

CDP 2009 Information Request

Respondent: Dampskibsselskabet NORDEN A/S

Risk and Opportunities

1. Regulatory Risks: (CDP6 1(a)(i))

1.1 Is your company exposed to regulatory risks related to climate change?

We consider our company to be exposed to regulatory risks.

This is the second year D/S NORDEN is answering the CDP Questionnaire and as previous year, the shipping industry is not subject to regulation in the area of greenhouse gas (GHG) emissions. However, considering the industry's contributions to climate change as a whole and the related ongoing debate amongst various stakeholders, including politicians, regulation is expected to follow.

Climate management and CO2 emissions are global challenges requiring a global solution. The Kyoto Protocol places regulation of the shipping industry in the hands of the UN's international shipping organisation, International Maritime Organization (IMO). IMO is working on determining a measure of how energy-efficiently a vessel transports its cargo. This work is to form the basis for the regulation of the shipping industry's CO2 emissions.

Whether regulation on GHG emissions will have an impact on D/S NORDEN depends on the scope of the regulation.

D/S NORDEN supports a global solution and a global regulation scheme. D/S NORDEN is of the opinion that only a global regulation scheme can reduce the risk of regional regulation schemes being used.

D/S NORDEN supports IMO's work through the Danish Shipowners' Association and considers it important to find international solutions to this global problem, as such solutions result in the best environmental improvements and ensure equal competition for all shipping companies around the world. D/S NORDEN believes that a coherent and comprehensive future IMO framework should be:

- a) effective in contributing to the reduction of total GHG emissions
- b) binding and equally applicable to all Flag States in order to avoid evasion
- c) cost effective
- d) able to limit or effectively minimize competitive distortion
- e) environmentally sustainable without penalizing global trade and growth
- f) target based and not prescribing specific methods
- g) promoting and facilitating technical innovation and R&D in the shipping industry
- h) accomodating to frontrunners in the field of energy efficient technologies
- i) practical, transparent, fraud free and easy to administer

These principles have been laid down by IMO's Marine Environment Protection Committee.

D/S NORDEN is a member of International Association of Independent Tanker Owners (INTERTANKO). D/S NORDEN has mentioned its 14-point plan (please see question 23.6) to INTERTANKO and INTERTANKO has recommended a number of the points as best industry practice.

D/S NORDEN welcomes industry-specific regulation given that it is transparent, global and fair in its scope and thus does not affect the competitive market mechanisms. Under these circumstances, regulation will favour those shipping companies which are most carbon-efficient, e.g. in terms of fuel efficiency. D/S NORDEN would consider such regulation an opportunity rather than a risk.

In December this year the COP15 will be held in Copenhagen. D/S NORDEN hopes that the outcome of COP15 will entail a fair and global regulation.

Further information

2. Physical Risks: (CDP6 1(a)(ii))

2.1 Is your company exposed to physical risks from climate change?

We consider our company to be exposed to physical risks.

To the shipping industry, physical conditions related to changing and rough weather (such as cyclones and a high sea, region with ice etc.) are inherent challenges. These challenges are continuously dealt with through daily operations.

Whereas physical challenges related to climate change are already known to the industry, the increase in abnormal and severe weather conditions, as forecasted by the Intergovernmental Panel on Climate Change (IPCC), are likely to alter the intensity and significance of those challenges (e.g. as a result of an increase in the frequency of severe storms and freak waves (> 25 meters)).

Physical challenges related to extreme weather conditions are integrated into D/S NORDEN's daily operations of owned and chartered vessels - e.g. by using the best available technology for constant monitoring of the position of vessels (using GPS), monitoring of weather conditions, weather routing, route planning, the type of vessel in operation (i.e. special requirements regarding construction) and well-trained, educated and qualified staff. Hence, different types of physical challenges posed by climate change are already factored in. An increase in intensity and significance of those risks can immediately be responded to by escalating the activities already in place. Thus, D/S NORDEN considers the physical challenges to be manageable in a foreseeable future.

It is clear that the newest technology and training of staff are mandatory to be able to ensure proper management of extreme weather events both in the shorter and longer run.

Further information

3. Other Risks: (CDP6 1(a)(iii))

3.1 Is your company exposed to other risks as a result of climate change?

We consider our company to be exposed to other risks.

Due to the increasing debate about the industry's contributions to climate change, climate change is generally considered a reputation issue in the shipping industry. Shipping accounts for almost 90% of all transport measured in tons cargoes (source: Maritime International Secretariat Services Ltd). There are no precise figures on how much CO2 is presently emitted by shipping, but it is estimated to be around 2.7% of global CO2 emissions (source: IMO, 2007).

Despite the fact that shipping is the most environmentally sound means of transport with far lower CO2 emissions, and thus less environmental impact per transported ton of cargo than for example train, lorry or air transport, it is essential that the industry continuously takes measures to reduce emissions and participate in the debate. D/S NORDEN takes part in the debate through its involvement in the Danish Shipowners' Association and INTERTANKO, and directly through its Annual Reports and news magazine, "NORDEN news" which is published four times a year.

Climate change can also cause market related impacts as the demand for and supply of transportation of different types of goods to and from different geographical regions of the world may change.

To D/S NORDEN, these challenges imply a constant and high awareness of the developments in the debate and an increasing effort to communicate actively. It is important that stakeholders know that D/S NORDEN works to address the issue of climate change through for example different efficiency measures. D/S NORDEN's second response to the CDP Questionnaire is an example of the company's awareness and of its wish to communicate its efforts.

With regard to changes in the demand for as well as supply of goods transported by D/S NORDEN, the company's business model is "adapted" to such changes. D/S NORDEN has owned and chartered vessels (D/S NORDEN has more chartered vessels than owned). This implies that D/S NORDEN, to a great extent, is equipped to meet changes and demands in the market place. Hence, the impact is currently manageable and not considered to be significant in a foreseeable future.

Further information

4. Regulatory Opportunities: (CDP6 1(b)(i))

4.1 Do regulatory requirements on climate change present opportunities for your company?

Regulatory requirements present opportunities for my company.

As described in question 1.1, the shipping industry is likely to be included in GHG regulation in the near future. IMO is currently working to develop and lay down the groundwork for this regulation.

On the basis of IMO's work, which supports transparent and global GHG regulations, D/S NORDEN welcomes the regulation. D/S NORDEN considers regulation which follows the nine principles (please see question 1.1) set out by IMO's Marine Environment Protection Committee in 2008 an opportunity as such regulation would be global and thus binding and equally applicable to all Flag States as well as favour those shipping companies which are most carbon-efficient, e.g. in terms of fuel efficiency. D/S NORDEN hopes that COP15 will lead to regulation based on IMO's nine principles.

In addition to global regulation targeted at the shipping industry, D/S NORDEN would be pleased to see more holistic legislation after 2012 where the transport sector, as a whole, will be included in the post-Kyoto regulations. This would be advantageous for the shipping industry which has far lower CO2 emissions (and thus less environmental impact per transported ton of cargo) than for example train, lorry or air transport.

Further information

5. Physical Opportunities: (CDP6 1(b)(ii))

5.1 Do physical changes resulting from climate change present opportunities for your company?

Physical changes do not present opportunities for my company.

Currently, no significant opportunities exist for D/S NORDEN related to the physical challenges resulting from climate change.

