CSR Accounting Policies 2016

Table of contents

Dampskibsselskabet NORDEN A/S

CSR Accounting Policies and Reporting Principles

This document presents the framework behind NORDEN's CSR performance data presented in NORDEN's CSR report 2016. The CSR report covers the relevant and significant environmental, social, and ethical issues for the calendar year 2016, and how each of the indicators are defined and calculated.

1. Reporting period

The report covers the period from 1. January 2016 to 31. December 2016.

2. Boundary

The CSR report boundary includes assets and employees in the parent company and in subsidiaries, as well as assets in joint ventures (JVs). Assets in JV's include vessels owned by NORDEN together with partners in the company NORD SUMMIT Pte. Ltd. NORDENs owns 50% of the JV Polar Navigation Pte. Ltd that holds assets in the form of chartered vessels. Common to the vessels in JVs is that they are managed and operated by NORDEN, but all material decisions regarding the commercial, operational and technical management of the vessels are made in agreement with the partners.

The reporting boundary includes:

1) Owned vessels
2) Operated vessels
3) Employees on shore
4) Employees at sea
5) NORDEN Office sites

Reporting office sites:

Country	City	Company	Office
Denmark	Hellerup	Dampskibsselskabet NORDEN A/S	Head office
Brazil	Rio de Janeiro	NORDEN Tankers & Bulkers do Brazil Ltda	Wholly owned subsidiary of Dampskibsselskabet NORDEN A/S
India	Mumbai	NORDEN Tankers & Bulkers India, Pvt. Ltd	Wholly owned subsidiary of Dampskibsselskabet NORDEN A/S
USA	Annapolis	NORDEN Tankers & Bulkers (USA) Inc.[1]	Wholly owned subsidiary of Dampskibsselskabet NORDEN A/S
Chile	Santiago	NORDEN Tankers & Bulkers Chile SpA	Wholly owned subsidiary of Dampskibsselskabet NORDEN A/S
Singapore	Singapore	NORDEN Shipping Pte. Ltd.	Wholly owned subsidiary of Dampskibsselskabet NORDEN A/S
China	Shanghai	NORDEN Shipping Pte. Ltd. (Singapore)	Representative Office of NORDEN Shipping Pte. Ltd.
Australia	Melbourne	NORDEN Shipping (Australia) Pty. Ltd.	Wholly owned subsidiary of NORDEN Shipping (Singapore) Pte. Ltd.

[1] Has from 1 January 2017 changed name to: NORDEN Shipping (USA) LLC.

Operated vessels refer to vessels that NORDEN is the operator for but not necessarily the owner. Operates comprises coordination of the voyage, arranging for support and port calls.

Owned and operated refer to vessels that NORDEN either owns or operates or both, but exclude vessels that are on time-charter to other shipowners.

Owned, operated vessels refer to vessels that NORDEN owns and operates, leaving out vessels in external management.

3. Data quality and data collection

In collecting information and data on NORDEN's CSR performance, the reporting principles of balance, clarity, accuracy, reliability, timeliness and comparability are applied. Where possible, data is presented with comparative data from the past 5 years. Some data do not, however, have historical data dating back 5 years.

Significant changes in data are sought explained in the CSR report, either directly below the indicator in the table or in the relevant section. The CSR assurance provider PwC provides independent limited assurance on NORDEN's CSR performance indicators.
Data is collected from a number of source systems in the different functions of NORDEN, including the HR department, Fuel Efficiency department, Technical department, CSR department and Strategic Purchasing Department.

All data is ultimately reported to the CSR & Compliance Manager, who consolidates data and coordinates the data collection process and assurance.

In the course of the year, data from the Fuel Efficiency department is controlled monthly by the department itself, data from the Technical department is reported and controlled monthly by the Performance manager, whereas all other data is reported by the data owner and controlled on an annual basis by the CSR Manager. Going forward, NORDEN will seek to strengthen the processes behind data collection and seek to implement the relevant review and control mechanisms for the relevant indicators.

4. Scope and reporting processes

NORDEN reports on issues which, based on a CSR materiality assessment, are evaluated to be of material relevance to NORDEN's stakeholders and to NORDEN as a company. In deciding on which areas to include in the annual CSR report, account is also taken of the statutory requirements and the disclosure requirements that NORDEN is subject to.
In 2016, the reporting on CSR performance and indicators have been revised and strengthened in order to reflect the new CSR Direction 2016-2018, as well as to better reflect internal and external stakeholders' information needs and the importance ascribed to CSR in NORDEN's activities.

Together with the CSR materiality assessment, this has led to changes in the scope of the CSR report 2016, including changes in reported issues and selected indicators. As of 2015, NORDEN no longer applies Global Reporting Initiative (GRI) specific disclosures. This has also led to changes in the indicators in the CSR report 2016.

