Intended for
Nord Stream 2 AG

Date
March 2017

Document number
W-PE-EIA-PFI-REP-805-030800EN-05

NORD STREAM 2
SOCIAL IMPACT ASSESSMENT – KOTKA SURVEY REPORT

RAMBØLL

NORD STREAM 2

Social impact assessment – Kotka survey report

Revision	**05**
Date	**20.03.2017**
Document ID	**W-PE-EIA-PFI-REP-805-030800EN**
Ref	**1100019533 / PO16-5068**

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1. INTRODUCTION

Nord Stream 2 AG is planning to construct two underwater natural gas pipelines in the Baltic Sea. The approximately 1,200 km long pipelines are planned to be routed from the southern coast of the Gulf of Finland in Russia through Finnish, Swedish and Danish waters to the German coast in Lubmin.

The Nord Stream 2 Pipeline Project builds on the existing Nord Stream Pipeline system which was constructed in 2010–2012. During the implementation of the earlier project, the coating and logistics contractor for Nord Stream stored pipes at a temporary storage facility located in Hanko harbour and stored and applied concrete coating to pipes at a facility located in Mussalo Harbour in the City of Kotka. The Nord Stream pipelines were commissioned in 2011 and 2012.

According to the plans for the Nord Stream 2 project presented during the implementation of the survey in April 2016, related onshore supplier operations and some ancillary operations during the Nord Stream 2 project are intended to be carried out in the cities of Kotka and Hanko located on the southern coast of Finland.

In the Finnish section, a national environmental impact assessment procedure is applied to the Nord Stream 2 project as required by law. Ramboll Finland Oy, as the environmental consultant for Nord Stream 2, has carried out the assessments during the EIA procedure. Part of the assessment includes consideration of impacts on the comfort, health and safety of the human living environment. A resident survey for the residents of the Kotka region was used to collect information and opinions for assessing the impacts of the project.

Methodology of the survey implementation and data analysis is explained in Chapter 2, results in Chapter 3 and summary of the results in Chapter 4. More detailed information on the planned project can be found in the project description in Appendix 1.

2. METHODOLOGY

2.1 Survey design and implementation

Ramboll Finland Oy conducted a postal survey at Kotka region to find out how the residents feel about the planned Nord Stream 2 project, the related supplier activities and possible impacts of them. A postal survey was assessed to be the most suitable method as it offers the advantage of reaching a variety of age and occupation groups. It is also possible to contact more people through a postal survey than through interviews. The survey consisted of 19 questions designed to gather information concerning the respondents' background (Questions 1-6), baseline information about current living environment (Questions 7-8), experience of pipe coating activities in Kotka during the Nord Stream project in 2010–2012 (Questions 9-10), familiarity with the planned Nord Stream 2 project and possible impacts of the operations planned to be carried out in Kotka (Questions 11-18) and additional comments (Question 19). Questionnaire of the Kotka survey is presented in Appendix 1.

On 15 April 2016, 1,497 questionnaires were delivered by post to randomly selected households of the City of Kotka living in the vicinity of planned transport route to Mussalo Harbour plus three questionnaires as control questionnaires to the Finnish Post and Population Register Centre for official purposes. The area of the survey delivery is presented in a map attached to a cover letter of the survey in the Appendix 1. Based on the selection criteria, survey could only be delivered to households which had residents between 18 to 80 years old, and did not have a ban for direct marketing. There were in total 17,902 residents within 11,962 households fulfilling the selection criteria in the area of delivery, and in each selected household the survey was delivered randomly to one of the adults between 18 to 80 years old (Table 1). The first delivery included a cover letter, a questionnaire, a Nord Stream 2 project description and a response envelope, on which postage was paid. A reminder letter was sent to the households that had not responded by the original response deadline on 29 April 2016. The letter notified the recipients that the response deadline had been extended to 4 May 2016. As of 16 May 2016, 326 returned questionnaire forms had been received.

Table 1. Information about survey delivery statistics

Number of all residents in the survey area	Number of all households in the survey area	Number of households fulfilling the sample criteria	Number of residents fulfilling the sample criteria	No of delivered questionnaires	Number of received questionnaires	Response rate
24,701	13,711	11,962	17,902	1,497	326	21.7%

The questionnaires were processed anonymously and in a highly confidential manner. It was at no time possible to identify individual respondents, unless the respondent had written his or her name on the questionnaire (anonymous survey). Printing and delivery of the questionnaires and optical reading of the returned questionnaires was undertaken by JP-Postitus Oy, and only JP-Postitus Oy processed the address details. These details were used only to deliver the survey and its notification letter. The responses were sent to JP-Postitus Oy, which converted the forms into an electronic format and supplied the data to Ramboll Finland Oy.

2.2 Data analysis

Ramboll analysed the results. Data was processed with a statistical program (Excel-based Tixel). The statistical analysis took into account all responses received by 16 May 2016, excluding only one questionnaire form which was returned empty. The total number of analysed questionnaires (325) is large enough for statistical analysis.

The analysis consisted of taking one-dimensional distribution curve from each question. In questions which consisted of multiple statements, the responses were gathered into a single chart. Statistical significance was studied against background variables (respondents' gender, age group, occupation, location of permanent/holiday residence and time lived in the area) using chi-squared test. In addition, statistical significance of the questions in relation to respondents' familiarity with the Nord Stream project related activities in Kotka in 2010–2012, observation of changes in the living environment in

2010–2012, and familiarity with the Nord Stream 2 project, was also analysed using chi-squared test. Only statistically significant results that are of practical importance in the context of the survey and social impact assessment are discussed in the text. In cross tabulations between two questions, the results only comprise of responses where the respondent had given an answer to each of the analysed questions.

2.3 Data validation

Missing respondents

As 1,497 questionnaires were delivered and 326 returned, the response rate was 21.7%. It is typical response rate for this type of resident survey in Finland. When the respondents' background information was compared with the demography of the City of Kotka, it could be seen that the elderly age groups (over 65-years) and men were overrepresented (Table 2). It seems that the older generation was more interested in responding to the surveys compared to the younger generation, which is often the trend in postal surveys. One possible explanation for higher activity of male respondents is a perception, that pipeline project and related activities (e.g. pipe coating) are considered as technical "male" themes, which may not so much be in the interest of women.

Table 2. Demography of the city of Kotka and the respondents of the survey

	Total population	Female	Male	18-65 year olds	Over 65-year olds
The City of Kotka	54,518	51%	49%	71%	29%
Respondents of the survey	326	42%	58%	59%	42%

Source: Kotka tilastotietoja 2014

The survey was mostly about the planned Nord Stream 2 project-related activities in Kotka. It can be assumed that among those who received the questionnaire but did not respond, a lack of interest on the issue, as well as a lack of knowledge of the project, has been reasons for not responding to the survey. There was statistically significant difference between the responses of men and women, as men were more familiar with the project-related activities in 2010–2012, as well as with the planned Nord Stream 2 project. Men also estimated the impact of the operation of the coating plant in 2010–2012 on local economy more positively than women. It is possible that overrepresentation of men, and over 65-years old respondents, might have slightly distorted the survey results.

Missing data

One of the returned 326 questionnaire forms was empty and therefore in total 325 responses were included in the analysis. The survey data was subjected to partial item nonresponse, meaning that some respondents had not responded to each question. Yet, majority of the respondents had responded to all questions. In the postal survey it is not possible to control the responses in the same way as in an internet survey, which can be designed in a way that it requires the respondent to answer all questions.

Due to unidentified reasons, thirteen respondents had not responded to questions 7, 8, 9 and 10, which were located on the second and third page of the questionnaire form. Questions gathered information about respondent's current living environment and familiarity with pipe coating activities in Kotka during 2010–2012. The thirteen respondents belonged to different age groups, gender and occupations. Hence, no evident pattern, that could explain the missing responses, was identified. Yet, all aforementioned respondents had responded to subsequent questions regarding the Nord Stream 2 project and related activities in Kotka. Questionnaire forms of thirteen persons who did not answer to the questions 7, 8, 9 and 10 were also included in the analysis, as each question in the survey was separately analysed only taking into account the responses that were present.

In some questions, it is understandable that the number of responses can be smaller. This can be the case for instance with questions about familiarity with, or impacts of, the pipeline project implemented in 2010–2012. Some people may opt not to respond, if they feel like they do not have an opinion on the question, or they feel it is not relevant to them. As an example in Figure 7, eight respondents had a missing value to the statement "Traffic safety using a car", although they had assessed traffic safety as a pedestrian. The respondents may have left the response blank by mistake or purposely. It was noted

that there were some missing values even in questions, where an option ”I cannot say” was available. The missing values seemed to be random.

A decision was made to do available-case analysis, including all available data from 325 respondents. No imputation methods were used, in order to keep the number of available cases large enough. As a result of the selected approach, the number of responses varies per each question. The number of all responses and missing answers in each question are presented in Table 3.

In question 10b, the response was only expected, if response to the question 10a was positive. In questions 12 and 13, the response was expected, if the response to question 11 was positive. Question 19 was about additional comments, if the respondent had anything else he wanted to comment on. Regarding only questions where a response was expected from all respondents, the number of missing answers in the whole survey was on average 4%, and in its highest 6%, from all responses. In cross tabulations of two variables pairwise deletion was used, taking into account only units, where the respondent had given an answer to each of the analyzed questions.

Table 3. Number of total responses and missing responses per each question in the survey

Question	Total number of responses	Expected responses	Number of missing responses compared to the expected ones
Question 1	321	325	4
Question 2	323	325	2
Question 3	323	325	2
Question 4	324	325	1
Question 5	317	325	8
Question 6	316* (average)	325	9* (min 3-max 13)
Question 7	304* (average)	325	21* (min 15-max 33)
Question 8	306* (average)	325	19* (min 17-max 22)
Question 9	311	325	14
Question 10a	308	325	17
Question 10b**	184* (average)	44	-
Question 11	320	325	5
Question 12***	242	245	3
Question 13***	243	245	2
Question 14	307* (average)	325	18* (min 12-max 32)
Question 15	316* (average)	325	9* (min 7-max 11)
Question 16	314* (average)	325	11* (min 7-max 11)
Question 17	312* (average)	325	13* (min 11-max 17)
Question 18	312* (average)	325	13* (min 11-max 17)
Question 19 (additional comments)	91	-	-

* Average value calculated based on missing answers for all statements within the question

** Response to the questions 10b was expected only if the response to question 10a was positive, but some respondents responded despite negative answer in question 10a.

*** Response to the questions 12 and 13 was expected only if the response to the question 11 was positive.

In questions where the expected number of responses was 325, the number of actual responses is presented in the graph using a capital letter N (e.g. N=301 signifies, that the number of responses to the question was 301). Regarding questions, where the expected number of responses was less than 325 (questions 10b, 12 and 13), the number of responses is presented using a lower case n. The variation in the number of respondents is taken into account in the analysis of the results.

Sources of uncertainty

Missing respondents and data may distort the results, if nonresponse does not distribute randomly. Variation in the number of respondents per each question, and the possibility that some questions may have been understood differently by different respondents, may cause uncertainties in the analysis of the results.

A mistake in the wording of the Finnish language questionnaire was detected in the question 4 about the location of permanent or holiday residence. The last response option should have been written as “Neither my permanent nor my holiday residence is located in the area”. However, in the Finnish language questionnaire, due to mistake in translation, it was phrased as “Either my permanent or my holiday residence is not located in the area”. Twenty-two respondents (7%) had selected this response option. The questionnaire was sent only to households that, based on the information on Population Register Centre, had permanent or holiday home at the survey area. It is possible that some respondents might have considered the sentence as it was meant (logically) meaning that neither their permanent nor holiday residence was located in the survey area. For some respondents, the reason for selecting the option could have been due to a mistake or misunderstanding, or due to resent changes in addresses. Respondents choosing this option did not seem to present any specific age, gender or other background group.

There was inconsistency in the responses to the questions number 10 and 14, which is a sign that the questions have been partly understood differently than were meant to. In question 10b experienced changes in the living environment caused by the operations at the coating plant were reported also by some respondents who, according to the response to a question 10a had not lived in the “area”, or had lived in the “area” but did not remember any changes. Observed inconsistency can be partly explained with the fact that it is not clearly specified what is the “area” mentioned in the question 10a, although it was meant to mean the living area in the vicinity of the coating plant or transport route (survey area as referred to in the question 4). In addition, living in the area has been selected as the condition to determine the changes, although changes can also be observed by those who are working, spending holiday or otherwise spending time in the area. In the results chapter, a decision was made to present the responses to the question 10b by all respondents who answered to the question (n=181-187), as well as separately only by those respondents, who had selected the option “Yes, I lived in the area and remember experiencing changes and/or impacts caused by these operation” in the question 10a (n=43-44).

In question 14 respondents were asked to state their opinion on various statements concerning the Nord Stream 2 project and related activities. Two of the statements were about the respondent’s opinion of the Nord Stream 2 project (“I have no opinion on the project” and “My overall opinion of the Nord Stream 2 project is positive”), but there is inconsistency in the responses. While only 94 persons stated that they had an opinion on the project (disagreed with the statement “I have no opinion on the project”), in total 270 respondents agreed with the statement “My overall opinion of the Nord Stream 2 project is positive”). One could have assumed that, respondents with no opinion on the project would have responded to the statement of the overall opinion by selecting “I cannot say” option, yet this was not the case. The inconsistency can partly be explained by social desirability bias, a tendency of survey respondents to answer questions in a manner that, they think will be viewed favorably by others, or how the respondent has though he has been expected to respond, for instance by agreeing with a statement. It is possible that, respondents have understood the statements differently than they were meant, and have not thus responded with consistency. Some may have though only about the Nord Stream 2 project related activities planned to take place in Kotka, while others may have thought about the project in European scale. Due to inconsistency, it is not possible to get an unambiguous picture of the overall opinion the respondents have about the Nord Stream 2 project from this specific question alone.

The aim of the survey was to find out information about opinions and concerns of the residents of Kotka regarding the Nord Stream 2 project and related activities. One possible source of uncertainty in this kind of surveys could be that some of the concerns are left unnoticed. Yet, as often people who are more concerned on the issue, are more probably going to express their opinion and answer to the survey, it can be assumed that, respondents who have been reached by the survey have brought up the main issues and concerns of the people.

3. RESULTS

3.1 Background information on the respondents

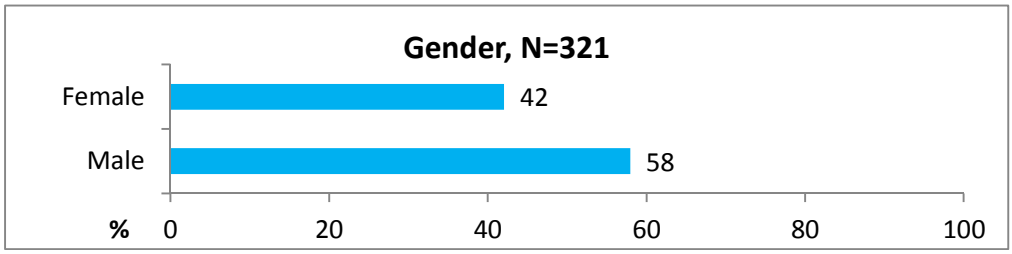


Figure 1. Gender distribution of the respondents.