Further information

6. Other Opportunities: (CDP6 1(b)(iii))

6.1 Does climate change present other opportunities for your company?

Climate change presents other opportunities for my company.

At industry level, it is essential that measures are taken to further reduce emissions (thereby ensuring that the industry keeps its current position as best in class). I.e. the shipping industry accounts for almost 90% of all transport and is the most environmentally sound means of cargo transport.

To D/S NORDEN, an advantage exists in the market place due to high efficiency of the vessels owned by the company. The average age of D/S NORDEN's vessels is generally low, and the newest technologies are installed onboard. Currently the newest technologies used are focusing on optimising the usage of burning fossil fuels in the diesel engines of the vessels. This has been the objective for many years now - and since diesel engines are foreseen to stay as the main propulsive power in shipping - this is expected to continue. However, D/S NORDEN has an opportunity to gain a competitive edge by actively increasing its profile as a responsible shipping company which continuously works to lower CO2 emissions. A factor of influence for future customers that is likely to increase in significance.

Furthermore, D/S NORDEN would look forward to doing business with customers who are interested in informing consumers etc. of transportation specific emissions

(when appropriate).

Further information

Greenhouse Gas (GHG) Emissions Accounting, Emissions Intensity, Energy and Trading

7. Reporting Year (CDP6 Q2(a)(ii))

Information about how to respond to this section may be found in "The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)" developed by the World Resources Institute and the World Business Council for Sustainable Development ("the GHG Protocol"), see <http://www.ghgprotocol.org/>. ISO 14064-1 is compatible with the GHG Protocol as are a number of regional/national programme protocols. For more information see <http://www.ghgprotocol.org/> and use the guidance button above.

Please provide CDP with responses to questions 7, 8, 9, 10.1, 10.2, 11.1 and 11.2 for the three years prior to the current reporting year if you have not done so before or if this is the first time you have answered a CDP information request. Please work backwards from the current reporting year, so that you enter data for your oldest reporting period last.

Questions 10.1, 10.2, 11.1, and 11.2 are on subsequent webpages and the dates that you give in answer to question 7 will be carried forwards to automatically populate those webpages.

7.1. Please state the start date and end date of the year for which you are reporting GHG emissions.

Start date: 01 January 2008
End date: 31 December 2008
Financial accounting year: 01 January 2008

8. Reporting Boundary: (CDP6 Q2(a)(i))

8.1. Please indicate the category that describes the company, entities, or group for which Scope 1 and Scope 2 GHG emissions are reported.

[Companies over which financial control is exercised – per consolidated audited Financial Statements.](#)

8.2. Please state whether any parts of your business or sources of GHG emissions are excluded from your reporting boundary.

[D/S NORDEN's reporting boundaries:](#)

[D/S NORDEN's reporting comprises GHG emissions from the company's shipping operations at sea, the land-based administration activities and business travel activities.](#)

[Shipping itself is the company's primary and significant source of GHG emissions in the form of CO2 emissions. The GHG emissions from land-based activities and business travel activities are highly insignificant compared to the GHG emissions from the shipping operations at sea. However, by including these emissions D/S NORDEN involve its employees in the CO2 debate which motivate the long-term effort needed of the employees.](#)

[At the end of 2008, D/S NORDEN owned 18 vessels \(all under the company's full control\). "Full control" in this connection means that D/S NORDEN owns the vessels, has the decision-making rights and has the opportunity to invest in the best available technology. As a result of D/S NORDEN's flexible business model, the company also operated some 170 vessels held on charter for shorter or longer periods of time. The company controls these vessels only commercially. GHG emissions from D/S NORDEN's fleet are thus influenced by the combination of vessels the company chooses to include in its portfolio.](#)

[D/S NORDEN's emissions are divided into the GHG protocol's Scope 1, Scope 2 and Scope 3.](#)

[Scope 1: Includes emissions from the 18 vessels owned by D/S NORDEN in 2008. Here, the company has full financial and operational control within the boundaries of the international shipping rules, regulations and planning which all shipping companies are subject to. Some of the owned vessels have, during 2008, been chartered to other companies. As D/S NORDEN is the owner and thus responsible for securing best available technology \(for the purpose of reducing GHG emissions from vessels\), all owned vessels are categorised as Scope 1.](#)

[Scope 2: Includes emissions from land-based activities at D/S NORDEN's headquarter in Denmark only. The overseas offices are not included in Scope 2 emissions. D/S NORDEN has offices in Singapore, Mumbai, Shanghai, Annapolis and Rio de Janeiro. At the end of 2008, 50 employees was located at the company's overseas offices and 150 employees was located at the company's headquarter in Denmark. In Scope 2 is included emissions from electricity and heating.](#)

[Scope 3: Includes emissions from the about 170 vessels which D/S NORDEN chartered for shorter or longer periods of time during 2008. Having the commercial control, D/S NORDEN provides bunker fuel for these vessels. When D/S NORDEN charters a vessel, the owner of the chartered vessel signs that he lives up to IMO's conventions. Some of the chartered vessels have, during 2008, been re-chartered to other companies. As D/S NORDEN is not responsible for securing best available technology \(for the purpose of reducing GHG emissions from the chartered vessels\), all chartered vessels are categorised as Scope 3. Emissions are calculated on the basis of bunker fuel purchased in 2008. Furthermore, Scope 3 includes emissions from the employees business travel activity by flight conducted during 2008. In Scope 3 emissions from D/S NORDEN's supply chain is not included.](#)

9. Methodology: (CDP6 Q2(a)(iii))

9.1. Please describe the process used by your company to calculate Scope 1 and Scope 2 GHG emissions including the name of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 GHG emissions.

Please provide your answer in the text box. In addition to this description, if relevant, select a methodology from the list of published methodologies. This will aid automated analysis of the data.

[D/S NORDEN's GHG emissions accounting under Scope 1:](#)

[The methodology used by D/S NORDEN to calculate its GHG emissions under Scope 1 is the same as last year. It is based on data registered in the log system in](#)

compliance with Danish Flag State regulation for shipping companies. These log systems show the bunker fuel consumed by owned vessels in operation in 2008.

The total registered consumption of bunker fuel for 2008 for all owned vessels is multiplied by the CO2 emissions factor 3.312502 provided by Lloyd's Register of Shipping, London, "Marine Exhaust Emissions Research Programme", 1995. The result of this calculation is the reported annual CO2 emissions for vessels owned by D/S NORDEN.

D/S NORDEN's GHG emissions accounting under Scope 2:

The methodology used by D/S NORDEN to calculate its GHG emissions under Scope 2 is based on the amount of used electricity and heating in 2008. It is the first year D/S NORDEN reports Scope 2 emissions. Since D/S NORDEN moved to its current headquarter during 2008 there are no full year numbers for the amount of used electricity and heating. Therefore electricity is estimated by taking an average of the last six months consumed electricity to get a monthly estimate and heating is estimated by taking an average of the past eight months consumption to get a monthly estimate. The monthly numbers for the two are timed with twelve to get an estimate for the full year for electricity and heating respectively. Electricity is already measured in kWh and therefore the total estimated electricity used in 2008 is multiplied by the CO2 emissions factor 283.582 provided by The Greenhouse Gas Protocol Initiative, "Indirect CO2 emissions from Purchased Electricity, Heat, or Steam", "EFs Electricity Intl All Fuels, Denmark, 2005" to obtain the amount of CO2 emissions from electricity. Heat is measured in GJ and therefore the amount of used heating in GJ is converted to kWh by using an online energy converter. To obtain the amount of CO2 emissions from heating the above mentioned emissions factor 283.582 is used.

