated information on indigenous peoples population in the project area;
- > details on cultural heritage objects;
- > new data on macrophytes and spawning grounds of fish within the Kurgalsky reserve boundaries following additional research carried out in summer 2017.

6. A Broad Range of Mitigation and Offset Measures

Nord Stream 2 has developed a broad range of mitigation and offset measures to compensate potential residual impacts. Thanks to the feedback received from experts during the consultation, the initially planned measure programme was expanded to include the following:

- > reducing the width of the construction corridor through the use of innovative construction methods, i.e. trench boxes and laying the pipe in a trench filled with water (see below);
- > optimisation of the construction schedule taking into account the sensitive periods for birds, fish and marine mammals;
- > installation of six artificial nesting platforms for the white-tailed eagle and other large birds;
- > transplantation of the rare and protected plants from the construction corridor to other suitable habitats;
- > release of high-value fish fry (Atlantic salmon, trout);
- > installation of warning signs next to the habitats of the rare and protected plants and animals in the vicinity of construction sites;
- > fencing off the construction site to prevent animals from falling into the trench;
- > prevention of invasive alien plant species by phytosanitary control.



In addition, beyond Russian regulatory and legal requirements, the company is developing a biodiversity conservation plan for the Kurgalsky reserve that will be discussed with experts and competent authorities and will include a wide range of activities in accordance with international standards.

7. Innovative Construction Solution Developed as Key Measure to Significantly Reduce Environmental Impact

In recognition of the pipeline construction in the sensitive area at the shore-crossing site in Russia and in response to the suggestions received from the public, Nord Stream 2 has developed an innovative construction solution. The new technical solution is tailored to the local environmental conditions. It will reduce the construction corridor and related impacts by some 50 percent.

In the most sensitive habitat, the construction will be performed only within the narrowest feasible construction corridor with a width of 30 metres.

The new construction solution relies on trench boxes to maintain vertical trench walls and reduce the width of the trench to the bare minimum. Leading international engineers developed the innovative trench construction method after careful consideration of all available technical options and local environmental conditions with the objective to ensure minimal environmental disturbance.

The method will allow the pipeline installation in a flooded trench, ensuring that groundwater levels during and after construction to be maintained. The amount of excavated material will be reduced by 70 percent compared to a conventional unsupported trench. Limited heavy equipment will be used on site for the pipeline installation, significantly lowering noise emissions and associated disturbances.

Key environmental advantages of the proposed construction solution:

- > It will reduce the construction corridor and related impacts by some 50 percent, so that only an area of 0.175 km² will be temporarily impacted. Within the coastal forest, the width of corridor will be 30 metres for a length of 1.3 kilometres. At the dune, the right of way will be 40 metres only; this section will extend over a length of 400 metres;
- > The pipelines will be installed in a flooded trench, keeping surface hydrology in its natural condition;
- > Very limited heavy equipment will be used during pipeline installation through the protected area;
- > Noise emissions and associated disturbances will be significantly lowered.



Upon completion of construction, the entire area over a length of 3.7 kilometres length will be reinstated. Only a 30-metre-wide corridor above the pipeline will be maintained free of trees and naturally vegetated as required by the Russian safety standards that forbid planting trees over or near high pressure pipelines.

- > This means that only 0,111 km² will be maintained free of trees and naturally vegetated.

8. Pipeline Construction to Have Minimal Impact on the Kurgalsky Reserve

The onshore construction corridor will impact only 0.10 percent of the Kurgalsky reserve's overall onshore territory of 171.1 km². The reserve territory is equal to the total area of the reserve (555.1 km²) minus the offshore area (384.0 km²).



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About Nord Stream 2

Nord Stream 2 is an international project for a gas pipeline through the Baltic Sea to ensure reliable supplies of Russian natural gas to the key EU market in the long term.

Nord Stream 2 will largely follow the route and design of the successful Nord Stream Pipeline. Environmental monitoring during construction and operation of the pipeline has proven that the impact on the environment was minimal, local and short-term and that in a number of cases it was significantly lower than originally anticipated.

The EIA report for the Russian section of the Nord Stream 2 Pipeline is based on the results of comprehensive survey work carried out for the project over the last five years by leading scientific organisations and also taking into account data on the state of the environment from environmental organisations such as the Helsinki Commission. The document presents an assessment of the impact of project implementation on the atmosphere, water bodies, geological conditions, biotic and other environmental elements, as well as on regional socio-economic conditions in the Nord Stream 2 construction area.

In addition to the EIA procedure set out in Russian law, international consultations on the Nord Stream 2 project's potential transboundary environmental impacts have also been carried out in line with the Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention). Despite the fact the Russian Federation has not ratified the Espoo Convention, it has voluntarily taken on the obligations of Party of Origin for the Nord Stream 2 project as far as national legislation allows.

The Nord Stream 2 project was initiated by PJSC Gazprom and is supported by a number of leading international energy companies Uniper SE and BASF SE/Wintershall Holding GmbH (Germany), Royal Dutch Shell plc (the UK and the Netherlands), OMV AG (Austria) and Engie S.A. (France). www.nord-stream2.com