The responses of men and the elderly age group (over 65-years) were overrepresented in the survey results (Figures 1 and 2). The large number of older respondents also reflected to the share of pensioners, who constituted half of the respondents to the survey followed by blue collar and white collar workers (Figure 3). The number of respondents who have answered to a question is presented in the graphs using a letter N followed by the figure.

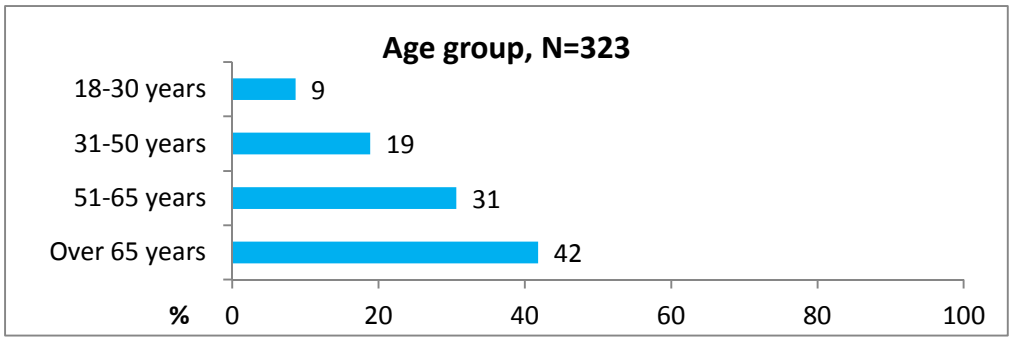


Figure 2. Age distribution of the respondents.

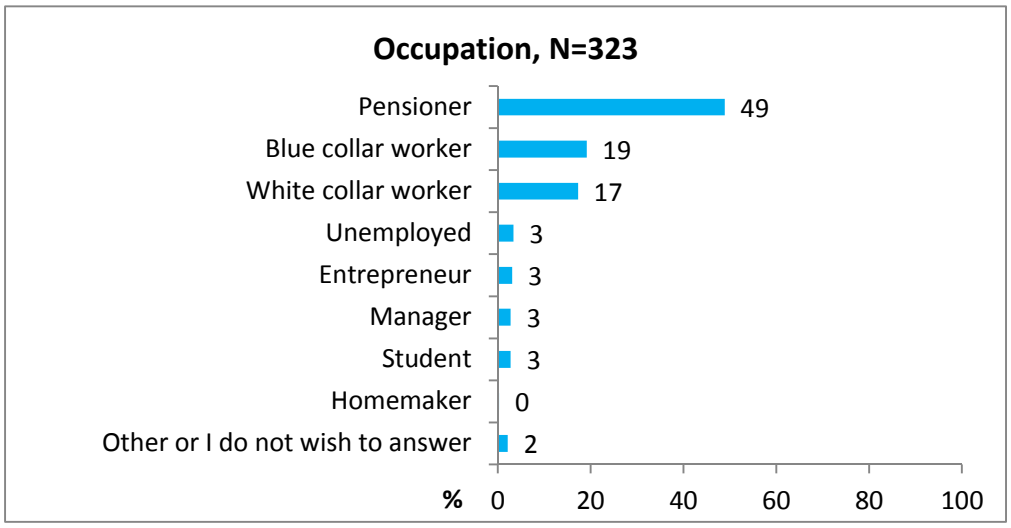


Figure 3. Occupation distribution of the respondents.

Because the number of responses in some of the occupational categories was very low (Figure 3), the nine original categories were combined into three classes to enable further statistical analysis. The three classes, as presented in Figure 4, are: “employed” (comprising "white collar worker", "blue collar worker", "entrepreneur" and "manager"), “pensioner” (comprising “pensioner”) and “other” (comprising

"student", "unemployed", "homemaker" and "other"). Majority of the respondents were either employed or pensioners.

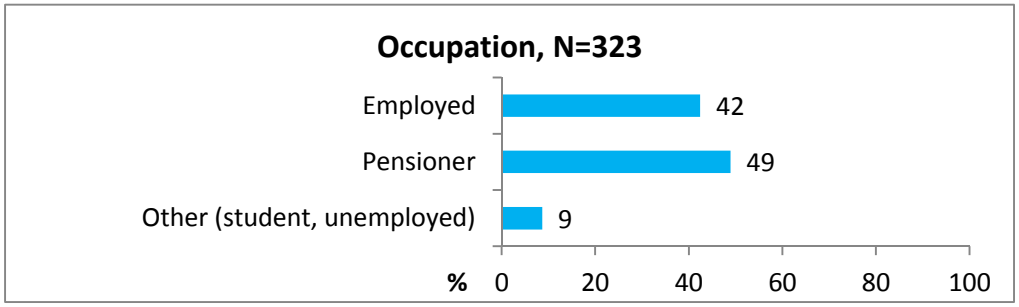


Figure 4. Occupation distribution of the respondents, combined classes.

Most of the respondents received the questionnaire because their permanent residence is located in the area of the survey delivery (see the map of the survey delivery area in the cover letter in Appendix 1). Only a few respondents had only their holiday residence in the area (Figure 5), which is understandable because of the nature of the target area (mostly residential area). Respondents included newcomers and long-time residents (Figure 6).

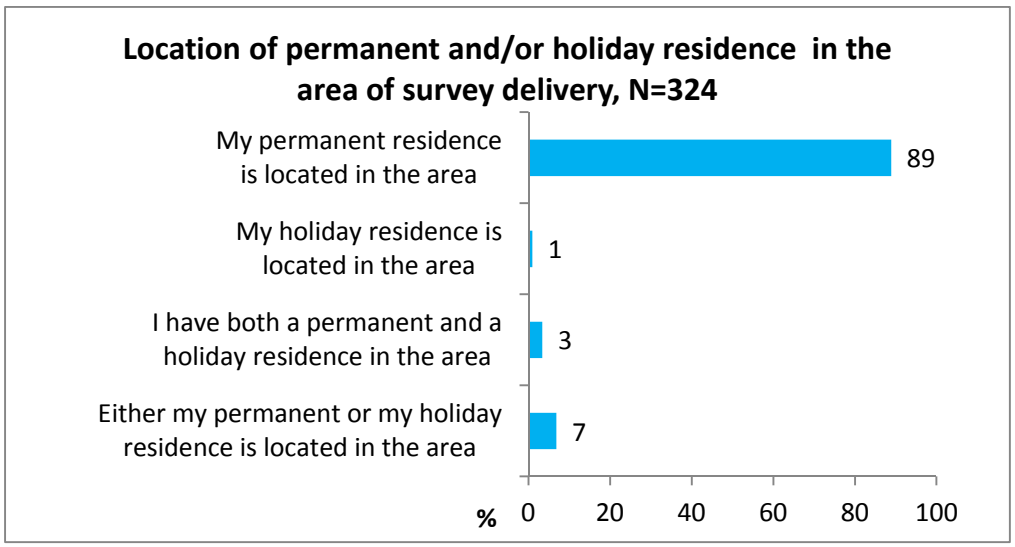


Figure 5. Location of the permanent and/or holiday residence of the respondents.

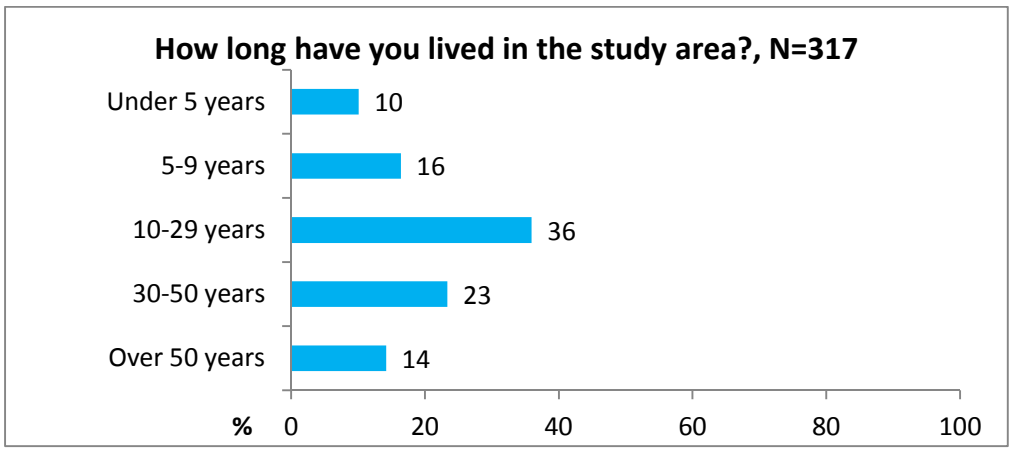


Figure 6. Number of years respondents have lived/spent holidays near the project area.

3.2 Current living environment near the industrial area and the harbour

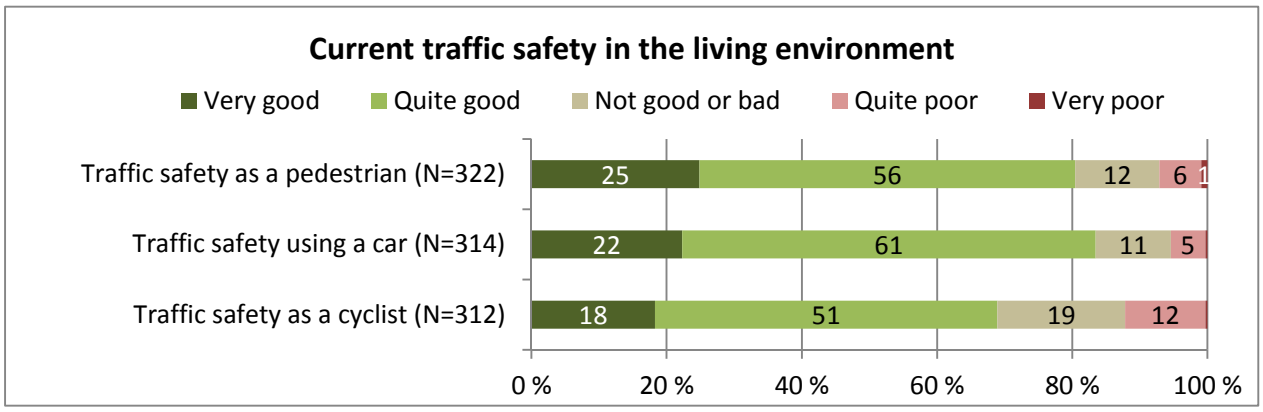


Figure 7. Opinions of respondents on the current traffic safety in the living environment.

Respondents were asked about their views on issues in their current living environment. Overall, the respondents were satisfied with the traffic safety as a pedestrian, as a cyclist and while using a car (Figure 7).

The respondents were mainly satisfied with the outdoor activities, scenery, air quality, general safety and calmness of their living environment (Figure 8). However, employment possibilities and the municipal economy were considered poor.

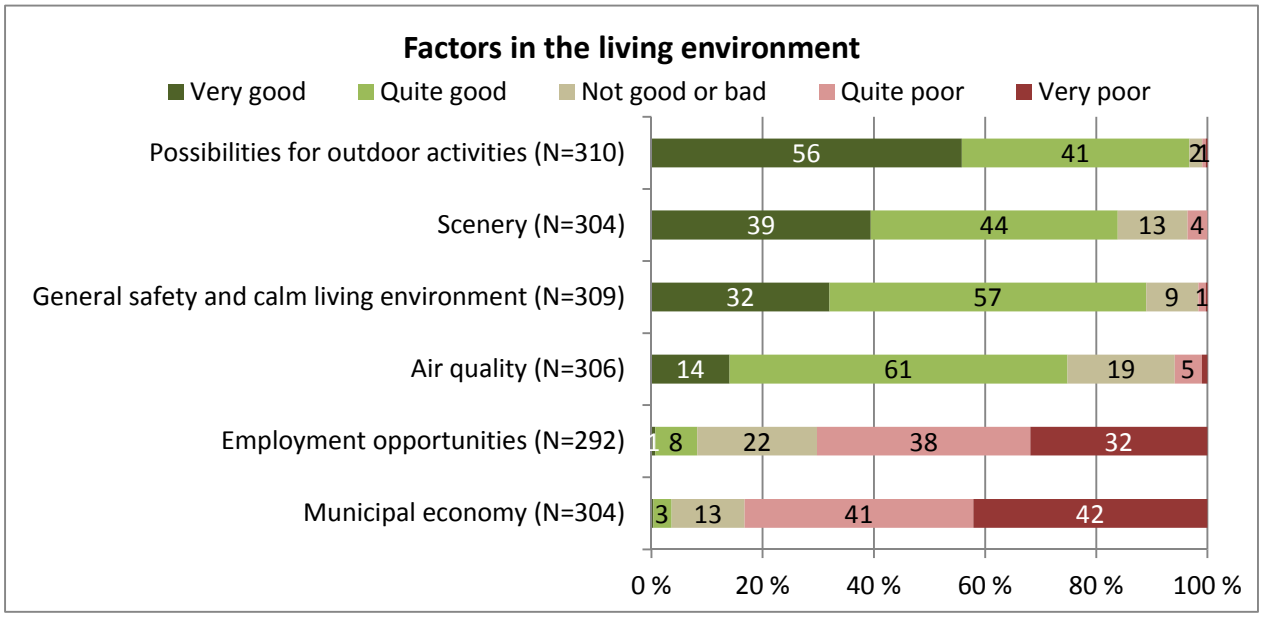


Figure 8. Opinions of respondents on the current living environment.

Currently, nuisance from the operations at the Mussalo Harbour and Palaslahti industrial area is mainly caused by heavy traffic (congestion, noise and dust) (Figures 9 and 10). Few respondents provided examples for the sources or locations of the disturbance caused by the operations. In the comments, disturbance was felt especially along Merituulentie, where in addition to noise, dust was disturbing cycling on the cycling track along the road, and there was also nuisance caused by littering of the road sides. A crossroads of Merituulentie and Rajakalliontie was considered unsafe, and noise and dust were causing disturbance on Norssalmi bridge connecting Hirssaari and Kotkansaari. Apart from the traffic, the majority of the respondents did not experience disturbance caused by the operations at the harbour or Palaslahti industrial area.