Scope 2 emissions are only calculated for the company's headquarter and not the overseas offices since these emissions are an even more insignificant part of D/S NORDEN's total CO2 emissions. 3/4 of the employees at D/S NORDEN are seated at the company's headquarter which represents about 150 employees.

Select methodologies:

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
For Scope 1 CO2 emissions Lloyd's Register of Shipping has been used.

Please also provide:

9.2 Details of any assumptions made.

Regarding Scope 2 it is assumed that the consumption of electricity and heating over the last six and eight months respectively are the same as the first six and four months. These assumptions imply that electricity and heating are extrapolated based on consumption from the last six and eight months. Since an extrapolation is used to estimate the CO2 emissions from electricity and heating there is uncertainty regarding the findings.

9.3 The names of and links to any calculation tools used.

For Scope 2 emissions an online energy converter has been used to convert from giga joule (GJ) to mega watthour (MWh). The link for the converter is the following:
<http://www.onlineconversion.com/energy.htm>

For Scope 2 emissions The Greenhouse Gas Protocol Initiative, "Indirect CO2 emissions from Purchased Electricity, Heat, or Steam" has been used to calculate the amount of CO2 emissions resulting from electricity and heating which was measured in kWh. The link for the spread sheet is the following:
<http://www.ghgprotocol.org/calculation-tools/all-tools>

Select calculation tools:

GHG Protocol - Indirect CO2 emissions from Purchased Electricity, Heat, or Steam 2.0 March 2008

9.4 The global warming potentials you have applied and their origin.

This question is not applicable to D/S NORDEN.

9.5 The emission factors you have applied and their origin.

Scope 1 emissions factor: 3.312502 provided by Lloyd's Register of Shipping, London, "Marine Exhaust Emissions Research Programme", 1995. This emissions factor is the same as the one used for CDP reporting previous year.

Scope 2 emissions factor: 283.582 provided by The Greenhouse Gas Protocol Initiative, "Indirect CO2 emissions from Purchased Electricity, Heat, or Steam", EFs Electricity Intl All Fuels, Denmark, 2005".

Further information

Approximately 25% of the electricity is produced from renewable energy sources (wind, water, sun, waste, biomass and biogas) according to the energy provider, Dong Energy. At this stage D/S NORDEN is not able to estimate a total percentage of purchased MWh from renewable energy.

10. Scope 1 Direct GHG Emissions: (CDP6 Q2(b)(i))

Instructions for question 10 and question 11 (following page)

When providing answers to questions 10 and 11, please do not deduct offset credits, Renewable Energy Certificates etc, or net off any estimated avoided emissions from the export of renewable energy, carbon sequestration (including enhanced oil recovery) or from the use of goods and services. Opportunities to provide details of activities that reduce or avoid emissions are provided elsewhere in the information request.

Carbon dioxide emissions from biologically sequestered carbon e.g. carbon dioxide from burning biomass/biofuels should be reported separately from emissions Scopes 1, 2 and 3. If relevant, please report these emissions in question 15. However, please do include any nitrous oxide or methane emissions from biomass/biofuel combustion in your emissions under the three scopes.

Please answer the following questions using Table 1.

Please provide:

10.1. Total gross global Scope 1 GHG emissions in metric tonnes of CO₂-e

Please break down your total gross global Scope 1 emissions by:

10.2. Country or region

Please provide CDP with responses to questions 10.1 and 10.2 for the three years prior to the current reporting year if you have not done so before or if this is the first time you have answered a CDP information request. Please work backwards from the current reporting year, so that you enter data for your oldest reporting period last. Table 1 (below) and table 5 (Q11.1 and 11.2) will be automatically populated with the dates that you give in answer to 7.1.

Electric utilities should report emissions by country/region using the table in question EU3.

Table 1 - Please use whole numbers only. Use the "Other" option in the drop down menu to enter the name of a region.

Reporting year Q7.1 Start date	01/01/2008
Reporting year Q7.1 End date	31/12/2008
10.1 Total gross global Scope 1 GHG emissions in metric tonnes CO₂-e	374000
10.2 Gross Scope 1 emissions in metric tonnes CO₂-e by country or region	

Your answer to question 10.1 will be automatically carried forward to tables 2 and 3 below if you add a country or region in answer to 10.2 or press "Save" at the end of the page.

Please tick the box if your total gross global Scope 1 figure (Q10.1) includes emissions that you have transferred outside your reporting boundary (as given in answer to 8.1). Please report these transfers under 13.5.

Where it will facilitate a better understanding of your business, please also break down your total global Scope 1 emissions by:

10.3. Business division

and/or

10.4. Facility

10.3. Business division (only data for the current reporting year requested)

Table 2 - Please use whole numbers only.

Business Divisions - Enter names below	Scope 1 Metric tonnes CO₂-e
Total gross global Scope 1 GHG emissions in metric tonnes CO₂-e - answer to question Q10.1	374000

10.4. Facility (only data for the current reporting year requested)

Table 3 - Please use whole numbers only.

Facilities - Enter names below	Scope 1 Metric tonnes CO₂-e
Total gross global Scope 1 GHG emissions in metric tonnes CO₂-e - answer to question Q10.1	374000

10.5. Please break down your total global Scope 1 GHG emissions in metric tonnes of the gas and metric tonnes of CO₂-e by GHG type. (Only data for the current reporting year requested.)

Table 4 - Please use whole numbers only.

Scope 1 GHG Type	Unit	Quantity
CO ₂	Metric tonnes	
CH ₄	Metric tonnes	
CH ₄	Metric tonnes CO ₂ -e	
N ₂ O	Metric tonnes	
N ₂ O	Metric tonnes CO ₂ -e	
HFCs	Metric tonnes	
HFCs	Metric tonnes CO ₂ -e	
PFCs	Metric tonnes	
PFCs	Metric tonnes CO ₂ -e	
SF ₆	Metric tonnes	
SF ₆	Metric tonnes CO ₂ -e	

10.6. If you have not provided any information about Scope 1 emissions in response to the questions above, please explain your reasons and describe any plans you have for collecting Scope 1 GHG emissions information in future.

Further information

The emissions come from D/S NORDEN's global operations at sea and are not confined to specific countries.

The increase in Scope 1 CO₂ emissions from last years reporting based on the period 01.01.2007 - 31.12.2007 (which was 362000 metric tonnes) is due to D/S NORDEN's increased size of owned fleet. Calculated per vessel day, it is estimated that D/S NORDEN's CO₂ emissions have fallen by 2.4%.

In relation to question 10.5 where it is asked to break down the company's total global Scope 1 GHG emissions in metric tonnes of the gas and metric tonnes of CO₂-e by GHG type, it is not possible to conduct this break down since there are no certain data for this (source: MAN Diesel SE). D/S NORDEN will continue to investigate whether such a break down will be possible in the future.

11. Scope 2 Indirect GHG Emissions: (CDP6 Q2(b)(i))

Important note about emission factors where zero or low carbon electricity is purchased:

The emissions factor you should use for calculating Scope 2 emissions depends upon whether the electricity you purchase is counted in calculating the grid average emissions factor or not – see below. You can find this out from your supplier.

