

Espoo Consultation Finland-Sweden.

Letter from the Ministry of the Environment of Finland to all Parties dated 5.6.2009 – id no. YM5/5521/2006.

Consultation in accordance with Articles 4 and 5 of the Convention of Environmental Impact Assessment in as Transboundary Context (Espoo Convention) for the Nord Stream Gas Pipeline. Ministry of the Environment, Finland.

Regarding potential transboundary effects in relation to the Nord Stream Project in the Swedish EEZ the company would initially like to have the following noted.

As stated in Nord Stream's Espoo Report, the Espoo Convention defines a transboundary impact as *any impact, not exclusively of a global nature, within an area under the jurisdiction of a Party caused by a proposed activity the physical origin of which is situated wholly or in part within the area under the jurisdiction of another Party.* Thus, the key objective of the presented Espoo Report is the assessment and communication of transboundary impacts in an area outside the party of origin (where a thorough assessment in this regard has been conducted in detail and summarised in Chapter 11 "Transboundary Impacts" of the report). Consequently, based on the statement from Finland the issues noted and commented on below are answers to questions directly addressing Nord Stream activities that take place in the Swedish EEZ. As regards any general comments on the entire project, we refer to the Espoo Report and the conclusions therein, national permitting process and other bilateral consultations that have taken place between parties of origin and affected countries after the referral period of the Espoo Report ended.

1) Information on the transboundary impacts into Finland from activities in the vicinity of the Swedish / Finnish EEZ border.

Please see attached report "Details on the area in Sweden close to the Swedish/Finnish EEZ" describing the project activities and potential transboundary environmental impacts from activities in the vicinity of the Swedish-Finnish border. The "alignment sheet" to this report gives detailed information on the bathymetry, geological conditions and seabed features in the area. As is evident from the report, no transboundary impacts will occur due to the seabed intervention works close to the Finnish EEZ border (an insignificant amount of sediments may at most settle inside the Finnish EEZ, a distance of 1,7 km from the site where the relevant intervention works has been carried out).

2) Restriction areas for fishery, assessment of losses and adverse socio-economic impacts. Possible compensation measures for the losses and adverse impacts on Finnish fishermen fishing in the Swedish EEZ.

The Nord Stream pipelines have been designed to withstand over-trawling for the whole operational life, i.e. to withstand impacts from trawling equipment with the aim of allowing fishing gear to cross the pipeline without damaging it. The DNV risk analysis marks all areas along the pipeline either as green (negligible) or yellow (acceptable) in relation to pull-over and hooking threats from trawling activity (see Figure 1) during the operation phase. In the permit application Nord Stream will not apply for permanent fishing restriction zones during the operation phase of the pipelines. During construction there will be a temporary safety zone with a radius of up to 2 km around the lay barge, which will hinder fishing activities in this zone.