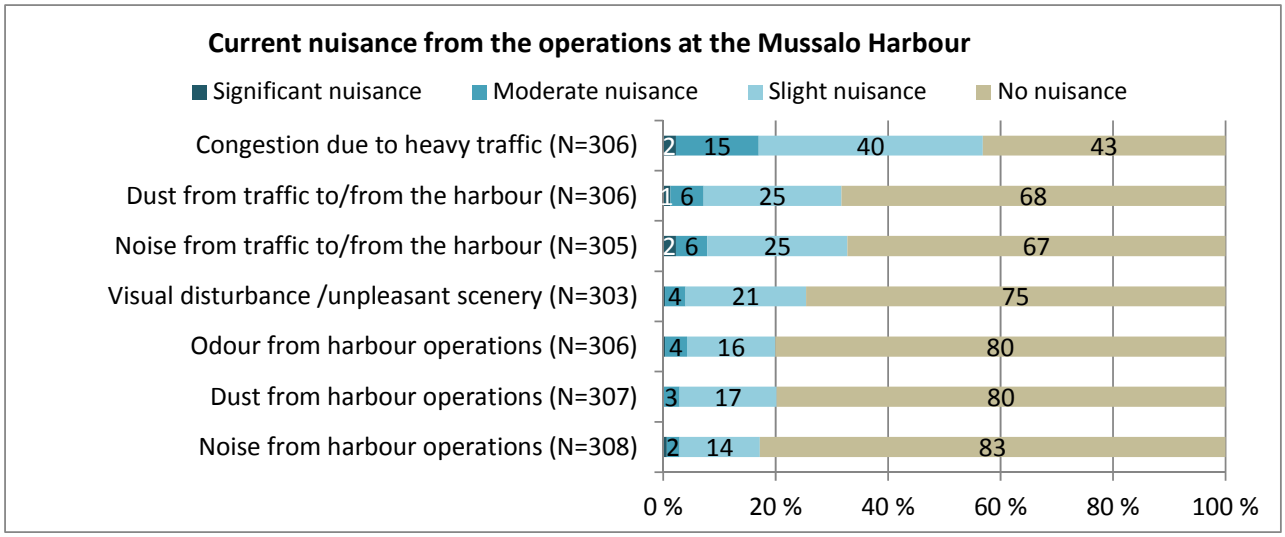


Figure 9. Opinions of respondents on the level of nuisance owing to current operations at the Mussalo Harbour.

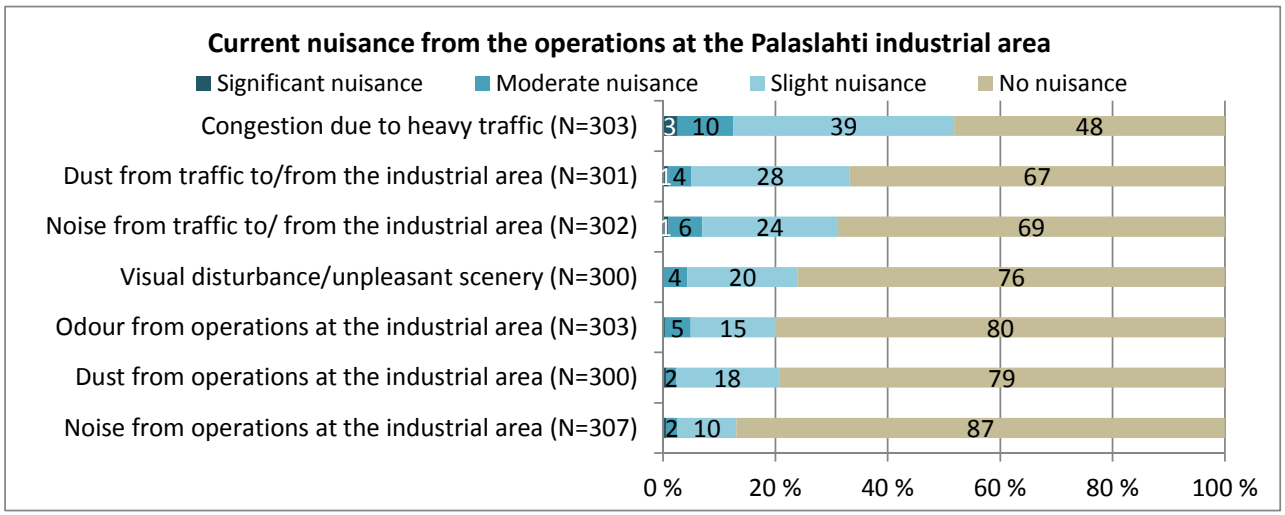


Figure 10. Opinions of respondents on level of nuisance owing to current operations at the Palaslahti industrial area.

3.3 Knowledge of and observed impacts arising from the Nord Stream Pipeline project related activities in Kotka in 2010-2012

Approximately 80% of the respondents had at least some knowledge about the pipe coating and storage activities in 2010–2012, and seven percent of the respondents with personal experience had worked in the pipe coating plant or in other Nord Stream Pipeline project related activities in 2010–2012 (Figure 11). There was a statistically significant difference in the variable "gender" as men were more familiar with the activities than women. At that time, 80% of the respondents lived in the area (Figure 12). However, only 14% of all respondents remembered noticing some changes in the living environment that they considered most likely to be caused by activities at the Mussalo coating plant.

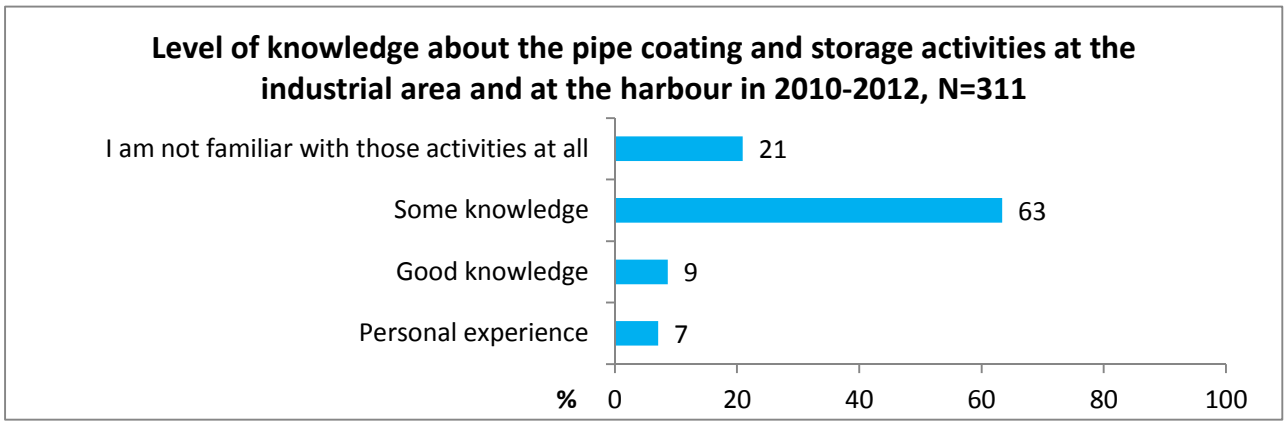


Figure 11. Knowledge of the pipe coating and storage activities at the Palaslahti industrial area and Mussalo Harbour in 2010–2012.

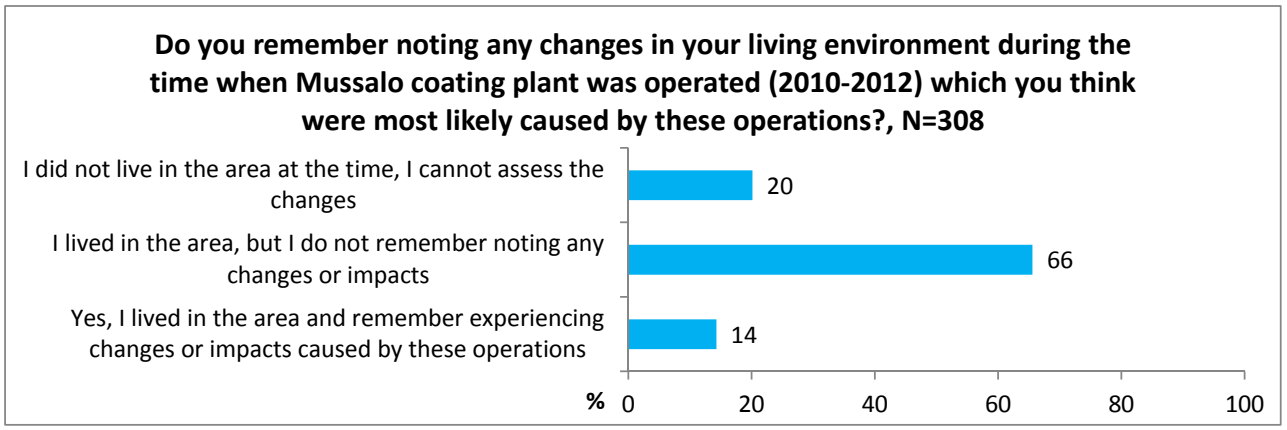


Figure 12. Respondents opinions on changes caused by the pipe coating and storage activities at the Palaslahti industrial area and Mussalo Harbour in 2010–2012.

While only 14% (n=44) of the respondents lived in the area and remembered experiencing changes or impacts caused by operations at the harbour and the industrial area (Figure 12), around half of the respondents (n=181-187) responded to the following statements about observed changes (Figure 13). Thus, although many respondents did not necessarily have first-hand knowledge, they still wanted to assess the changes in the survey. Some of the statements were about issues which can be observed even without living in the vicinity of the harbour area, such as changes in job opportunities, or impacts on local economy. Thus, some people who did not have personal experience, may have responded based on the information they had received from the media or from other public discussions. For a comparison, Figure 14 presents only the views of the respondents, who had lived in the area at the time and responded that they had remembered experiencing changes or impacts caused by these operations.

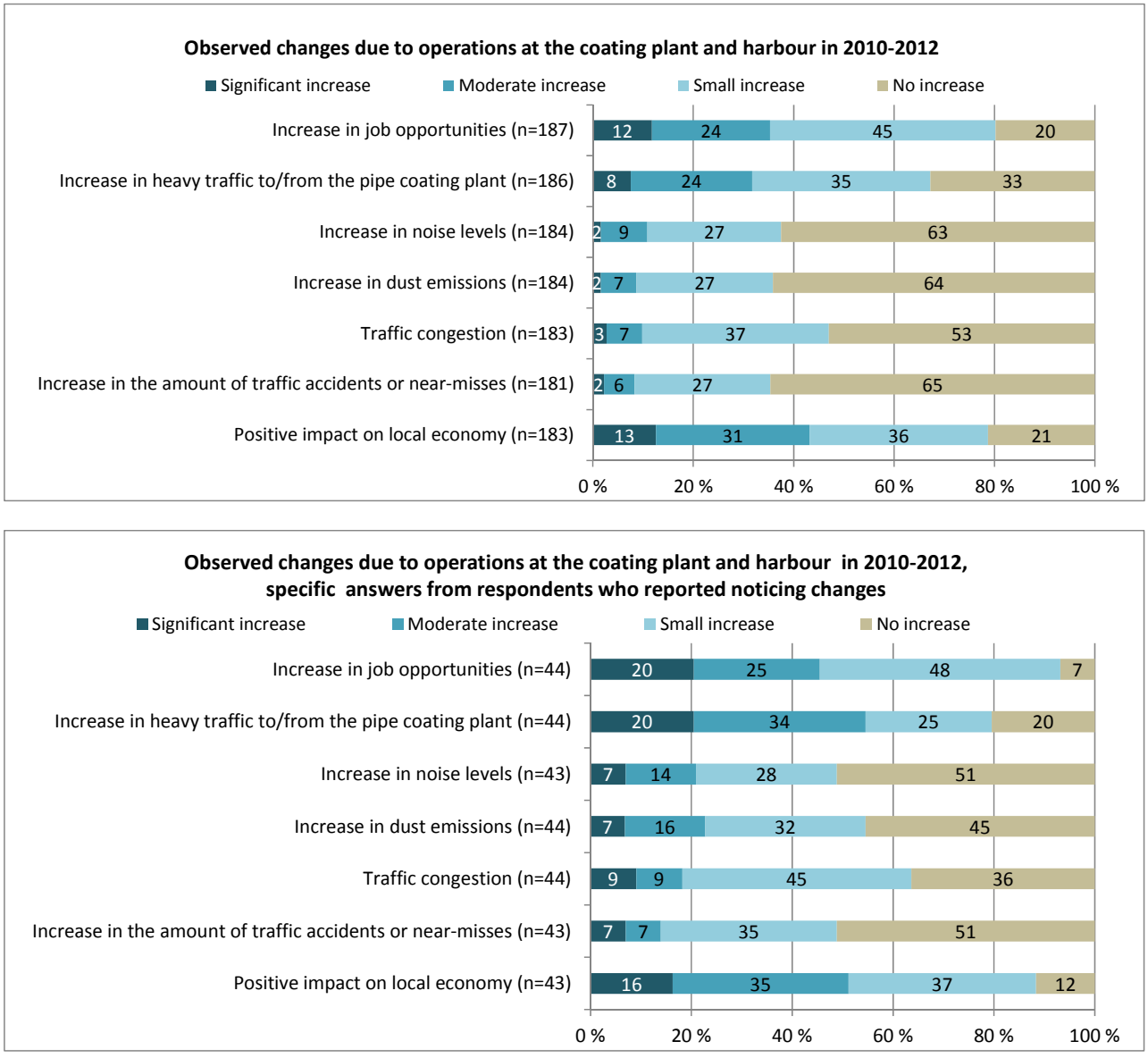


Figure 13. Observed changes in the living environment arising from operations at the coating plant and the harbour in 2010–2012.

The most notable changes in the living environment arising from operations at the coating plant and the harbour were positive impacts on the municipal economy and employment (Figure 13). Men observed higher positive impacts on economy than women (statistically significant difference). Respondents, who had lived in the area over 10 years, had observed bigger increase in job opportunities than those, who had lived there for a shorter time (statistically significant difference). The negative impacts were mainly related to heavy traffic, traffic congestion, increase in noise levels and dust emissions. Yet, the increase in heavy traffic was observed much more than any other negative impacts (Figure 13).

In addition to the listed options, respondents could describe in writing other changes they had observed in their living environment. Among the twenty five responses to the question, respondents mentioned non-compliance of traffic regulations (traffic lights), noise due to increased heavy traffic and trail traffic, inadequate trail capacity, congestion at the Mussalo Harbour, high speed of ships causing high waves disturbing boats at the marina and quarrying vibration in houses. Positive changes were related to increased positive image, economy and internationalization of the City of Kotka.

3.4 Knowledge of and opinion on the Nord Stream 2 project and related activities in Kotka area

For 23% of the respondents, the questionnaire and accompanying information sheets were the first time they heard about the Nord Stream 2 project (Figure 14). There were statistically significant differences in the responses of respondents in different age groups and between men and women. Men were more familiar with the project than women, and half of the respondents under 30 years were not familiar with the project at all, while respondents above 50 years were most familiar with it. The main information sources for nearly 80% of the respondents, who already had at least heard about the project, were newspapers, magazines, television or radio (Figure 15). People found the available information to be mainly easy to understand and sufficient for their needs (Figure 16).