Electricity that IS counted in calculating the grid average emissions factor:

Where electricity is sourced from the grid and that electricity has been counted in calculating the grid average emissions factor, Scope 2 emissions must be calculated using the grid average emissions factor, even if your company purchases electricity under a zero or low carbon electricity tariff.

Electricity that is NOT counted in calculating the grid average emissions factor:

Where zero or low carbon electricity is sourced from the grid or otherwise transmitted to the company and that electricity is not counted in calculating the grid average, the emissions factor specific to that method of generation can be used, provided that any certificates quantifying GHG-related environmental benefits claimed for the electricity are not sold or passed on separately from the electricity purchased.

[Click here](#) to see the instructions from the previous page on answering question 11.

Please answer the following questions using Table 5.

Please provide:

11.1. Total gross global Scope 2 GHG emissions in metric tonnes of CO₂-e.

Please break down your total gross global Scope 2 emissions by:

11.2. Country or region

Please provide CDP with responses to questions 11.1 and 11.2 for the three years prior to the current reporting year if you have not done so before or if this is the first time you have answered a CDP information request. Please work backwards from the current reporting year, so that you enter data for your oldest reporting period last. Table 5 will be automatically populated with the dates that you gave in answer to 7.1.

Table 5 - Please use whole numbers only. Use the "Other" option in the drop down menu to enter the name of a region.

Reporting year Q7.1 Start date	01/01/2008
Reporting year Q7.1 End date	31/12/2008
11.1 Total gross global Scope 2 GHG emissions in metric tonnes CO ₂ -e	614
11.2 Gross Scope 2 emissions in metric tonnes CO ₂ -e by country or region	

Your answer to 11.1 will be automatically carried forward to tables 6 and 7 below if you add a country or region in answer to 11.2 or press "Save" at the end of the page.

Where it will facilitate a better understanding of your business, please also break down your total global Scope 2 emissions by:

11.3. Business division

and/or

11.4. Facility

11.3. Business division (only data for the current reporting year requested)

Table 6 - Please use whole numbers only.

Business Divisions - Enter names below	Scope 2 Metric tonnes CO2-e
Total gross global Scope 2 GHG emissions in metric tonnes CO ₂ -e - answer to question Q11.1	614

11.4. Facility (only data for the current reporting year requested)

Table 7 - Please use whole numbers only.

Facilities - Enter names below	Scope 2 Metric tonnes CO2-e
Total gross global Scope 2 GHG emissions in metric tonnes CO ₂ -e - answer to question Q11.1	614

11.5. If you have not provided any information about Scope 2 emissions in response to the questions above, please explain your reasons and describe any plans you have for collecting Scope 2 GHG emissions information in future.

Further information

[This year Scope 2 CO2 emissions has only been calculated at D/S NORDEN's headquarter and not the company's overseas offices.](#)

12. Contractual Arrangements Supporting Particular Types of Electricity Generation: (CDP6 Q2(b)(i)- Guidance)

12.1. If you consider that the grid average factor used to report Scope 2 emissions in question 11 does not reflect the contractual arrangements you have with electricity suppliers, (for example, because you purchase electricity using a zero or low carbon electricity tariff), you may calculate and report a contractual Scope 2 figure in response to this question, showing the origin of the alternative emission factor and information about the tariff.

[This question is not applicable to D/S NORDEN since the company use regular electricity with the emissions factor from the Greenhouse Gas Protocol Initiative \(please see question 9.3\).](#)

12.2. If you retire any certificates (eg: Renewable Energy Certificates) associated with zero or low carbon electricity, please provide details.

[D/S NORDEN's energy provider produces 25% of our consumed electricity from renewable energy \(please see "Further information" to question 9\).](#)

Further information

[D/S NORDEN's website is CO2 neutral. Please see the following link for the CO2 neutral certificate: http://www.ingenco2.dk/crt/discust/c/18/1/1](http://www.ingenco2.dk/crt/discust/c/18/1/1)

13. Scope 3 Other Indirect GHG Emissions: (CDP6 Q2(c))

For each of the following categories, please:

- Describe the main sources of emissions,
- Report emissions in metric tonnes of CO₂-e,
- state the methodology, assumptions, calculation tools, databases, emission factors (including sources) and global warming potentials (including sources) you have used for calculating emissions.

Notes about question 13

When providing answers to question 13, please do not deduct offset credits, Renewable Energy Certificates etc, or net off any estimated avoided emissions from the export of renewable energy, carbon sequestration (including enhanced oil recovery) or from the use of goods and services. Opportunities to provide details of activities that reduce or avoid emissions are provided elsewhere in the information request.

Carbon dioxide emissions from biologically sequestered carbon e.g. carbon dioxide from burning biomass/biofuels should be reported separately from emissions Scopes 1, 2 and 3. If relevant, please report these emissions in question 15. However, please do include any nitrous oxide or methane emissions from biomass/biofuel combustion

in your emissions under the three scopes.

13.1 Employee business travel

Describe the main sources of emissions

CO2 emissions from employee business travel are based on D/S NORDEN's flight travel.

Emissions in metric tonnes CO₂-e.

509

State the methodology, assumptions, calculation tools, databases, emission factors (including sources) and global warming potentials (including sources) you have used for calculating emissions.

D/S NORDEN has obtained the CO2 emissions number above from the company's travel agency. D/S NORDEN has informed the travel agency about each flight conducted: its departure and arrival locations. Based on this information, D/S NORDEN's travel agency has obtained the CO2 emissions number.

Employee business travel will be reduced by 2/3 in 2009 compared to 2008. Therefore CO2 emissions from employee business travel will be reduced by 2/3 as well.

13.2. External distribution/logistics

Describe the main sources of emissions

Emissions in metric tonnes CO₂-e.

State the methodology, assumptions, calculation tools, databases, emission factors (including sources) and global warming potentials (including sources) you have used for calculating emissions.

13.3 Use/disposal of company's products and services

For auto manufacture and auto component companies – please refer to the additional questions for these sectors before completing question 13.3.
Describe the main sources of emissions

Emissions in metric tonnes CO₂-e.

State the methodology, assumptions, calculation tools, databases, emission factors (including sources) and global warming potentials (including sources) you have used for calculating emissions.

13.4 Company supply chain

Describe the main sources of emissions

Emissions in metric tonnes CO₂-e.

State the methodology, assumptions, calculation tools, databases, emission factors (including sources) and global warming potentials (including sources) you have used for calculating emissions.

13.5 Other

If you are reporting emissions that do not fall into the categories above, please categorise them into transferred emissions and non-transferred emissions (please see guidance for an explanation of these terms).

Please report transfers in the first three input fields and non-transfers in the last three input fields.

Transfers

Describe the main sources of emissions

This question is not applicable to Not relevant to D/S NORDEN since there are no allocation of transferred CO2 emissions.

Transfers

Report emissions in metric tonnes of CO₂-e.

Transfers

State the methodology, assumptions, calculation tools, databases, emission factors (including sources) and global warming potentials (including sources) you have used for calculating emissions.

Non-transfers

Describe the main sources of emissions

CO₂ emissions from the vessels that D/S NORDEN charters for shorter or longer periods of time are considered to be the most significant source of emissions under Scope 3.