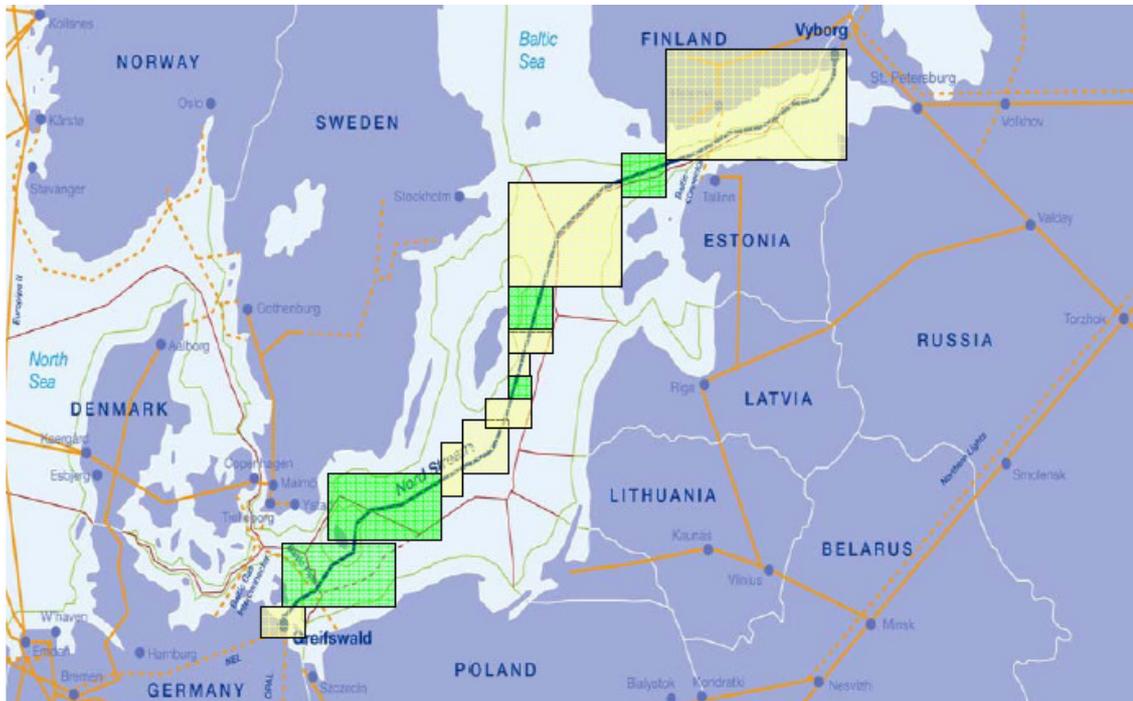


Figure 1 DNV risk assessment results regarding interaction between fishing gears with the Nord Stream pipelines per pipeline section, showing pull-over and hooking threats to be either green (negligible) or yellow (acceptable)

The type of fishing gear used, the target species and the fishing area determine to a large extent whether fisheries are potentially affected by the project.

To address all relevant issues directly to the Baltic Sea's fishing community Nord Stream has established a Fishing Working Group, which cultured relationships with

fishermen and fishing organisations around the Baltic Sea and negotiated agreements in accordance with country specific legislation. Agreements are being set up with all affected fishermen / fishing organisations and cover all phases of the project - construction, operation and decommissioning.

The agreements include arrangements about information and adjustment of fishing patterns as well as compensation for restrictions during construction and the additional effort it will take to fish in the vicinity of – and trawl over the pipelines. Further, Nord Stream and the fishing organisations agree to set up jointly agreed guidelines describing the best practices and policies to be observed when fishing in the vicinity of the pipelines.

Nord Stream has foreseen the following mitigation measures in order to minimize impact on fisheries resulting from the pipelines' presence:

- Detailed information has already been given to Baltic Sea fishermen regarding the exact proposed location of the pipelines.
- It is agreed with fishermen organisations to arrange information sessions and set up guidelines describing best practices and policies to be observed when fishing in the vicinity of the pipelines.
- Fishermen will be provided with maps delineating sensitive locations, such as where free-spans pose a risk to fishing activities. Experiences with numerous offshore pipelines in a number of different seas have shown that fishery and offshore pipelines can co-exist safely. The pipelines' coordinates ("as built") will be provided in a format compatible with electronic systems used in professional fishing.
- In addition, the pipelines will also be added to latest sea and navigation charts so that the fishermen and other entities engaged in activities within the Baltic Sea can plan and relate to the posted pipelines locations. Through FOGA, it is planned to provide weekly electronic updates of the position of the pipeline and support vessels as well as a bi-weekly paper-based version during the construction process.

Regarding monetary compensation to Finnish fishermen affected by the pipeline, which fish in the Swedish EEZ negotiations with them are being conducted by Nord Stream and will be successfully finalized. All agreements with Finnish and Swedish fishermen who are members of their countries' fishermen associations have been signed.

In order to avoid possible effects in important spawning and nursery areas the operation of the lay barge has been carefully planned in particular in relation to the important cod spawning area in the Bornholm's depth. In this area trawl fishery is forbidden in the period from the 1st of May until 31st of October. The pipe-laying activity in the area is scheduled for the winter 2010/2011 and for the second pipeline winter 2011/2012. As the cod spawning will take place inside the period where trawl fishery is forbidden, see above, the construction works take place outside this season. The route of the pipeline in the southern Swedish EEZ has earlier been changed in a

direction east of Bornholm island (instead of north of the island) and by this change the pipeline route will avoid the most important areas for trawl fishery, which has its centre to the North-west of the present pipeline position. By these measures, Nord Stream has taken note of the possible fishery related impacts that were voiced by the Board of Fishery and adapted the planning accordingly in order to minimise potential impacts and accommodate the authorities' suggestions.