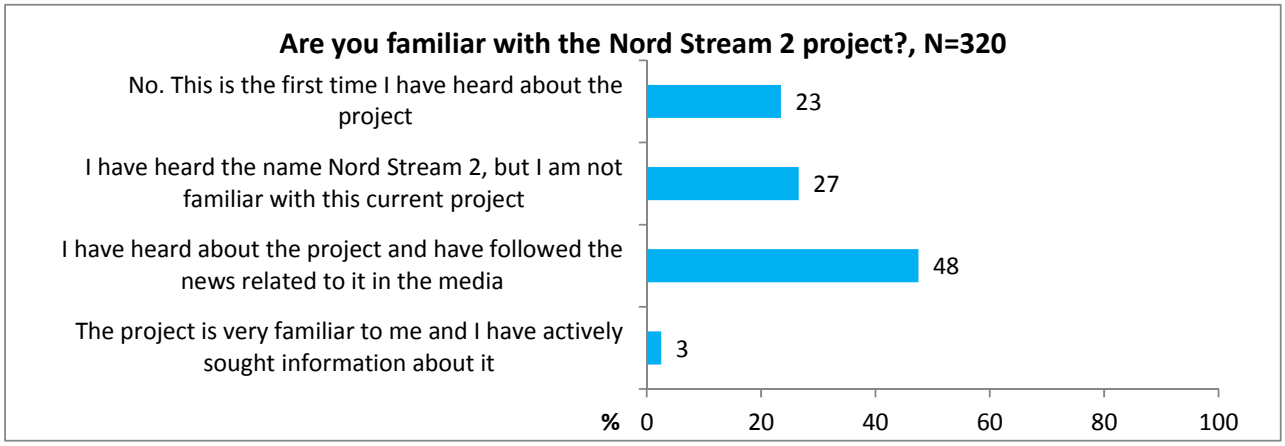


Figure 14. Familiarity with the Nord Stream 2 project.

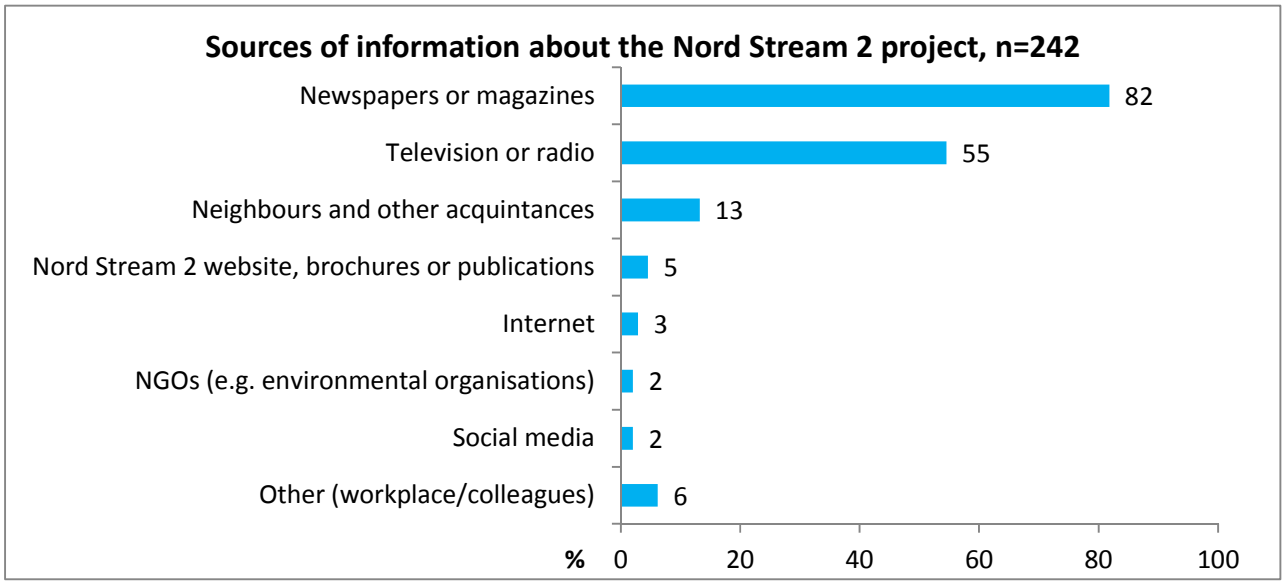


Figure 15. Sources of information about the Nord Stream 2 project.

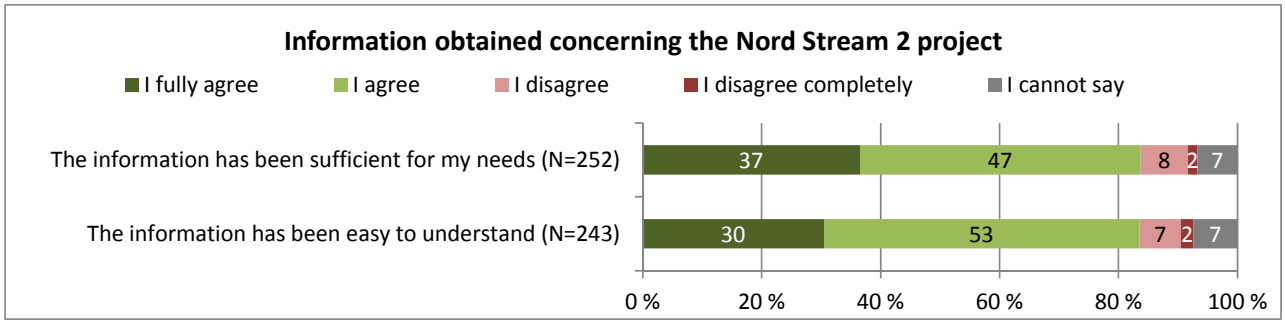


Figure 16. Opinions of respondents on the information about the Nord Stream 2 project.

Respondents were asked to respond to statements concerning the planned Nord Stream 2 project-related activities in Kotka. Majority of the respondents expected that the project-related activities would create potential job and business opportunities (Figure 17). Only very few respondents felt that Kotka should not be used as a logistics hub for project-related operations.

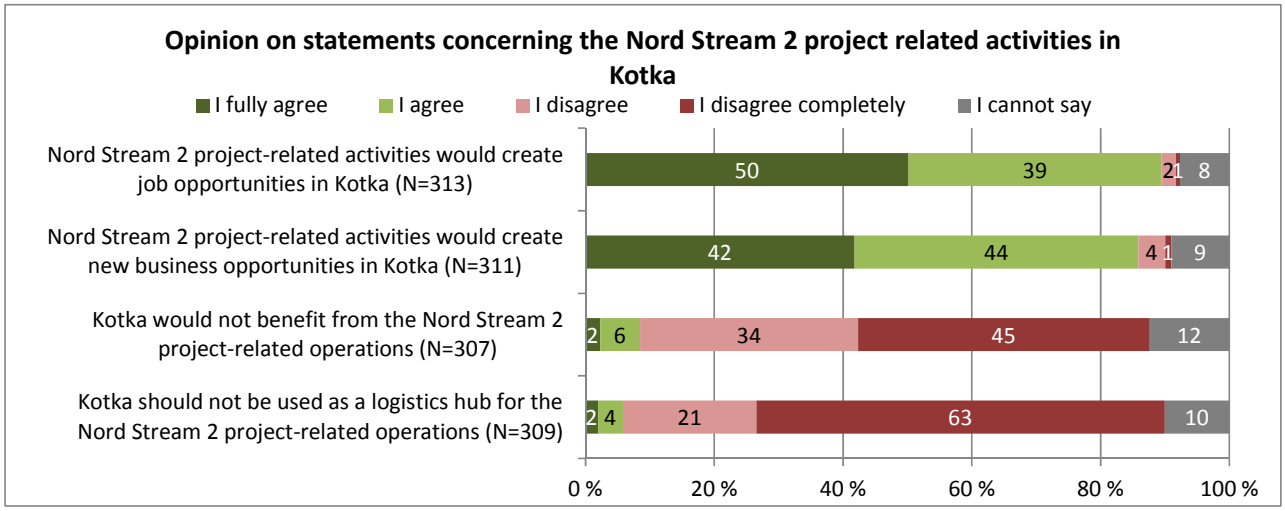
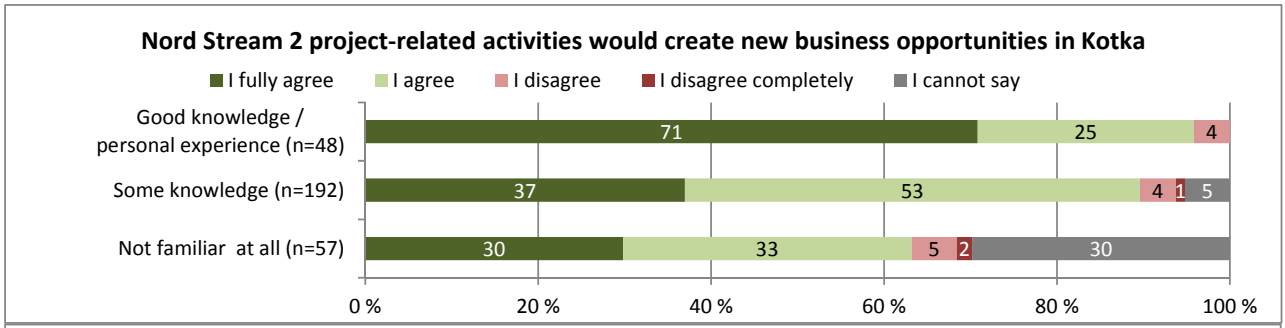
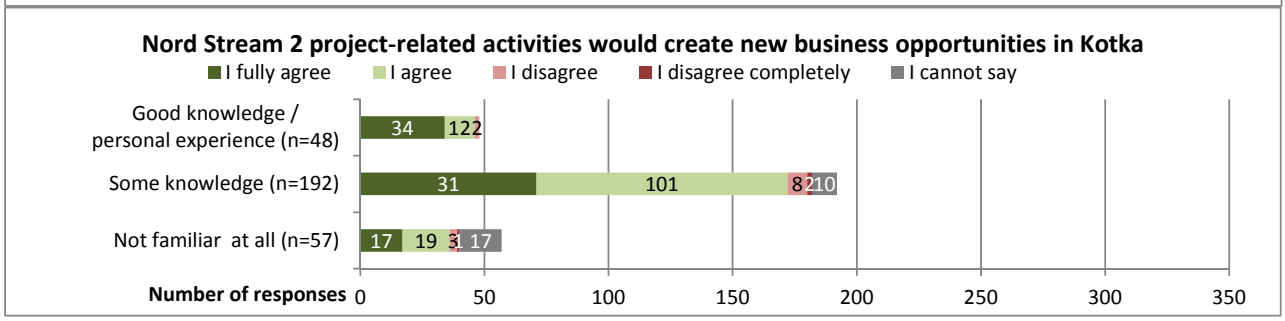
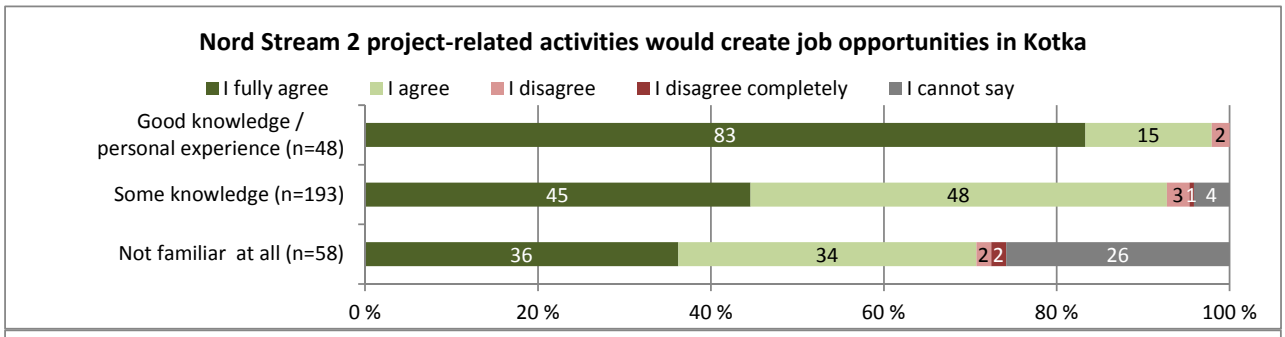


Figure 17. Opinions of respondents on the Nord Stream 2 project related activities in Kotka.

When responses to the statements on the Nord Stream 2 project were analysed in relation to the respondents' familiarity with the pipe coating and storage activities in Kotka in 2010–2012, there were statistically significant differences between respondents with different levels of knowledge (chi-squared test). Generally, respondents who had either good knowledge or personal experience of the operations in 2010–2012, had higher expectations regarding Nord Stream 2 project related activities in relation to new business and job opportunities in Kotka (Fig. 18). Most of the respondents, including those with no or limited knowledge of previous activities, disagreed with the statements that Kotka would not benefit from the activities and that Kotka should not be used as a hub for Nord Stream 2 project-related activities (Figure 19). Thus, the project was generally considered positive for Kotka, especially with regard to increasing employment opportunities. Yet, while reviewing the results, one should bear in mind that, the response classes of respondents with good knowledge (n=46-48) and no knowledge (n=57-58) were relatively smaller compared to the group of respondents with some knowledge (n=191-193). In Figures 18 and 19 the results are represented as percentages, and as frequencies, to visualize the differences in the number of respondents in the response classes. In Figures 18 and 19 only responses from respondents who answered both questions (familiarity with the Nord Stream project activities in Kotka in 2010–2012 and statements on Nord Stream 2 project-related activities in Kotka) are included in the analysis.







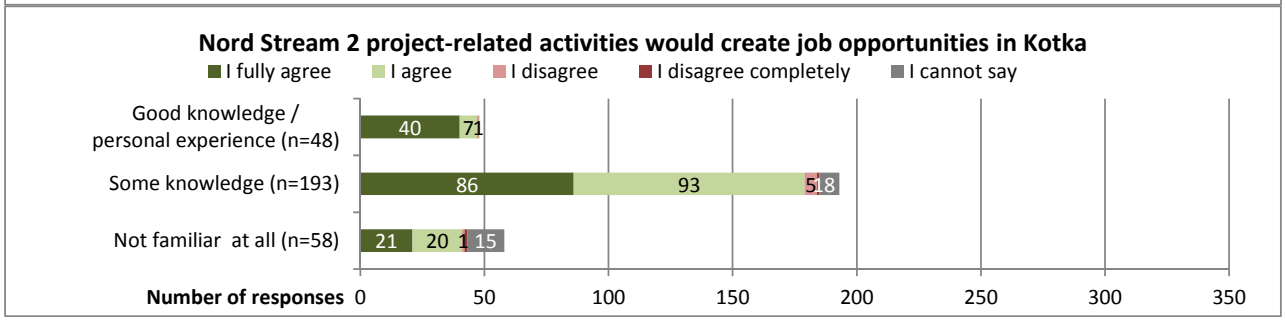


Figure 18. Opinions of respondents on the Nord Stream 2 project related activities in Kotka in relation to their familiarity with the activities in Kotka in 2010–2012 presented in percentage and in frequencies (job and business opportunities).