Non-transfers

Report emissions in metric tonnes of CO₂-e.

2900000

The increase in Scope 3 CO₂ emissions from chartered vessels from last years reporting is based on the period 01.01.2007 - 31.12.2007 (which was 2200000 metric tonnes) is due to an increase in D/S NORDEN's number of vessel days of chartered in vessels over all of 2008.

Non-transfers

State the methodology, assumptions, calculation tools, databases, emission factors (including sources) and global warming potentials (including sources) you have used for calculating emissions.

The methodology used by D/S NORDEN to calculate its GHG emissions under Scope 3 is based on data registered in the company's internal system. This system registers bunker fuel purchased for owned and chartered vessels. Having the commercial control of the chartered vessels, D/S NORDEN provides bunker fuel for these vessels. Since D/S NORDEN does not have the exact log information for the chartered vessels, as is the case for the owned vessels reported under Scope 1, the CO₂ emissions are calculated on the basis of purchased bunker fuel for the chartered vessels during 2008. The purchase of bunker fuel for chartered vessels is allocated in accordance with accounting principles, including pro rata consolidation. This purchase is multiplied by the CO₂ emissions factor 3.312502 provided by Lloyd's Register of Shipping, London, "Marine Exhaust Emissions Research Programme", 1995. The result of this calculation is the reported annual CO₂ emissions for D/S NORDEN's chartered vessels.

13.6 If you have not provided information about one or more of the categories of Scope 3 GHG emissions in response to the questions above, please explain your reasons and describe any plans you have for collecting Scope 3 indirect emissions information in future.

Further information

14. Emissions Avoided Through Use Of Goods And Services (New for CDP 2009)

14.1. If your goods and/or services enable GHG emissions to be avoided by a third party, please provide details including the estimated avoided emissions, the anticipated timescale over which the emissions are avoided and the methodology, assumptions, emission factors (including sources), and global warming potentials (including sources) used for your estimations.

Please see question 23.6 regarding the NORS project which offers a freight to the company's customers which can lead to a 15-20% reduction in CO₂ emissions.

Further information

15. Carbon Dioxide Emissions from Biologically Sequestered Carbon: (New for CDP 2009)

An example would be carbon dioxide from burning biomass/biofuels.

15.1. Please provide the total global carbon dioxide emissions in metric tonnes CO₂ from biologically sequestered carbon.

Emissions in metric tonnes CO₂ - Please use whole numbers only

0

Further information

D/S NORDEN does not emission CO2 from biologically sequestered carbon and therefore the enquired details cannot be provided by D/S NORDEN.

16. Emissions Intensity: (CDP6 Q3(b))

16.1. Please supply a financial emissions intensity measurement for the reporting year for your combined Scope 1 and 2 emissions.

Please describe the measurement.

For D/S NORDEN, emissions intensity is measured as Scope 1 and 2 CO₂ emissions divided by the company's turnover for the period 01.01.2008 - 31.12.2008. D/S NORDEN's turnover was USD 4,247 million.

16.1.1. Give the units. For example, the units could be metric tonnes of CO₂-e per million Yen of turnover, metric tonnes of CO₂-e per US\$ of profit, metric tonnes of CO₂-e per thousand Euros of turnover.

CO₂ emissions per million USD of turnover.

16.1.2. The resulting figure.

Use a decimal point if necessary. Please use a "." rather than a "," i.e. please write 15.6 rather than 15,6

88.2

16.2. Please supply an activity related intensity measurement for the reporting year for your combined Scope 1 and 2 emissions.

Please describe the measurement.

16.2.1. Give the units e.g. metric tonnes of CO₂-e per metric tonne of output or for service sector businesses per unit of service provided.

16.2.2. The resulting figure.

Use a decimal point if necessary. Please use a "." rather than a "," i.e. please write 15.6 rather than 15,6

Further information

Last reporting year's Scope 1 CO₂ emissions were 362000 tons (no data from Scope 2 CO₂ emissions were obtained last year). Last reporting year's turnover was USD 2,933 million. Therefore last reporting year's CO₂ emissions intensity was 123.4.

This reporting year's CO₂ emissions intensity was 88.1 if only Scope 1 CO₂ emissions was included. Based on Scope 1 CO₂ emissions alone, D/S NORDEN's CO₂ emissions intensity in 2008 is therefore more than 40% lower than the previous year.

17. Emissions History: (CDP6 Q2(f))

17.1. Do emissions for the reporting year vary significantly compared to previous years?

No - Please go to question 18.

If the answer to 17.1 is Yes:

17.1.1. Estimate the percentage by which emissions vary compared with the previous reporting year.

This box will accept numerical answers containing a decimal point. Please use "." not "," i.e. write 10.6, not 10,6.

Have the emissions increased or decreased?

Further information

Emissions reported for D/S NORDEN's last accounting year do not vary significantly compared to previous years. However, numbers include a 2.4% reduction resulting from the measures taken.

Looking forward, CO₂ emissions resulting from D/S NORDEN's operations at sea may be expected to vary significantly on an annual basis. A number of external factors exist strongly influencing the consumption of bunker fuel during operation and thus the associated CO₂ emissions. Weather related factors such as high sea, wind and current have a significant influence on consumption. The same goes for fleet composition and type of bunker fuel. Efficiency measures implemented to recude fuel

consumption might then be effected by variations in these external factors. These circumstances are also of importance when discussing target setting and forecasts of CO2 emissions for vessels, the fleet and the industry in general.

18. External Verification/Assurance: (CDP6 Q2(d))

18.1. Has any of the information reported in response to questions 10 – 15 been externally verified/assured in whole or in part?

No information has been provided in response to questions 10-15. Please go to question 19.

It would aid automated analysis of responses if you could select responses from the tick boxes below. However, please use the text box provided if the tick boxes menu options are not appropriate.

18.2. State the scope/boundary of emissions included within the verification/assurance exercise.

Please use the text box below to describe the scope/boundary of emissions included within the verification/assurance exercise if the tick box menu options above are not applicable.

18.3. State what level of assurance (eg: reasonable or limited) has been given.

18.4. Provide a copy of the verification/assurance statement.

Please attach a copy/copies.

18.5. Specify the standard against which the information has been verified/assured.

18.6. If none of the information provided in response to questions 10-15 has been verified in whole or in part, please state whether you have plans for GHG emissions accounting information to be externally verified/assured in future.

Further information

The CO2 emissions under Scope 1, as reported here, are included in D/S NORDEN's 2008 Annual Report. In the Annual Report, the estimated emissions resulting from the total purchase of bunker fuel (for chartered and owned vessels) are also included. Please see page 33 of the report. Please see the following link for D/S NORDEN's 2008 Annual Report: http://www.ds-norden.com/public/dokumenter/news_english/NORDENannualreport2008.pdf

19. Data Accuracy: (CDP6 Q2(e) – New wording for CDP 2009)

19.1. What are the main sources of uncertainty in your data gathering, handling and calculations e.g.: data gaps, assumptions, extrapolation, metering/measurement inaccuracies etc?

If you do not gather emissions data, please select emissions data is NOT gathered and proceed to question 20.

Emission data is gathered.

The data from which CO2 emissions are calculated are from the data system part of D/S NORDEN's ordinary and required business processes.