Possible effects on the food chain from release of harmful substances from resuspended sediments have been assessed to be negligible. In connection with different seabed intervention works in Sweden, including trenching, rock placement, munitions clearance and in connection with anchor-handling of the lay vessel, sediment will be mobilised. In areas where trenching is carried out, sediments contain only low contents of harmful substances, as the intervention works do not take place in bottoms with accumulating conditions. Neither trenching nor rock placement will be carried out inside the cod spawning area east of Bornholm. Anchor-handling will take place on bottoms where accumulation conditions prevail. But since the impacts from anchor-handling will be local, temporary and spatially distributed along the pipeline, there will be no significant impact from anchor-handling. Furthermore, since the majority of sediments that could contain contaminants are found in water areas with a halocline, which separates the lower part of the water column from the upper part, the majority of released contaminants will resettle with particles and not be accessible in the food chain. Release of contaminants to the biologically active upper zone of the water column is assessed to be very limited, with no significant consequences for the food web.

3) Risk assessments and management plans in relation to crossing a wartime dumping site of chemical weapons.

Nord Stream takes potential risks resulting from chemical munitions very seriously. In this context, one major goal in the process of selecting the proposed Nord Stream route has been the avoidance of related risk areas. Further, extensive surveys have been conducted to encounter chemical munitions legacies along this route. In the Swedish section of the pipeline route Nord Stream has proposed the routing that does not cross a munitions risk zone 2 southeast of Gotland but only a risk zone 3 area (risk zone 3 is an area where bottom trawling is prevalent and first aid gas equipment is required on board fishing vessels). A thorough assessment of alternatives further to the east of Gotland and Hoburgs Bank showed that the current alignment is advantageous - according to a weighting that was made of the most important aspects, i.e.:

- Pipeline alignment and designated areas.
- The physical and chemical environment.
- The biological and socioeconomic environment.
- The risk of collisions between construction vessels and the general ship traffic present in the Baltic Sea during construction as well as the risk from crossing the recommended shipping channel during operation.

- The possibility of transboundary impacts (impacts from activities inside Sweden that affect other countries in the Baltic Sea region).
- Life cycle assessment (LCA).

Along the pipeline route a very thorough munitions screening survey has been conducted; and in addition a soil sampling programme has been carried out in the Bornholm chemical risk area. From the investigations no chemical munitions have been identified in the Swedish section of the pipeline route and it is assessed that impacts from chemical munitions in Sweden is insignificant.

The sampling in the Bornholm risk area was carried out to evaluate the potential contamination caused by the remains of chemical warfare agents (CWA). Nord Stream commissioned the analysis of 100 soil samples from Danish waters. The soil samples were collected by DHI, an independent international consulting and research organisation, in 2008. The samples were taken on regular distance along the planned pipeline route. The chemical testing of the samples was split between two laboratories; one in Denmark (NERI¹) and one in Finland (VeriFin²). Therefore the CWA samples were doubled to enable the parallel processing of two laboratories. VeriFin (Finland) is an internationally recognised control laboratory for such testing's and has been used for the MERCW (Modelling of Ecological Risks Related to Sea-Dumped Chemical Weapons) project.

The results of the chemical analysis showed that only very few stations had evidence of contaminants related to CWA (Adamsite, Clark I, Triphenylarsine and Phenyldichloroarsine). For all other substances tested the content of CWA contaminants was below the detection limit. Overall, the extent of the contamination, where encountered, was very low in the sediment samples and pore water samples.

Nevertheless Nord Stream will develop a contingency plan for chance encounters with chemical warfare agents. This work will be developed in close consultation between the contractors, chemical warfare experts and respective governmental departments.

To mitigate any potential risks, procedures for avoiding onboard contamination from poison gas from munitions will be in place. These will be fully compliant with the HELCOM guidance and all relevant crew members will receive special training in recognising contaminated equipment and on protection from exposure.

No transboundary impacts between Sweden and Finland are expected in the above described matter.

¹ NERI: Danish National Environmental Research Institute

² VeriFin: Finnish Institute for Verification of the chemical weapons convention

4) Data for the environmental impact and assessment criteria for the use of pressure-testing water.

The updated pre-commissioning scenario which is now applicable involves flooding the first offshore segment (from KP 0 to KP 300) via a flooding spread stationed on a vessel in the Finnish EEZ at KP 300, rather than at the Russian landfall. The second and third segments will be flooded via a flooding spread stationed on a vessel in the Swedish EEZ at KP 675. Following completion of the pressure testing and tie-in operations, the pipeline will be dewatered towards the Russian landfall, using compressed air from Greifswald (Germany), discharging through a temporary line.

There will be no trans-boundary impacts from Sweden to Finland due to pre-commissioning as the pressure testing water will be discharged at the Russian landfall. However, in the advance of the pig train there is the potential requirement for the take-out of water at the tie-in point at KP 300 in Finland. This water and any associated debris from inside the will be disposed of in compliance with Finnish waste management regulations.