Figure 19. Opinions of respondents on the Nord Stream 2 project related activities in Kotka in relation to their familiarity with the activities in Kotka in 2010–2012 presented in percentage and in frequencies (logistics hub).

When responses to the statements on the Nord Stream 2 project were analysed in light of respondents' familiarity with the Nord Stream 2 project, there were statistically significant differences between respondents with different levels of knowledge (chi-squared test). Generally, respondents who were more familiar with the project, had a stronger opinion that it would be beneficial to Kotka, in comparison with the respondents who were less familiar with the project.

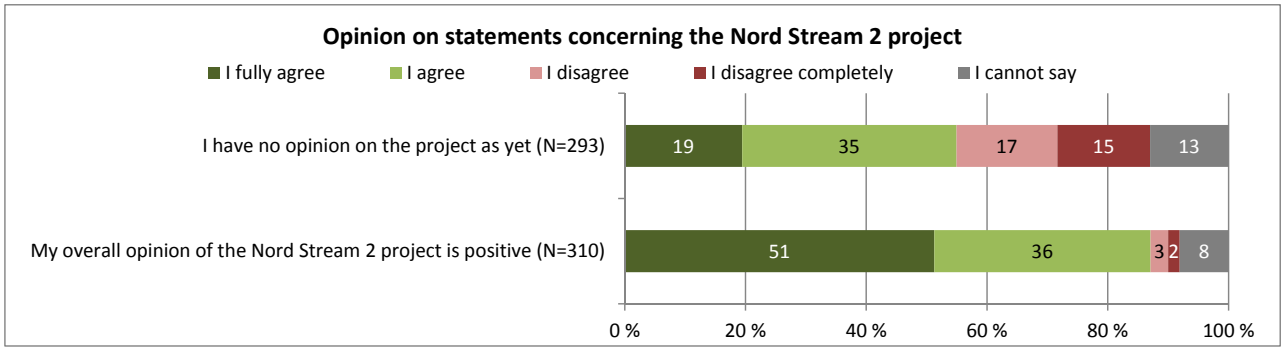


Figure 20. Opinions of respondents on the Nord Stream 2 project related activities in Kotka.

Respondents were also asked their opinion on the Nord Stream 2 project in other two statements (Figure 20). Although only 94 persons stated that they have an opinion on the project (disagreed with the statement “I have no opinion on the project”), there were in total 270 respondents who agreed with the statement “My overall opinion of the Nord Stream 2 project is positive”. One could have assumed that, respondents who stated to have no opinion on the project, would have responded to the statement of the overall opinion by selecting “I cannot say” option, yet this was not the case. Due to inconsistency, it is not possible to get an unambiguous picture of the overall opinion the respondents have about the Nord Stream 2 project solely from this question.

When the statements on opinions were analysed in relation to the respondents’ familiarity with the pipe coating and storage activities in Kotka in 2010–2012, there were statistically significant differences between respondents with different levels of knowledge (chi-squared test). Quite understandably, majority of the respondents who were not familiar with the activities in Kotka in 2010–2012 (n=60) had not yet formed an opinion on the Nord Stream 2 project. However, only around half of those respondents who had a good knowledge or personal experience of the operations in Kotka in 2010–2012 (n=47) had formed an opinion of the project.

Taking into account the inconsistency of the results regarding the two statements on opinion of the Nord Stream 2 project it is not possible to have a clear picture of respondent’s overall opinion towards the project as a whole based on these questions only. While there was a clear support towards the project-related activities planned to take place in Kotka (Figure 17), forming an overall opinion on the project seemed to be more challenging (Figure 20). While the planned activities in Kotka are clearly defined, the overall picture of the Nord Stream 2 project in the European scale may be vaguer and thus affect the ability to form a clear opinion on it.

3.5 Opinions on the possible impacts of the Nord Stream 2 project related supplier operations in Kotka

Respondents were asked about their opinion on possible impacts of planned project-related supplier onshore operations in Kotka (pipeline coating, rock transportation and storage and pipe storage and transportation) which were described in the cover letter accompanying the questionnaire.

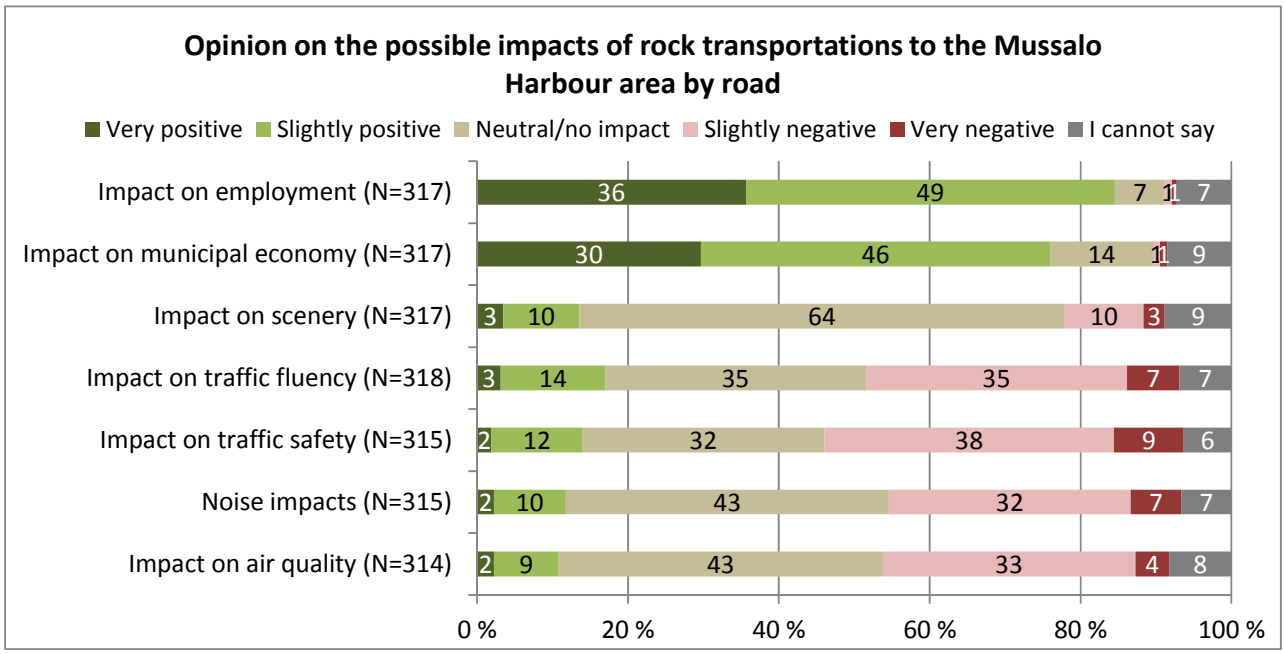


Figure 21. Opinions of respondents on the possible impacts of rock transportation to the harbour area.

While the possible impact of rock transportation raised positive expectations in terms of local employment and the municipal economy, concern over the negative impacts on traffic, noise and air quality was also raised (Figure 21). Women were more negative in their assessment of possible impacts on municipal economy, scenery, traffic fluency and traffic safety (statistically significant difference). In the question about traffic safety in the current living environment (Figure 7, p. 8), women were more concerned than men about the traffic safety as a cyclist (statistically significant difference). Thus traffic safety seems to cause concern among women. For a statement with statistically significant difference in variable “occupation”, pensioners did not assess the impacts on traffic fluency as negatively as respondents classified in other occupation groups (statistically significant difference).

Few respondents (n=26) also gave additional comments to the question. Positive comments emphasized positive economic impacts and increased economic activity in the harbour and in Kotka in general, as well as increased visibility for Kotka also abroad. Many negative comments expressed concern over the wearing off the road surfaces due to increased heavy traffic, and concern for the traffic safety for children and animals was also brought up. Some respondents recalled heavy traffic driving through Mussalontie road during the Nord Stream Pipeline project in 2010-2012, and expressed a need to monitor the traffic, so that the same would not happen during the Nord Stream 2 project.

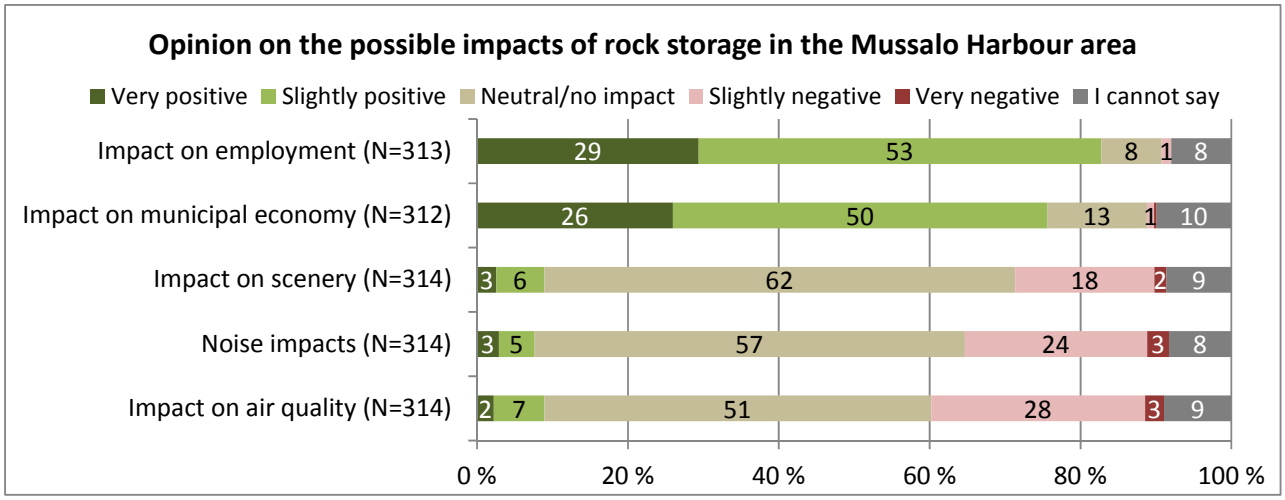


Figure 22. Opinions of respondents on the possible impacts of rock storage in the Mussalo Harbour area.

Rock storage in the Mussalo Harbour area raised positive expectations in terms of employment and the municipal economy (Figure 22). While more than half of the respondents expected rock storage not to cause any impacts, concerns about negative impacts on scenery, noise and air quality were also expressed.

Nine respondents commented on the impacts of rock storage in the Mussalo Harbour area. Few respondents were concerned about the dust emissions and accumulated impacts to the neighbouring areas, while positive comments were about increased economic activity in the Kotka region.

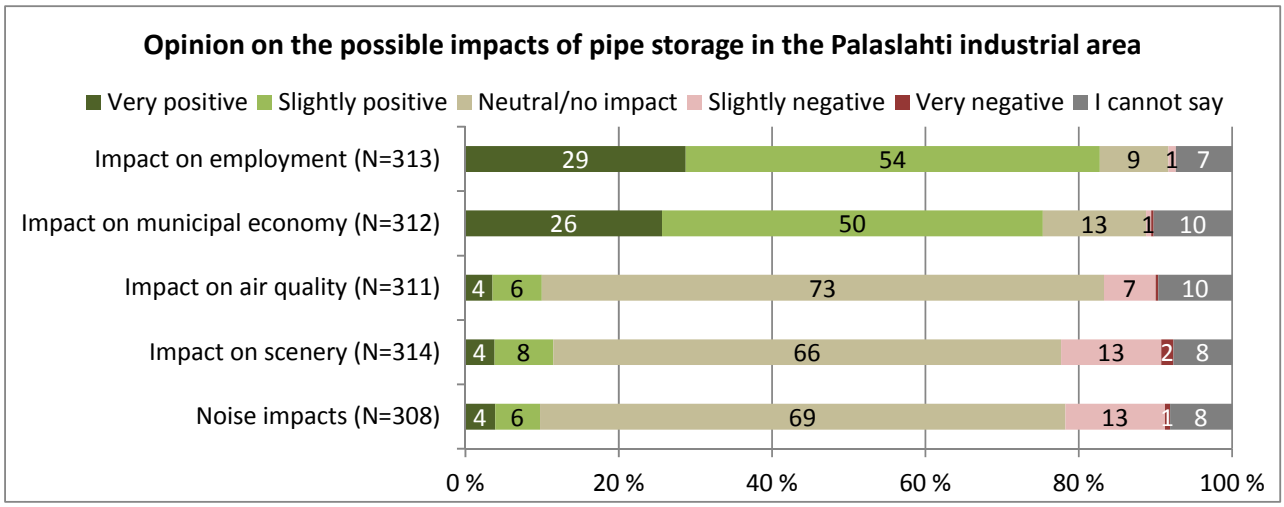


Figure 23. Opinions of respondents on the possible impacts of rock storage in the Palaslahti industrial area.

Pipe storage in the Palaslahti industrial area raised positive expectations in terms of employment and municipal economy (Figure 23). Majority of the respondents expected pipe storage not to cause any impacts on air quality, scenery or noise. Yet, concerns over negative impacts, and expectation over positive impacts, were also expressed by some of the respondents.

Four respondents commented the impacts on pipe storage. Comments were positive about the increased economic activity in Kotka region and the use of currently empty storage areas.