The bunker fuel consumed by D/S NORDEN's owned vessels is registered in D/S NORDEN's ordinary log system which complies with the requirements set up by the Danish Flag State. This system registers the daily consumption of different types of fuel (e.g. heavy fuel and marine diesel).

The bunker fuels purchased for D/S NORDEN's owned and chartered vessels are registered in D/S NORDEN's internal financial system for purchase of bunker fuel.

The system used to collect data has thus been developed to ensure factual measurement of the total amount of bunker fuel consumed and purchased and not factual measurement of CO2 emissions from the vessels and their activities in different regions.

19.2. How do these uncertainties affect the accuracy of the reported data in percentage terms or an estimated standard deviation?

The uncertainties affect the reported data of about 1% resulting from a range of factors, mainly: temperature conversions, flowmeter inaccuracy and degassing.

19.3. Does your company report GHG emissions under any mandatory or voluntary scheme (other than CDP) that requires an accuracy assessment?

No (Please go to question 20.)

19.3.1 Please provide the name of the scheme.

19.3.2. Please provide the accuracy assessment for GHG emissions reported under that scheme for the last report delivered.

Further information

20. Energy and Fuel Requirements and Costs: (New for CDP 2009)

Please provide the following information for the reporting year:

Cost of purchased energy

20.1. The total cost of electricity, heat, steam and cooling purchased by your company.

1250000

Select currency

Danish krone

20.1.1. Please break down the costs by individual energy type.

Table 8 - The "Cost" column will not accept text. Please use whole numbers only.

Energy type	Cost	Currency
Electricity	1000000	Danish krone
Heat	250000	Danish krone
Steam		Danish krone
Cooling		Danish krone

Cost of purchased fuel

20.2. The total cost of fuel purchased by your company for mobile and stationary combustion.

401990466

Select currency

United States dollar

20.2.1. Please breakdown the costs by individual fuel type.

Table 9 - The cost column will not accept text. Please use whole numbers only.

Mobile combustion fuels	Cost	Currency
Bunker for vessels	401990466	United States dollar

Stationary combustion fuels	Cost	Currency
-----------------------------	------	----------

Energy and fuel inputs

The following questions are designed to establish your company's requirements for energy and fuel (inputs). Please note that MWh is our preferred unit for answers as this helps with comparability and analysis. Although it is usually associated with electricity, it can equally be used to represent the energy content of fuels (see CDP 2009 Reporting Guidance for further information on conversions to MWh).

Purchased energy input

20.3 Your company's total consumption of purchased energy in MWh.

Please use whole numbers only.

2166 MWh

Purchased and self produced fuel input

20.4. Your company's total consumption in MWh of fuels for stationary combustion only. This includes purchased fuels, as well as biomass and self-produced fuels where relevant.

Please use whole numbers only.

In answering this question and the one below, you will have used either Higher Heating Values (also known as Gross Calorific Values) or Lower Heating Values (also known as Net Calorific Values).

Please state which you have used in calculating your answers.

20.4.1. Please break down the total consumption of fuels reported in answer to question 20.4 by individual fuel type in MWh.

Table 10 - Please use whole numbers only

Stationary combustion fuels	MWh
-----------------------------	-----

Energy output

In this question we ask for information about the energy in MWh generated by your company from the fuel that it uses. Comparing the energy contained in the fuel before combustion (question 20.4) with the energy available for use after combustion will give an indication of the efficiency of your combustion processes, taking your industry sector into account.

20.5. What is the total amount of energy generated in MWh from the fuels reported in question 20.4?

Please use whole numbers only.

20.6. What is the total amount in MWh of renewable energy, excluding biomass, that is self-generated by your company?

Please use whole numbers only.

Energy exports

This question is for companies that export energy that is surplus to their requirements. For example, a company may use electricity from a combined heat and power plant but export the heat to another organisation.

20.7. What percentage of the energy reported in response to question 20.5 is exported/sold by your company to the grid or to third parties?

Please use whole numbers only.

20.8. What percentage of the renewable energy reported in response to question 20.6 is exported/sold by your company to the grid or to third parties?

Please use whole numbers only.

Further information

Questions 20.4 to 20.8 are not relevant to D/S NORDEN.

21. EU Emissions Trading Scheme: (CDP6 Q2(g)(i) – New wording for CDP 2009)

Electric utilities should report allowances and emissions using the table in question EU5.

21.1. Does your company operate or have ownership of facilities covered by the EU Emissions Trading Scheme (EU ETS)?

No (Please go to question 22.)

Please give details of:

21.2. The allowances allocated for free for each year of Phase II for facilities which you operate or own. (Even if you do not wholly own facilities, please give the full number of allowances).

Table 11 - Please use whole numbers only.

	2008	2009	2010	2011	2012
Free allowances metric tonnes CO2					

21.3. The total allowances purchased through national auctioning processes for the period 1 January 2008 to 31 December 2008 for facilities that you operate or own. (Even if you do not wholly own facilities, please give the total allowances purchased through auctions by the facilities for this period).

Total allowances purchased through auction

21.4. The total CO₂ emissions for 1 January 2008 to 31 December 2008 for facilities which you operate or own. (Even if you do not wholly own facilities, please give the total emissions for this period.)

Total emissions in metric tonnes

Further information

22. Emissions Trading: (CDP6 Q2(g)(ii) - New wording for CDP 2009)

Electric utilities should read EU6 before answering these questions.

22.1. Please provide details of any emissions trading schemes, other than the EU ETS, in which your company already participates or is likely to participate within the next two years.

[We do not participate or anticipate participating in any trading schemes within the next two years. \(Please go to question 22.3\)](#)

22.2. What is your overall strategy for complying with any schemes in which you are required or have elected to participate, including the EU ETS?

Further information

22. Carbon credits

22.3. Have you purchased any project-based carbon credits?

[No. \(Please go to question 22.5\)](#)

Please indicate whether the credits are to meet one or more of the following commitments:

Please also:

22.4 Provide details including the type of unit, volume and vintage purchased and the standard/scheme against which the credits have been verified, issued and retired (where applicable).

22.5. Have you been involved in the origination of project-based carbon credits?

[No. \(Please go to question 22.7\)](#)

22.6. Please provide details including:

- Your role in the project(s),
- The locations and technologies involved,
- The standard/scheme under which the projects are being/have been developed,
- Whether emissions reductions have been validated or verified,
- The annual volumes of generated/projected carbon credits,

- Retirement method if used for own compliance or offsetting.

22.7. Are you involved in the trading of allowances under the EU ETS and/or project-based carbon credits as a separate business activity, or in direct support of a business activity such as investment fund management or the provision of offsetting services?

No. (Please go to question 23)

22.8. Please provide details of the role performed.

Further information

Performance

23. Reduction plans & goals: (CDP6 Q3(a))

23.1. Does your company have a GHG emissions and/or energy reduction plan in place?

Yes. (Please go to question 23.3)

23.2. Please explain why.

It would aid automated analysis of responses if you could select a response from the options below as well as using the text box. However, please just use the text box provided if the options are not appropriate.