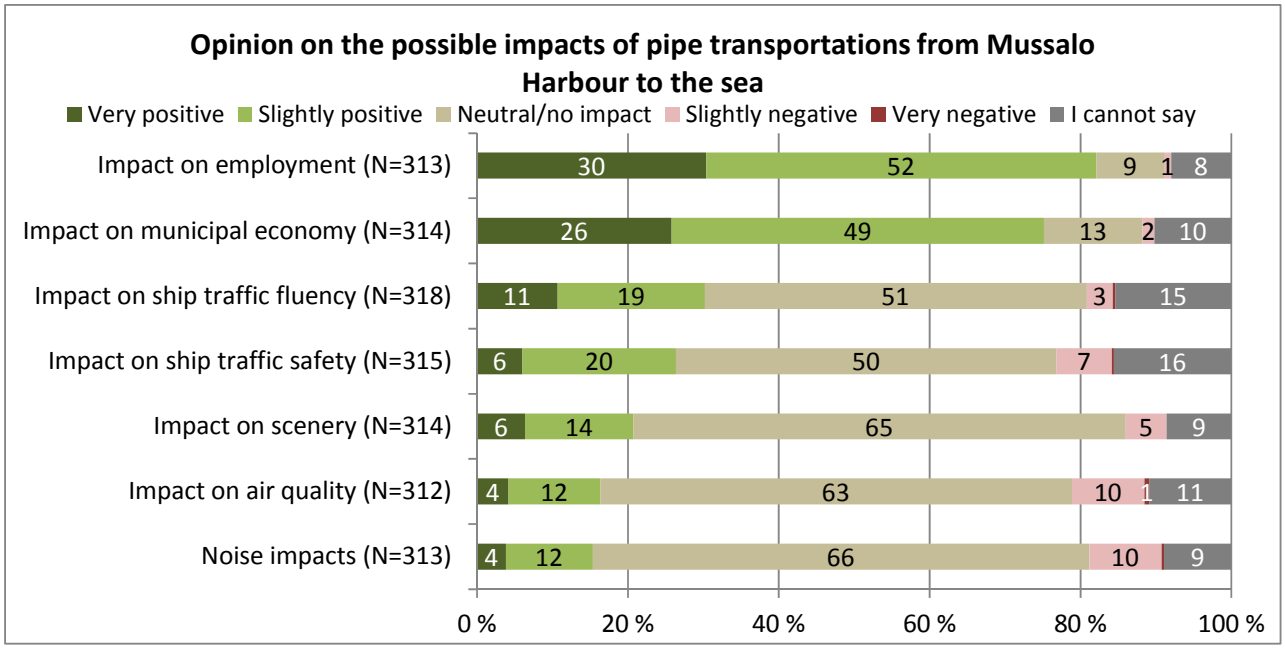


Figure 24. Opinions of respondents on the possible impacts of pipe transportation from Mussalo Harbour to the sea.

Pipe transportation from the harbour to the sea raised positive expectations in terms of employment and municipal economy among majority of the respondents (Figure 24). Around one fourth of the respondents expected the impacts to the ship traffic fluency and safety to be positive. Majority of the respondents expected pipe transportation not to cause any impacts on air quality, scenery or noise. Yet, concerns over negative impacts, and expectation over positive impacts, were also expressed by some of the respondents.

Ten respondents gave an additional comment on impacts of pipe transportations from the harbour to the sea. Most of the respondents thought that there would be positive impact on the Mussalo Harbour. Few respondents were concerned over the impacts to leisure boating, if vessels are moving with high speed. There was also concern over impacts to fishing areas.

When responses to questions on possible impacts of the activities related to rock and pipe transportation and storage (Figures 22-24) were analysed in light of respondents' familiarity with the Nord Stream 2 project, there were statistically significant differences between respondents with different levels of knowledge (chi-squared test). Generally, respondents who were more familiar with the project, had a stronger opinion that the impacts on employment and municipal economy would be very positive, in comparison with the respondents who were less familiar with the project.

3.6 Additional comments

At the end of the questionnaire respondents were provided an opportunity to include additional comments about the Nord Stream 2 project. In total, 91 respondents provided additional comments. Their comments were divided into the categories presented in Figure 25.

Around half of the respondents expressed their support for the planned operations in Kotka, as they expected these activities to create much needed job opportunities and to boost the local economy. Many comments emphasised the importance of employing locally in Kotka, as opposed to bringing in workforce from abroad. There was concern with regard to impacts on traffic, and some respondents also offered suggestions for traffic arrangements, in order to decrease such impacts. Respondents mentioned the working conditions at the coating plant in 2010–2012, and noted the need to improve the situation, if the coating plant starts to operate again. Comments mainly concerned operations in Kotka. Only four respondents were concerned about the possible political implications of the Nord Stream 2 project, mainly in relation to Russia. Examples of the additional comments are listed below the graph.

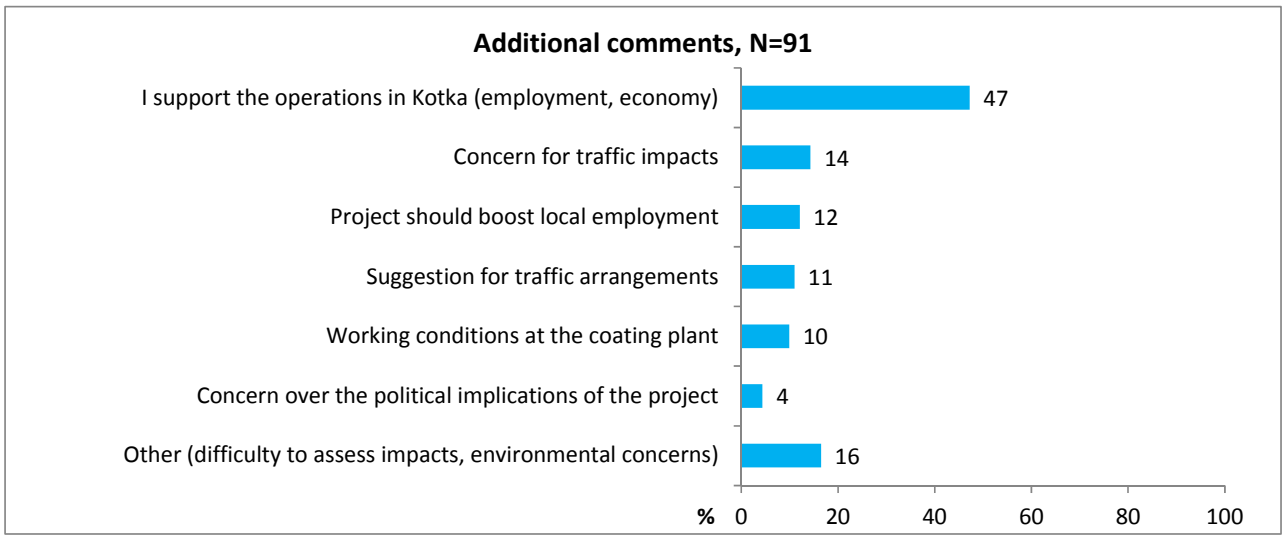


Figure 25. Additional comments provided by respondents the Nord Stream 2 project.

Examples of the additional comments. The original comments are in Finnish and translation in English is provided in brackets after each comment.

I support the operations in Kotka (employment, economy)

"*Kaikki mikä lisää työllisyyttä ja tuo rahaa kaupunkiin on kannatettavaa! Uusia tuulia vaan!"*
[Everything that brings the town more employment and money should be supported! A breath of fresh air is welcome!]

"Mussalo on oiva paikka putkipinnoitukseen, jos vain urakka sinne saadaan."
[Mussalo is an ideal location for pipe coating, so long as it wins the contract.]

"Suhtaudun erittäin myönteisesti, työllisyyden ja kunnan talouden kannalta erityisesti."
[I am very positive, especially, from the point of view of employment and the economy.]

"On hyvä jos Kotkaan saadaan edes pientä parannusta työllisyystilanteeseen. Nähdäkseni tämä hanke ei paljon eroa muista suurista teollisuuden hankkeista vaikka pysyviä merkkejä ei Kotkaan jää."
[It would be good for Kotka to gain even a slight improvement to the employment situation. As I see it, this project does not significantly differ from other large industrial projects, even though Kotka will not see any permanent impacts from it.]

"Kaikki toiminta mikä toisi Kotkaan lisää toimintaa ja työpaikkoja pitää ottaa vastaan, vaikka niillä olisikin jotain haittavaikutuksia."
[Any activity that would bring more operations and employment into Kotka must be accepted even though it may have some negative side effects.]

Concern for traffic impacts

”Liikenneväylät tukkeutuvat ja niiden kunto varmaan heikkenee nopeasti. Merituulentie ruuhkautuu ja sivuteiltä pääsy hankaloituu.”

[Transport routes will block-up and their condition will likely speedily deteriorate. Road Merituulentie will become congested and access to it from side roads will become more difficult.]

”Lisääntyvä raskas liikenne on merkittävä haitta Hirsvaarassa ja Mussalossa asuville. Melu ja pöly lisääntyvät. Erityisesti Norssalmen sillalla on jo nyt ikävä liikkua jalan tai pyörällä raskaan liikenteen lähituntumassa. Sillan kevyenliikenteen väylää olisi parannettava esim. betonikaiteella. Hankkeen vaikutukset Kotkan työpaikkoihin ja talouteen vaikuttavat vähäisiltä ja tilapäisiltä. Syntyvä haitta on niistä liian kova hinta.”

[The increase in heavy goods traffic is a significant nuisance to the residents living in Hirsvaara and Mussalo. Noise and dust will increase. It is already unpleasant to walk or cycle on the Norssalmi bridge near to heavy goods traffic. The pedestrian/cycle lane on the bridge should be improved, for example, by installing a concrete barrier. The impacts the project will have on employment and the economy in Kotka appears to be insignificant and temporary. The nuisance created is too high a price to pay for those impacts.]

”Hanke olisi tervetullut Kotkaan. Logistisesti sopiva paikka. Ainoa heikko kohta lienee VT15 Kyminlinna-Kotka-osuus, jonka liikenneturvallisuus jo nyt on kyseenalaisella tolalla.”

[The project would be welcome in Kotka. It is logistically a suitable location. The only weak link is probably the section between Kyminlinna and Kotka on Highway15, where the situation is already questionable as regards road safety.]

Project should boost local employment

”Toivottavasti vaikuttaa Kotkan kunnantalouteen sekä kotkalaiseen työllistämistilanteeseen eikä ulkolaisten tai muupaikkakuntalaisten.”

[Hopefully, the project will impact Kotka local economy and the employment situation of Kotka residents rather than that of outsiders or residents of other municipalities.]

”Jos autot ajaa siellä missä pitää ja hanke toteutetaan "kotkalaisten" voimin, tämä on loistava. Jos taas ulkomaiset firmat ja työntekijät tulevat tänne, niin ei mitään hyötyä. Rahat valuvat muualle!!”

[If vehicles drive where they are supposed to and the project goes ahead using local manpower, then this is great. If, on the other hand, foreign companies and personnel are brought over here, then it has no benefit. The money will flow elsewhere!!]

”Työvoiman palkkauksessa tulisi suosia paikallisia työttömiä hakijoita.”

[Recruitment should favour local, unemployed applicants.]

Suggestion for traffic arrangements

”Vuosina 2010–2012 rekat ajoivat joskus "surutta" Mussalontietä. Tämä aiheutti melu, pöly ja etenkin liikenteelle haittoja. Kaikki risteysalueet (punaisia päin!) ja kova liikennenopeus! Valvonta paremmaksi. (Reilut sakot)!”

[During 2010-2012, heavy goods vehicles occasionally drove ”without qualms” along Road Mussalontie. This caused noise, dust and, especially, detriment to traffic. All crossings (against the red light!) and high speeds! Better enforcement. (Appropriate fines)!]

”Ei työmaaliikennettä Mussalon tielle, liikkuu paljon koululaisia.”

[No construction-related traffic onto Road Mussalontie, there are lots of school children moving about there.]

”Maatiekuljetusten hoitamisessa valittava työntekijät erittäin tarkalla seulalla. Tiukat kontrollit ja ajo-ajat.”

[The drivers used for road transport must be selected very carefully. Strict controls and drive-times.]

”Autot pois Hyväntuulentieltä aamu- iltapäivä ja muina ns. ruuhka-aikoina. Pinnoitustöihin suomalaiset työntekijät, joten työsuhteita pitää kunnioittaa ja työskentelyolosuhteet paremmin kuin viimeksi. Pöly ym. työturvallisuus.”

[Vehicles off of Road Hyväntuulentie during mornings and afternoons and other rush-hour times. The coating plant will have Finnish employees, thus, respect employment conditions and improve working conditions from last time. Dust and other occupational safety issues.]

Working conditions at the coating plant

“Pinnoitustöihin suomalaiset työntekijät, joten työsuhteita pitää kunnioittaa ja työskentelyolosuhteet paremmin kuin viimeksi. Pöly ym. työturvallisuus.”

[The coating plant will have Finnish employees, thus, respect employment conditions and improve working conditions from last time. Dust and other occupational safety issues.]

”Toivottavasti pinnoituksen työsuhdeasiat hoidetaan paremmin kuin viimeksi, silloin oli erimielisyyttä palkoista ja lomista.”

[Hopefully, employment issues related to the coating plant will be managed better than last time, when there was differences in opinion related to salaries and leave days.

”Toivottavasti myös pinnoitustehtaan työhyvinvointiin kiinnitetään huomiota. Viime kerralla se ei ollut hyvä.”

[Hopefully, attention will also be paid to workplace well-being. Last time it was not good.]

”Pinnoitetehtaassa täytyy tällä kertaa ehdottomasti vaatia kaikkien Suomen työsuojelun vaatimusten täyttämistä niin ettei uudelleen esiintyisi pölyjen ja kaasujen aiheuttamia sairastapauksia, kun ei riittävästi oltu huolehdittu ilmanlaadusta ja pölyjen/kaasujen poistojärjestelmistä suljetussa hallissa. Ulkomaalainen EUPEC'in omistaja eikä edes kotimainen työnjohto välittänyt riittävästi työsuojelun täytäntöön panosta, mikä vaati työsuojeluviranomaisten kohtuuttoman suurta ponnistusta yrittää saada työolosuhteet edes kohtuullisiksi. Kuitenkaan täysin siinä onnistumatta. Myös tehtaan työntekijöiden työ/oikeusturvaa olisi valvottava nimenomaan vuokratyövoiman osalta.”

[This time, compliance with all Finnish occupational health and safety requirements must be insisted upon at the coating plant so that cases of illness related to exposure to dust and gas is not repeated because indoor air quality and dust/gas extraction systems were not sufficiently considered in an enclosed hall. Neither the foreign owner of EUPEC nor the domestic management team had the appropriate interest to enforce occupational health and safety issues which caused an unreasonable amount of work for the health and safety authorities to get working conditions even to a tolerable level. And even then only partially succeeding. Also, the labour protection of contract workers employed at the plant should be the focus of supervision.]

Concern over political implications of the project

”Onko Venäjä tarpeeksi luotettava toimija? (vrt. nykyinen maailmanpoliittinen tilanne länsimaiden ja Venäjän välillä).”

[Is Russia a reliable enough actor? (compare with the current geopolitical situation between the West and Russia).]

”Koko hanke tulisi hylätä, sillä liika riippuvuus Venäjästä energiantuottajana (hanat kiinni halutessaan - kiristys – esim. Ukraina) on vahingollista Euroopalle ja Suomelle. Nestekaasuterminaaleja lisää sekä Norjan kaasukenttien kaasun tuominen Euroopan parempi vaihtoehto.”

[The entire project should be discarded because being too reliant on Russia as an energy producer (shutting off the valves when it pleases- blackmail- e.g. Ukraine) is detrimental to Europe and Finland. There is a need for more natural gas terminals and bringing gas from Norwegian gas fields is a better option for Europe.]

”Tämä hanke vain auttaa Venäjän armeijaa nousemaan ja jaloilleen ja valtaamaan uusia alueita.”

[This project only helps the Russian army to rise and get back on its feet to occupy new areas.]

”Hanke on välttämätön Keski-Euroopan valtioiden energiahuollolle. Ja voihan hankkeella olla myönteisiä turvallisuuspoliittisia vaikutuksia aikaa myöten. Hankkeen haittavaikutukset ovat kuitenkin vain väliaikaisia. Hankkeella ei ole Kotkan kaupungin talouteen juurikaan vaikutusta.”

[The project is necessary for the energy needs of Central Europe. And perhaps the project will over time also have a positive impact on security policy. The negative impacts are at any rate only temporary. The project does not have much of an impact on the local economy of Kotka.]

4. SUMMARY OF THE RESULTS

The respondents were mainly satisfied with the current level of traffic safety, outdoor activities, scenery, air quality, general safety and calmness of their living environment. Yet, majority considered the current status of employment possibilities and municipal economy to be poor. Nuisance from the current operations at the Mussalo Harbour and Palaslahti industrial area is mainly caused by heavy traffic, which contributes to noise, dust and traffic congestion, which had been experienced by half of the respondents. Disturbance is experienced especially along Merituulentie road.

During the Nord Stream Pipeline project in 2010–2012 project related pipe coating and storage activities took place in Kotka. Eighty percent of the respondents were at least in some level familiar with the activities, while 7% had personal experience through working in the project related activities. Only 14% of the respondents remembered to have experienced changes in their living environment, which they thought to have been caused by the pipe coating and storage activities during 2010–2012. The most notable changes in the living environment arising from operations at the coating plant and the harbour had been positive impacts on the municipal economy and employment, and negative impacts caused by heavy traffic, noise and dust emissions.

While half of the respondents were familiar with the project and had followed news related to it, for 23% of the respondents, the questionnaire and accompanying information sheets were the first time they heard about the Nord Stream 2 project. The main sources of information about the project were newspaper, magazine, television and radio.

Respondents had positive expectations about possible job and business opportunities the Nord Stream 2 project-related activities would create in Kotka region. Only very few respondents felt that Kotka should not be used as a logistics hub for project-related operations. Although over half of the respondents had not yet formed an opinion on the project, based on the responses, it seemed that in general the views towards the project, especially concerning the planned activities in Kotka, were more positive than negative. The expectations regarding Nord Stream 2 project related activities in relation to new employment opportunities and boost in economy in Kotka came out clearly also in the additional comments provided by the respondents in the end of the survey questionnaire.

Planned rock and pipe transportation and storage activities in the Mussalo Harbour and Palaslahti industrial area raised expectations of positive impacts on local employment and municipal economy. Planned activities also raised concern over the negative impacts, especially increase in noise and dust emissions as well as traffic congestion and decrease in traffic safety caused by increased heavy traffic. Heavy traffic is at present causing nuisance, especially in the form of traffic congestion, and had caused negative impacts also during the project related activities in 2010–2012.

APPENDIX 1
COVER LETTER, PROJECT DESCRIPTION AND QUESTIONNAIRE FORM

Intended for
Nord Stream 2

Date
June 2016

Document number
W-PE-EIA-PFI-QST-805-030300EN-07

NORD STREAM PROJECT 2
SOCIAL IMPACT ASSESSMENT – KOTKA QUESTIONNAIRE

RAMBOLL

Revision	**07**
Date	**20/07/2016**

Document ID	**W-PE-EIA-PFI-QST-805-030300EN**
Ref	**1100019533 / PO No. 15112600**

COVER LETTER OF THE QUESTIONNAIRE FOR THE RESIDENTS IN THE KOTKA REGION

Dear Recipient,

Nord Stream 2 AG is planning to construct two underwater natural gas pipelines in the Baltic Sea. More detailed information on the planned project can be found in the project description.

As required by law, an environmental impact assessment of the project is underway and carried out by Ramboll Finland Oy. Part of the assessment includes the consideration of impacts on the comfort, health and safety of the human living environment. Information and opinions for assessing these impacts of the project are compiled by conducting, among others, resident questionnaires. Three separate questionnaire surveys will be carried out in Finland; one for the residents of the Kot- ka region, one for the residents of the coastal region and one for commercial fishermen. According to current plans, related onshore supplier operations and some ancillary operations are intended to be carried out in Kotka.

The resident questionnaire for the Kotka region has been delivered to 1500 randomly selected households as depicted in the map overleaf. Each response is important in order to obtain as reliable an overview as possible from the responses of the residents. Your thoughts and opinions are of the highest priority, responding does not require any specific background information.

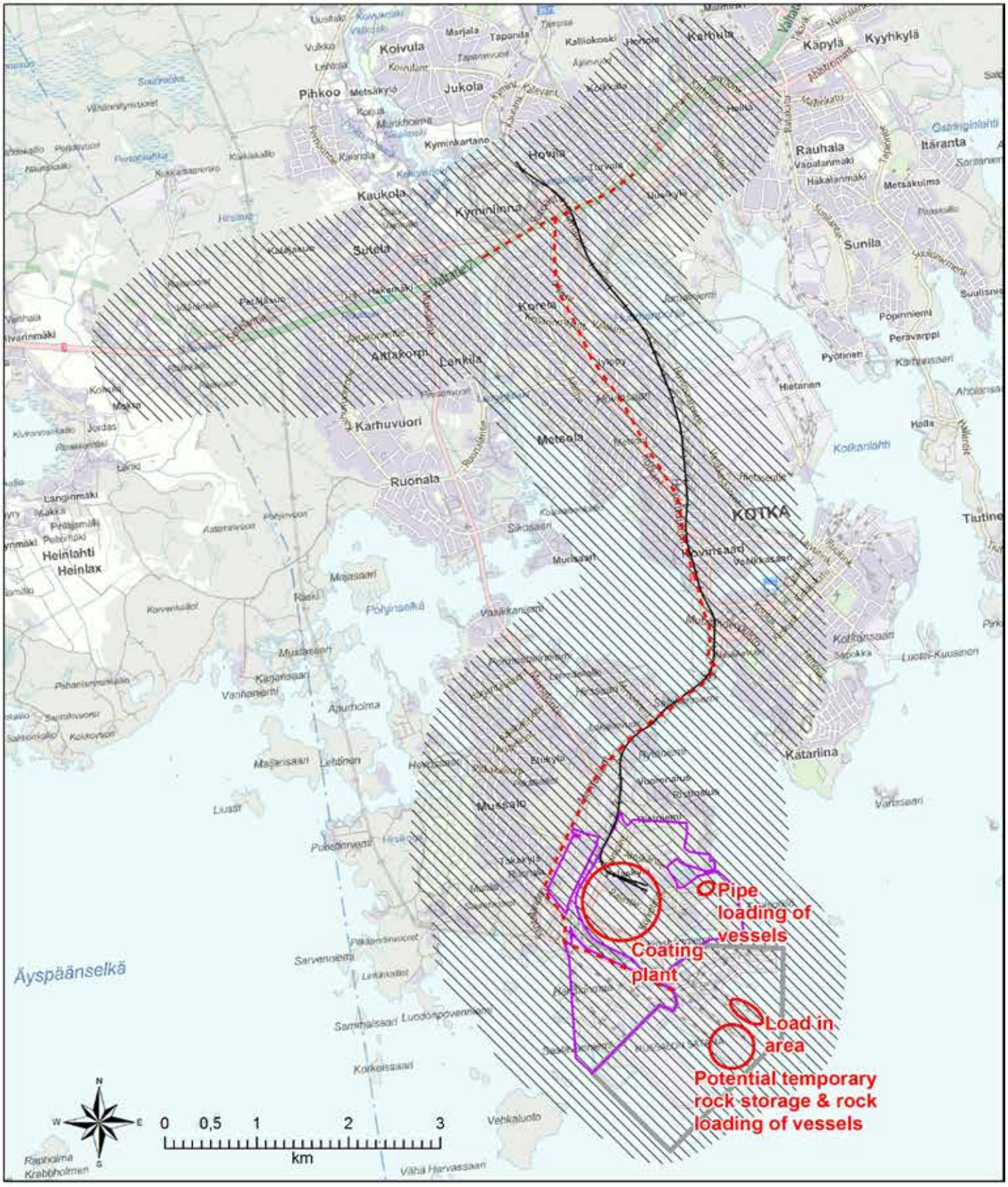
Would you please send your response by post no later than Friday 29 April 2016 using the attached return envelope (postage paid). Unfortunately, responses posted later than the deadline will not be included in the assessment.

All responses will be handled with confidentiality and anonymously and no individual respondents can be identified from the results. Address information is only used for the purposes of sending out this questionnaire. Return envelopes will be handled by JP-Postitus Oy, who will deliver the responses in an electronic format to Ramboll Finland Oy for statistical analysis. The response data will be used as baseline information for the impact assessment.

Thank you for your response!

More information on the EIA can be obtained from:
Sakari Salonen
Ramboll Finland Oy
firstname.lastname@ramboll.fi
tel. 020 755 611

More information on this questionnaire can be obtained from:
Hanna Herkkola
Ramboll Finland Oy
firstname.lastname@ramboll.fi
tel. 020 755 611



Potential rock transport route

Rautatie

Potential location of harbour activity

Harbour area

Zone for industrial and warehouse buildings

Questionnaire area

BACKGROUND INFORMATION ON THE NORD STREAM 2 PROJECT

Nord Stream 2 will consist of two natural gas pipelines running parallel on the seabed across the Baltic Sea. The Nord Stream 2 natural gas pipelines will have an annual capacity to transport 55 billion cubic metres (BCM) of Russian natural gas to the EU for at least 50 years.

The approximately 1200 km long pipelines are planned to be routed from the south coast of the Gulf of Finland in Russia through Finnish, Swedish and Danish waters to the Bay of Greifswald in Germany. The lenght of the Finnish route section will be approximately 370 km and it will run within the Finnish Exclusive Economic Zone (EEZ) in international waters. In order to implement the project, Nord Stream 2 requires an authorisation from all the countries, whose economic zones or territorial waters the pipelines will traverse.

Nord Stream 2 AG is the company that has been established for the purposes of designing, constructing and operating the pipelines. Signed partners include PJSC Gazprom from Russia, E.ON SE and BASF SE/Wintershall Holding GmbH from Germany, Royal Dutch Shell plc from the UK/The Netherlands, OMV AG from Austria and Engie S.A. from France. Nord Stream 2 is based in Zug, Switzerland. The estimated budget for the project stands at approximately EUR 8 billion and it is entirely privately funded.

Coupled with the fact that gas demand in the EU is increasing while production is decreasing and that Norway's gas reserves are expected to dwindle significantly in the coming years, the EU will need to rely on approximately 140 BCM of additional imported gas by 2035[1)]. Transport of natural gas across the Baltic Sea is an environmentally sustainable and economical alternative to meet the increasing demand of natural gas within the EU. Nord Stream 2 is a direct link between the largest gas fields in the world and the gas markets of the EU. The project also constitutes a complementary, reliable and competitive addition to existing gas transport routes.

The Nord Stream 2 project builds on the successfully implemented, initial Nord Stream pipeline project which was constructed between 2010 – 2012. During the implementation of the earlier project, the logistics contractor for Nord Stream stored pipes at a temporary storage facility located in Hanko harbour and stored and applied concrete coating to pipes at a facility located in Mussalo harbour in Kotka. The Nord Stream pipelines were commissioned in 2011 and 2012.

The results of the environmental and social monitoring of the impacts of the Nord Stream pipelines have demonstrated that the construction of the Nord Stream pipeline had no significant environmental impact on the Baltic Sea. The monitoring results over the past six years have confirmed that the impact of the construction work has been minor, local and short-term. The construction and operation of the Nord Stream 2 pipelines are intended to follow the same technical, ethical, environmental, and health and safety standards as applied to initial Nord Stream project.

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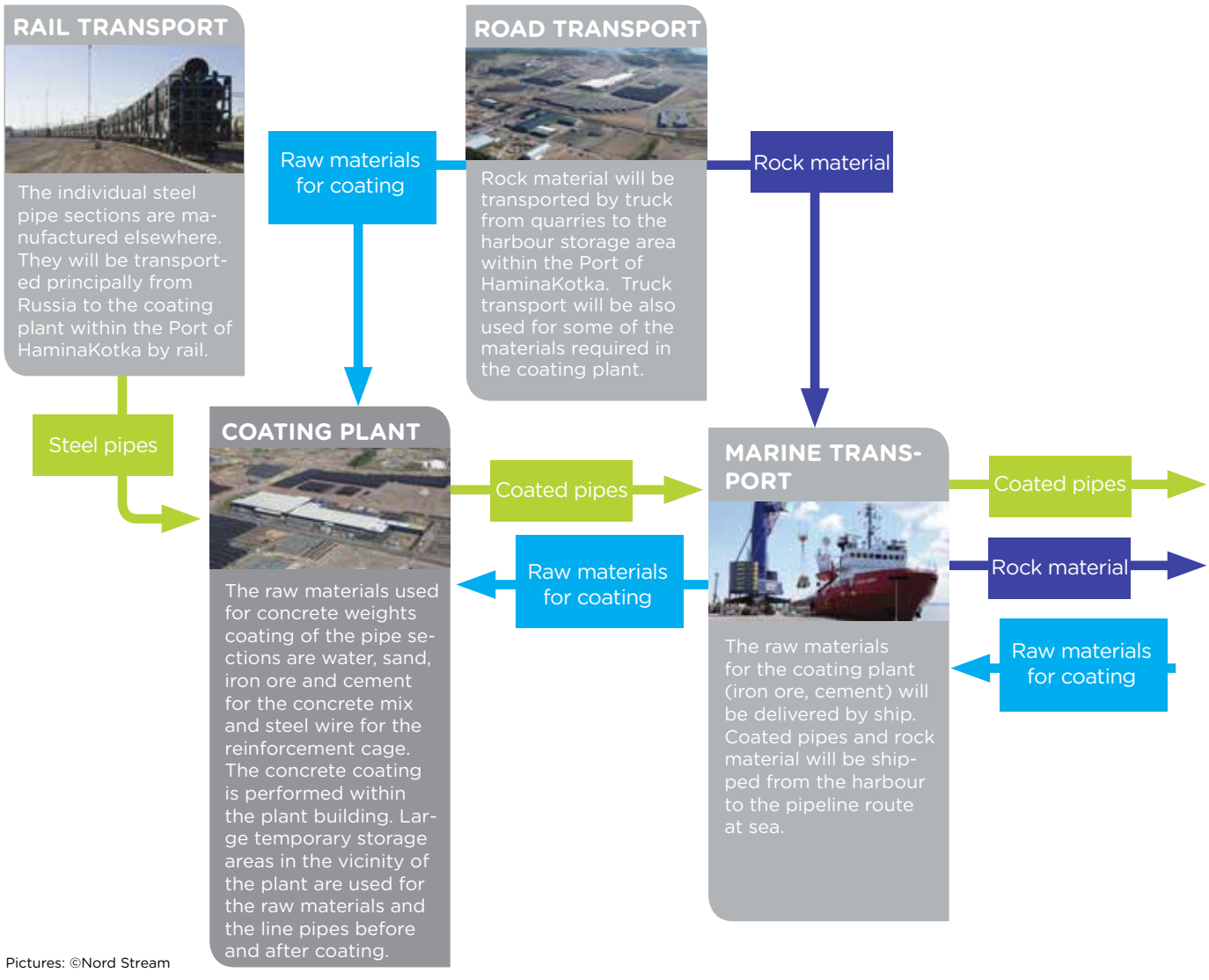
1) IHS CERA Long-Term Supply and Demand Outlooks to 2040, july 2015.