If the menu options above are not appropriate, please answer the question using the text box below:

Goal setting

23.3. Do you have an emissions and/or energy reduction target(s)?

Yes. (Please answer the following questions)

23.4 What is the baseline year for the target(s)?

2008

23.5. What is the emissions and/or energy reduction target(s)?

In order to minimise the impact on the environment and reduce CO2 emissions, D/S NORDEN has initiated a 14 point plan targeted at company owned vessels. This plan reduced CO2 emissions from owned vessels by 2.4% in 2008. The target for 2009 is to reduce CO2 emissions from owned vessels by 2%.

The target is based on the calculated technical reduction potentials from many of the initiatives listed in D/S NORDEN's 14 point plan.

23.6. What are the sources or activities to which the target(s) applies?

D/S NORDEN has launched a number of initiatives to improve the environment by minimising propulsion resistance and optimising fuel efficiency. Most of D/S NORDEN's 14 point plan was initiated in 2007 and the rest was initiated in 2008 when the vessels were drydocking. The 14 points, of which many are targeted at reducing CO2 emission, are:

1. Latest design of slide valves. Reduces CO2, NOx and SOx emissions.
2. CASPER system. Optimises fuel consumption.
3. FLAME system. Optimises combustion efficiency.
4. Advanced P/V tank valves. Reduces fumes from tanker cargoes.
5. Exxon Mobil Scrape Down analysis system. Optimises combustion efficiency.
6. Alpha Lubrication system. Minimises the consumption of lubricating oil.
7. Torque measuring system. Optimises the engine.
8. Waste monitoring and reporting system.
9. Full blasting of underwater hulls.
10. Propeller polishing.
11. Increased frequency of overhauls of the vessels' turbo charges.
12. Increased frequency of overhauls of the vessels' scavenger air coolers.
13. Increased frequency of overhauls of the vessels' fuel oil pumps and injectors.
14. Funding of environmental research and development programmes.

As an example of funding (point 14), D/S NORDEN decided (in March 2008) to sign an agreement with Decision 3 to test the GreenSteam™ trim system onboard one of the company's product tankers. The pilot project was a success and the first data has been achieved from the pilot project. They show that with 95% probability there is a theoretical change of reducing the amount of used bunker and therefore CO2 emissions - with 4%. The system has now been implemented on another two vessels to see whether the improvements work.

GreenSteam™ is a so-called intelligent system based on mathematical models of the factors which affect a vessel's speed and consumption of bunkers. Data on wind, draught, wave height, the vessel's GPS speed and logging speed, the angle of the rudder and how much the rudder works, combined with engine settings, consumption of bunkers, combustion efficiency etc. are collected during sailing.

Another example of funding of research and development projects is the sponsorship of a PhD stipend at the Copenhagen Business School (CBS) focusing on the subject "Building Social Performance Capabilities in the Shipping Industry". The project will be the focus area of a larger shipping research group at CBS. The project will focus on how major challenges in terms of pollution and relevant issues in relation to safety at sea and ashore may be translated into concrete requirements for the shipping companies to comply with.

The 14 point plan and the GreenSteam™ development project are both mentioned in the 2008 Annual Report and ongoing in D/S NORDEN's new magazine, "NORDEN news" (e.g. the following issues: spring 2008, summer 2008, winter 2008 and spring 2009). Please see the following links for the 2008 Annual Report and NORDEN news magazines respectively: http://www.ds-norden.com/public/dokumenter/news_english/NORDENAnnualreport2008.pdf and <http://www.ds-norden.com/profile/nordennews/newsmagazine/>

Together with D/S NORDEN's 50%-owned Norient Product Pool, the Norient Re-imbursment System (NORS) has been established. The NORS project is not part of D/S NORDEN's 14 point plan. NORS will optimize the supply chain by reducing lay time and thereby use the reduced lay time to sail slower and thereby reduce bunker consumption. It is estimated that a 15-20% reduction in CO2 is possible but the success depends on how many customers who wants to be part of the project. The fuel savings are divided equally between Norient Product Pool and the customer.

23.7. Over what period/timescale does the target(s) extend?

During 2009 the 14 point plan is expected to lead to a 2% reduction in CO2 emissions in addition to the 2.4% obtained during 2008. Another 2% reduction is expected in 2010.

It is difficult to say much about the reduced CO2 emissions following the implementation of GreenSteam™ and NORS. However, there are potentials for a reduction of 4% from GreenSteam™ and 15-20% from NORS in D/S NORDEN's 50%-owned Norient Product Pool.

Further information

As regards D/S NORDEN's operations at sea, the thing that reduces CO2 emissions most efficiently is by using less fuel. Consequently, in 2007 and 2008 D/S NORDEN launched a number of initiatives to reduce its contribution to climate change by minimising propulsion resistance and optimising fuel efficiency.

Historically, optimising fuel efficiency and thus reducing costs and other emissions which can harm the environment (for example NOx, SOx and particulate matter) has been a priority of D/S NORDEN.

The CO2 target for D/S NORDEN has been set according to the calculated reduction potentials from the initiatives introduced in 2007 and 2008. The reason being that it is currently not possible to measure the factual emissions from vessels at large with the necessary accuracy. Furthermore, a number of external factors like high sea, load conditions, current and wind exist which significantly influence the consumption of bunker fuel by vessels in operation. This implies that target setting is not a straight forward exercise.

Under the current circumstances, it is thus not possible for D/S NORDEN to measure and demonstrate a direct correlation between the initiatives set up and the consumption of bunker fuel - and the associated emissions.

To this end, D/S NORDEN has decided to establish a target based on the calculated technical reduction potentials which can be realised if initiatives listed in D/S NORDEN's 14 point plan are fully introduced.

23. GHG emissions and energy reduction activities

23.8. What activities are you undertaking or planning to undertake to reduce your emissions/energy use?

Please see question 23.6

Further information

23. Goal evaluation

23.9. What benchmarks or key performance indicators do you use to assess progress against the emissions/energy reduction goals you have set?

As benchmark is used INTERTANKO's environmental group estimate of CO2 savings resulting from the various technical measures taken (please see question 23.6) and as key performance indicator is used number of days implemented per technical measure.

Further information

23. Goal achievement

23.10. What emissions reductions, energy savings and associated cost savings have been achieved to date as a result of the plan and/or the activities described above?

Please state the methodology and data sources you have used for calculating these reductions and savings.

[Please see question 23.5 and question 23.9 above.](#)

23.11. What investment has been required to achieve the emissions reductions and energy savings targets or to carry out the activities listed in response to question 23.8 and over what period was that investment made?

Table 13 - The "Investment number" column will not accept text. Please use whole numbers only.

Emission reduction target/energy saving target or activity	Investment number	Investment currency	Timescale
--	-------------------	---------------------	-----------

Further information

[Investments that have been required to achieve the emissions reductions was part of the operational costs and have therefore not been made up separately.](#)

23. Goal planning & investment

Electric utilities should read the table in question EU3 for giving details of forecasted emissions.

23.12. What investment will be required to achieve the future targets set out in your reduction plan or to carry out the activities listed in response to question 23.8 above and over what period do you expect payback of that investment?

Table 14 - The "Number" column will not accept text. Please use whole numbers only.

Plan or action	Investment number	Investment currency	Payback
----------------	-------------------	---------------------	---------

23.13. Please estimate your company's future Scope 1 and Scope 2 emissions for the next five years for each of the main territories or regions in which you operate or provide a qualitative explanation for expected changes that could impact future GHG emissions.

If possible, please use table 15 below to structure your answer to the question or alternatively use the text box below.