PLANS FOR RELATED OPERATIONS TO BE CARRIED OUT IN THE KOTKA REGION

According to current plans, there is an option to have supplier onshore operations and ancillary operations related to the Nord Stream 2 project to be carried out in Kotka. Operations would include a pipe coating plant as well as the transport and temporary storage of rock material prior to it being transferred to the pipeline route. The planned operations in Kotka would be identical to those that were carried out in 2010-2012 for the initial Nord Stream project, during which a total of 76 000 pipes were coated. In addition, a total of 2.8 million tonnes of rock material was temporarily stored at Mussalo harbour prior to being transported out to sea. In the event that Kotka is selected as the centre for logistics and coating, the operations would under current scheduling commence in Kotka during the second half of 2016 and continue through to 2019.

The route for heavy vehicles used to transport rock and other material is planned to be directed from Highway 7 to Highway 15 (Road Hyväntuulentie) and onwards along Regional Road 355 (Road Merituulentie) to the industrial area and harbour area located on the island of Mussalo.



Pictures: ©Nord Stream

The coating plant and ancillary operations

According to current plans, the concrete weights coating of the pipe sections would take place at a coating plant located in the industrial area of Palaslahti in Mussalo, Kotka. Steel pipe sections manufactured elsewhere would most likely be transported to the site by rail.

At the plant, the pipe sections would be coated with concrete. Raw materials used at the plant include water, sand, cement, iron ore (for the cement mixture) and steel wiring (for reinforcement). Raw materials would be transported to the plant by ship or by truck. Coating would take place inside the plant building. Temporary storage areas for raw materials and pipes would need to be established in the immediate vicinity of the plant.

Coated pipes would be transported by ships from the harbour area to the pipe lay vessel at sea or to other potential temporary pipe storage areas.

Storage and transport of rock material

Rock material would be transported from quarries by truck to the temporary storage area in Mussalo harbour located at the Port of HaminaKotka. From there, the rock material would be shipped to the pipeline route at sea. The estimated quantity of rock material transported through the Port of HaminaKotka is 0,4 – 1,8 million cubic metres which would equal to approximately 90 – 100 truck loads per day.

The impacts of the operations

The most significant impacts of the planned onshore operations in Kotka would include increased truck traffic volumes as well as a visual impact of the pipe storage area located at the industrial site of Palaslahti in Mussalo.

NORD STREAM 2
ENVIRONMENTAL IMPACT ASSESSMENT
THE QUESTIONNAIRE FOR THE KOTKA REGION

BACKGROUND INFORMATION

1 **Gender**

☐ Female ☐ Male

2 **Age group**

☐ 18 - 30 years ☐ 31 - 50 years ☐ 51 - 65 years ☐ Over 65 years

3 **Occupation**

☐ Manager ☐ White collar worker ☐ Blue collar worker ☐ Entrepreneur

☐ Student ☐ Pensioner ☐ Homemaker ☐ Unemployed

☐ Other or I do not wish to answer

4 **Is your permanent and/or holiday residence located in the study area (see the map attached to the cover letter)?**

☐ My permanent residence is located in the area.

☐ My holiday residence is located in the area.

☐ I have both a permanent and a holiday residence in the area.

☐ Neither my permanent nor my holiday residence is located in the area.

5 **For how long have you lived in the study area?**

☐ Under 5 years

☐ 5 - 9 years

☐ 10 - 29 years

☐ 30 - 50 years

☐ Over 50 years

BASELINE

6 **How would you rate current traffic safety in your living environment? Please choose the option that best suits your opinion.**

	Very good 2	Quite good 1	Not good or bad 0	Quite poor -1	Very poor -2
Traffic safety using a car	☐	☐	☐	☐	☐
Traffic safety as a pedestrian	☐	☐	☐	☐	☐
Traffic safety as a cyclist	☐	☐	☐	☐	☐

7 **How would you rate the following factors in your living environment? Please choose the option that best suits your opinion.**

	Very good 2	Quite good 1	Not good or bad 0	Quite poor -1	Very poor -2
Possibilities for outdoor activities	☐	☐	☐	☐	☐
General safety and calm living environment	☐	☐	☐	☐	☐
Air quality	☐	☐	☐	☐	☐
Scenery	☐	☐	☐	☐	☐
Employment opportunities	☐	☐	☐	☐	☐
Municipal economy	☐	☐	☐	☐	☐

8 **Are you currently experiencing any form of disturbance in your living environment which you consider is caused by the operations at Mussalo harbour or at Palaslahti industrial area located next to the harbour?**

Operations at Mussalo harbour include operations of the Port of HaminaKotka, activities of cargo-handling operators and several companies located at the liquid bulk terminal, dry bulk terminal and container terminal.

Operations at Palaslahti industrial area include e.g. wastewater treatment plant, metal recycling plant and several logistics operations.

Disturbance caused by current operations at Mussalo harbour	No disturbance 0	Slight disturbance 1	Moderate disturbance 2	Significant disturbance 3	You can provide examples of sources of disturbance (e.g. location or operation)
Noise from harbour operations	☐	☐	☐	☐	
Noise from traffic to/from the harbour	☐	☐	☐	☐	
Dust from harbour operations	☐	☐	☐	☐	
Dust from traffic to/from the harbour	☐	☐	☐	☐	
Odour from harbour operations	☐	☐	☐	☐	
Congestion due to heavy traffic	☐	☐	☐	☐	
Visual disturbance / unpleasant scenery	☐	☐	☐	☐	

Disturbance from current operations at Palaslahti industrial area	No disturbance 0	Slight disturbance 1	Moderate disturbance 2	Significant disturbance 3	You can provide examples of sources of disturbance (e.g. location or operation)
Noise from operations at the industrial area	☐	☐	☐	☐	
Noise from traffic to/from the industrial area	☐	☐	☐	☐	
Dust from operations at the industrial area	☐	☐	☐	☐	
Dust from traffic to/from the industrial area	☐	☐	☐	☐	
Odour from operations at the industrial area	☐	☐	☐	☐	
Congestion due to heavy traffic	☐	☐	☐	☐	
Visual disturbance / unpleasant scenery	☐	☐	☐	☐	

9 **In 2010 – 2012, EUPEC Pipecoatings Finland Oy coated and stored pipes for the Nord Stream project in Palaslahti industrial area. What is your level of knowledge about those activities at the industrial area and at the harbour?**

- ☐ None. I am not familiar with those activities at all.
- ☐ Some knowledge. I am not particularly familiar with those activities, but I gained information via the media, friends or acquaintances etc.
- ☐ Good knowledge. I have searched for information about those activities.
- ☐ Personal experience. I have worked for the project / pipeline coating yard or related operations.

10 **Mussalo coating plant was operated by EUPEC Pipecoatings Finland Oy during 2010 – 2012.**

a) Do you remember noting any changes in your living environment during that time which you think were most likely caused by these operations?

- ☐ I did not live in the area at the time so I cannot assess the changes to the living environment.
- ☐ I lived in the area, but I do not remember noting any changes or impacts.
- ☐ Yes, I lived in the area and remember experiencing changes and/or impacts caused by these operations.

b) If you experienced impacts in your living environment that you consider were caused by the operation of the coating plant and related operations (2010 – 2012), please describe the magnitude of the change compared to the situation when the plant was not operating?

Observed changes due to operations at the coating plant and harbour in 2010 – 2012	No increase 0	Small increase 1	Moderate increase 2	Signi-ficant increase 3	You can provide further detail of the change (e.g. the location or specific operation) here
Job opportunities	☐	☐	☐	☐	
Volumes of heavy traffic to/from the pipe coating plant	☐	☐	☐	☐	
Noise levels	☐	☐	☐	☐	
Dust emissions	☐	☐	☐	☐	
Traffic congestion	☐	☐	☐	☐	
Number of traffic accidents or near-misses	☐	☐	☐	☐	
Positive impact on local economy	☐	☐	☐	☐	
Some other impacts, please describe here	☐	☐	☐	☐	

FAMILIARITY WITH THE PLANNED NORD STREAM 2 PROJECT

Nord Stream 2 AG has started planning two new pipelines. More information about the Nord Stream 2 project can be found in the cover letter, the project description and the Nord Stream 2 website *http://www.nord-stream2.com*.

11 **Are you familiar with the Nord Stream 2 project?**

- ☐ No. This is the first time I have heard about the project. *Please go to question 14*
- ☐ I have heard the name "Nord Stream 2", but I am not familiar with this current project.
- ☐ I have heard about the project and have followed the news related to it in the media.
- ☐ The project is very familiar to me and I have actively sought information about it.

12 **If you are familiar with the Nord Stream 2 project or have followed news related to it, where have you gained information about the project?**

- ☐ Newspapers or magazines
- ☐ Television or radio
- ☐ Nord Stream 2 website or other Nord Stream 2 brochures or publications
- ☐ Internet, which sites _____
- ☐ NGOs (e.g. environmental organisations)
- ☐ Neighbours and other acquaintances
- ☐ Social media, which one _____
- ☐ Other (please specify) _____

13 **How would you rate the information you have gained concerning the Nord Stream 2 project?** Please read the statements and indicate the level to which you agree with the statement by ticking the relevant box.

	I fully agree 2	I agree 1	I disagree -1	I disagree completely -2	I cannot say
The information has been sufficient for my needs	☐	☐	☐	☐	☐
The information has been easy to understand	☐	☐	☐	☐	☐

14 **What is your opinion on the following statements concerning the activities related to the Nord Stream 2 project in Kotka?**

You can find more information about the project and project-related topics in the cover letter accompanying this questionnaire. Please read each statement and indicate the level to which you agree with the statement by ticking the relevant box.

	I completely agree 2	I mostly agree 1	I mostly disagree -1	I comple-tely disagree -2	I cannot say
I have no opinion on the project as yet.	☐	☐	☐	☐	☐
Nord Stream 2 project related activities would create new business opportunities in Kotka.	☐	☐	☐	☐	☐
Nord Stream 2 project related activities would create job opportunities in Kotka.	☐	☐	☐	☐	☐
Kotka would not benefit from the Nord Stream 2 project-related operations.	☐	☐	☐	☐	☐
Kotka should not be used as a logistics hub for the Nord Stream 2 project-related operations.	☐	☐	☐	☐	☐
My overall opinion of the Nord Stream 2 project is positive.	☐	☐	☐	☐	☐

IMPACTS OF THE OPERATIONS PLANNED TO BE CARRIED OUT IN KOTKA

If the project-related supplier onshore operations (pipeline coating, rock placement) would take place in Kotka, what do you think about their possible impacts to Kotka? For more information about the onshore operations, including the coating plant and related operations, please see the project description.

15 **What is your opinion on the possible <u>impacts of rock transport flows</u> to the harbour area?** Rock material for pipeline construction is intended to be transported to temporary storage in Mussalo harbour by road transport via Highway 7 – Highway 15 (Hyväntuulentie) – Regional Road 355 (Merituulentie) until further transported by vessels to the required locations on the seabed under the pipeline. The estimated traffic volume for rock transport is 90-100 trucks per day for about 14 months.

	Very positive 2	Slightly positive 1	Neutral / no impact 0	Slightly negative -1	Very negative -2	I cannot say
Impact on traffic fluency	☐	☐	☐	☐	☐	☐
Impact on traffic safety	☐	☐	☐	☐	☐	☐
Impact on scenery	☐	☐	☐	☐	☐	☐
Impact on air quality	☐	☐	☐	☐	☐	☐
Noise impacts	☐	☐	☐	☐	☐	☐
Impact on employment	☐	☐	☐	☐	☐	☐
Impact on municipal economy	☐	☐	☐	☐	☐	☐
Other impact, please describe here	☐	☐	☐	☐	☐	☐

_____

_____

16 **What is your opinion on the possible <u>impacts of pipe transportations from Mussalo harbour to the sea</u>?** Pipes are transported from the harbour to the sea by ship. The number of pipe-carrier vessels is approximately 2 vessels per day during construction.

	Very positive 2	Slightly positive 1	Neutral / no impact 0	Slightly negative -1	Very negative -2	I cannot say
Impact on ship traffic fluency	☐	☐	☐	☐	☐	☐
Impact on ship traffic safety	☐	☐	☐	☐	☐	☐
Impact on scenery	☐	☐	☐	☐	☐	☐
Impact on air quality	☐	☐	☐	☐	☐	☐
Noise impacts	☐	☐	☐	☐	☐	☐
Impact on employment	☐	☐	☐	☐	☐	☐
Impact on municipal economy	☐	☐	☐	☐	☐	☐
Other impact, please describe here	☐	☐	☐	☐	☐	☐

_____

_____

17 **What is your opinion on the possible <u>impacts of rock storage</u> in the harbour area (please see the project description)?** Storage of rock material is intended to commence 3 months prior to the planned pipeline construction phase and continue for 14 months. The volume of the rock stockpile is approximately 250 000 tonnes.

	Very positive 2	Slightly positive 1	Neutral / no impact 0	Slightly negative -1	Very negative -2	I cannot say
Impact on scenery	☐	☐	☐	☐	☐	☐
Impact on air quality	☐	☐	☐	☐	☐	☐
Noise impacts	☐	☐	☐	☐	☐	☐
Impact on employment	☐	☐	☐	☐	☐	☐
Impact on municipal economy	☐	☐	☐	☐	☐	☐
Other impact, please describe here	☐	☐	☐	☐	☐	☐

_____

_____

18 **What is your opinion on the possible impacts of pipe storage operations in the Palaslahti industrial area (please see the project description?** Pipes are intended to be stored for approximately 28 months between 2016 – 2018. The maximum height of the pipeline stockpile is expected to be 6 m.

	Very positive 2	Slightly positive 1	Neutral / no impact 0	Slightly negative -1	Very negative -2	I cannot say
Impact on scenery	☐	☐	☐	☐	☐	☐
Impact on air quality	☐	☐	☐	☐	☐	☐
Noise impacts	☐	☐	☐	☐	☐	☐
Impact on employment	☐	☐	☐	☐	☐	☐
Impact on municipal economy	☐	☐	☐	☐	☐	☐
Other impact, please describe here	☐	☐	☐	☐	☐	☐

19 **Please provide below any additional comments regarding the Nord Stream 2 project in general or specific comments regarding the project-related onshore operations (pipeline coating, storage, rock placement) in Kotka.**

THANK YOU FOR YOUR RESPONSE!