[Investments that have been required to achieve the emissions reductions was part of the operational costs and have therefore not been made up separately.](#)

[CO2 emissions by D/S NORDEN are largely activity dependent. Given the downturn in the economic environment and world trade, the CO2 emissions will be affected by these factors and therefore CO2 emissions by D/S NORDEN will be lower in the foreseeable future than what it has been in 2007 and 2008. This is due to D/S NORDEN's reduction in its operated fleet to match the demand in world shipping.](#)

Scope 1 forecasted emissions in Table 15 below are in the following units.

Scope 2 forecasted emissions in Table 15 below are in the following units.

Table 15 - The "Scope" columns will not accept text. Please use whole numbers only.

Type in the name of the territory or region for which you are giving data and then press "Add Territory/Region". If giving a global figure instead of separate figures for regions or territories, please write "global" in the box labelled "Enter name of territory or region".

[Click here to see a sample table.](#)

Future reporting years:										
End date for year end DD/MM/YYYY										
Emission forecasts	Scope 1	Scope 2	Scope 1	Scope 2	Scope 1	Scope 2	Scope 1	Scope 2	Scope 1	Scope 2

23.14. Please estimate your company's future energy use for the next five years for each of the main territories or regions in which you operate or provide a qualitative explanation for expected changes that could impact future GHG emissions.

If possible, please use table 16 below to structure your answer to the question or alternatively use the text box below.

[D/S NORDEN's energy use in its headquarter \(which is what is reported in this questionnaire\) is not expected to change much over the next five years.](#)

Table 16 - Please use whole numbers only.

Type in the name of the territory or region for which you are giving data and a description of the data you are giving e.g. electricity consumption. Then press "Add Row". If giving a global figure instead of separate figures for regions or territories, please use the word "global". This table will also accept different types of units e.g. units of volume or mass.

[Click here to see a sample table.](#)

Future reporting years:										
End date for year end DD/MM/YYYY	31/12/2009		31/12/2010		31/12/2011		31/12/2012		31/12/2013	
Energy use estimates for territory/region	Number	Units	Number	Units	Number	Units	Number	Units	Number	Units
Global	2166	MWh	2166	MWh	2166	MWh	2166	MWh	2166	MWh

23.15. Please explain the methodology used for your estimations and any assumptions made.

Please see question 23.13 and question 23.14 above.

Further information

24. Planning: (CDP6 Q3(c))

24.1. How do you factor the cost of future emissions into capital expenditures and what impact have those estimated costs had on your investment decisions?

D/S NORDEN does not factor the cost of future emissions into capital expenditure planning, but D/S NORDEN considers the important parameters prior to vessel investments carefully. Increasingly the speed consumption of a design is considered important in this process whereby the fleet is gradually becoming more energy efficient.

The considerations have, for example, impacted the investment decision recently made regarding GreenSteam™ (please see question 23.6 for more details).

Further information

Governance

25. Responsibility: (CDP6 Q4(a))

25.1. Does a Board Committee or other executive body have overall responsibility for climate change?

Yes. (Please answer question 25.3 and 25.4)

25.2 Please state how overall responsibility for climate change is managed and indicate the highest level within your company with responsibility for climate change.

25.3. Which Board Committee or executive body has overall responsibility for climate change?

D/S NORDEN has set up a Corporate Social Responsibility (CSR) Executive Body appointed by the Board of Directors in April 2008 which has overall responsibility for ensuring that D/S NORDEN has a systematic management approach to environmental and social sustainability (in which the issue of climate change is included). The Chairman of the CSR Executive Body is the Chief Financial Officer of D/S NORDEN. Previously, CSR issues were handled by an interim task force in the company. The increased attention given to the environmental and social sustainability has led the company to set up a formal body.

25.4. What is the mechanism by which the Board or other executive body reviews the company's progress and status regarding climate change?

It is within the area of responsibility of D/S NORDEN's CSR Executive Body to develop and ensure implementation of future initiatives with regard to climate change and to monitor and review such initiatives. On a semi-annual basis, the body reports to D/S NORDEN's Board of Directors on the status of the work through the company's regular project review procedure.

Further information

26. Individual Performance: (CDP6 Q4(b))

26.1. Do you provide incentives for individual management of climate change issues including attainment of GHG targets?

No. (Please go to question 27.1)

26.2. Are those incentives linked to monetary rewards?

26.3. Who is entitled to benefit from those incentives?

Further information

GHG emissions is a direct result of D/S NORDEN's business activities, and therefore not possible to review or influence separately. Hence D/S NORDEN's efforts will be towards the relative effects e.g. in terms of efficiency and D/S NORDEN concentrate on performance measures for what the company controls directly.

27. Communications: (CDP6 Q4(c))

27.1. Do you publish information about the risks and opportunities presented to your company by climate change, details of your emissions and plans to reduce emissions?

Yes.

If so, please indicate which of the following apply and provide details and/or a link to the documents or a copy of the relevant excerpt:

27.2. The company's Annual Report or other mainstream filings.

Yes

In the 2008 Annual Report (please see page 33-35), D/S NORDEN publishes information pertaining to its approach to sustainability management and CSR issues (including climate change). The 2008 Annual Report can be found using the following link: http://www.ds-norden.com/public/dokumenter/news_english/NORDEAnnualreport2008.pdf

27.3. Voluntary communications (other than to CDP) such as Corporate Social Responsibility reporting.

Yes

D/S NORDEN's news magazine presents the latest news on D/S NORDEN's strategy, activities and organisation to shareholders, customers, employees and other stakeholders globally. The magazine is published four times a year: spring, summer, autumn and winter, and is a supplement to the news available on D/S NORDEN's website. The news magazine can be found using the following link: <http://www.ds-norden.com/profile/nordennews/newsmagazine/>

D/S NORDEN's approach to environmental and social responsibility issues is described in the following recent issues of the magazine: spring 2008, summer 2008, winter 2008 and spring 2009.

D/S NORDEN has also produced a booklet with the title "The Environment & D/S NORDEN" which in simple terms explains the company's environmental efforts and activities as well as how different technologies help reduce CO2 emissions. The target group for the booklet is the society that D/S NORDEN is part of. The booklet is available at the following link: <http://viewer.zmags.com/showmag.php?mid=wwqfqq#/page0/>

The chairman of the Board of Directors informs the shareholders at the Annual General Meeting, on D/S NORDEN's work within the scope of the company's CSR approach.

Furthermore, on D/S NORDEN's website, ds-norden.com, D/S NORDEN communicates ongoing to external parties about the company's CSR approach, including climate change and any news in relation to these activities. Please see the following link: <http://www.ds-norden.com/profile/csr/systematicapproach/>

D/S NORDEN communicates voluntarily through different communication channels like the CDP Questionnaire. D/S NORDEN does not produce a separate CSR report, but communicates the company's main CSR initiatives through the Annual Report.

Further information

28. Public Policy: (CDP6 Q4(d))

28.1. Do you engage with policymakers on possible responses to climate change including taxation, regulation and carbon trading?

Yes

D/S NORDEN engages with policymakers through its membership and active engagement in organisations like the Danish Shipowners' Association and INTERTANKO.

Furthermore, when appropriate, D/S NORDEN provides input to relevant policies and discussions regarding the shipping industry's contribution to climate change and how to best minimize such changes.

Further information