Changes to reported CSR data compared with 2015

In 2016, the following CSR indicators have been excluded from the CSR Report:

- Active core fleet table: Owned vessel, Dry cargo fleet, Tanker fleet, Chartered vessels with purchase option, Dry cargo fleet, Total active core fleet
- # Onshore part-time/full-time employee by gender and region

- # Onshore, permanent fixed contracts by gender and region
- Rate of new employees hired
- Employee turnover by age group, gender and region
- Employment level by gender and region
- % of workforce represented in formal health and safety committees
- Climate Action Plan
- # Near-miss reporting per owned vessel (*included in breakdown on safety reports into 4 categories*)
- Onshore energy consumption
- # Onshore/sea based employees who have completed anti-corruption training (*data on completed e-learning cannot be validated in 2016, due to changes in access to training)*
- # Observations of third party vessels

In 2016, NORDEN includes the following new indicators in the CSR Report:

- Total tax contribution
- First tier suppliers engaged in RSCM programme since 2013
- Retention rate senior officers

In 2016, reporting scopes for the following indicators were adjusted:

- Spills < 1 barrel
- Spills > 1 barrel
- Gender distribution of leaders (% females of total pool of onshore leaders)
- Gender distribution in total workforce (% based on FTE)

5. Energy consumption

Indicator	Unit	Boundary	Definition	Calculation
Intermediate fuel oil	1,000 mt	Owned	Intermediate fuel oil consumption from owned vessels operated by NORDEN.	Total intermediate fuel oil consumed on NORDEN voyages by own vessels.
Marine diesel oil and marine gas oil	1,000 mt	Owned	Marine diesel oil and marine gas oils consumption from owned vessels operated by NORDEN	Total marine diesel oil and marine gas oil consumed on NORDEN voyages by own vessels.
Intermediate fuel oil	1,000 mt	Operated dry cargo vessels	Intermediate fuel oil consumption from other bulk carriers operated by NORDEN.	Total intermediate fuel oil consumed by other dry cargo vessels operated by NORDEN.
Marine diesel oil and marine gas oil	1,000 mt	Operated dry cargo vessels	Marine diesel oil and marine gas oil from other bulk carriers operated by NORDEN.	Total marine diesel oil and marine gas oil consumed by other dry cargo vessels operated by NORDEN.
Intermediate fuel oil	1,000 mt	Operated tankers	Intermediate fuel oil consumption from other tankers operated by NORDEN.	Total intermediate fuel oil consumed by other tanker vessels operated by NORDEN.
Marine diesel oil and marine gas oil	1,000 mt	Operated tankers	Marine diesel oil and marine gas oil from other tankers operated by NORDEN.	Total marine diesel oil and marine gas oil consumed by other tanker vessels operated by NORDEN.
Direct energy consumption by primary energy source [(a)]	1,000 mt	Owned and Operated	Energy consumption from fuel consumption. In 2016, the direct energy consumption by primary energy source in joules was 41,153.7 MJ	Total amount of Intermediate fuel oil + Marine diesel oil + Marine gas oil from owned and operated vessels.

(a) Energy consumption on owned vessels, other dry cargo vessels operated by NORDEN and other tanker vessels operated by NORDEN in NPP.

6. Transport work

Indicator	Unit	Boundary	Definition	Calculation
Owned vessels	1,000,000 mt*nm	Owned	mio. metric tonne of cargo transported 1 mile	n/a
Dry cargo vessels		Other operated	mio. metric tonne of cargo transported 1 mile	n/a
Tanker vessels		Other operated	mio. metric tonne of cargo transported 1 mile	n/a
All operated vessels		Owned and operated	mio. metric tonne of cargo transported 1 mile.	n/a

7. Emissions and discharge

Indicator	Unit	Boundary	Definition	Calculation
Total CO_2 from owned vessels	1,000 mt	Owned	CO_2 emissions from owned vessels operated by NORDEN. CO_2 emission factor for residual fuel oil is 3,1144, and for marine diesel oil and marine gas oil it is 3.2060. Fuel figures for tankers/dry cargo vessels are registered in IMOS[2] at arrival/bunkering/departure. For tankers, fuel figures are partly updated manually by the operators and partly imported via MOEPS[3] through an integration to IMOS. For dry cargo vessels, the operator manually enters fuel figures into IMOS. Total fuel consumption for tanker/dry cargo is calculated by adding the fuel already on the vessel at the beginning of the voyage with the purchased bunker during the voyage, thereafter subtracting the remaining fuel on the vessel when the voyage ends. This is done for each vessel and registered in IMOS.	Total fuel consumption multiplied with the CO_2 emissions factor per fuel type.
Dry cargo vessels	1,000 mt	Other operated vessels	CO_2 emissions from other dry cargo vessels operated by NORDEN. CO_2 emission factor for residual fuel oil is 3,1144, and for marine diesel oil and marine gas oil it is 3.2060.	Total fuel consumption multiplied with the CO_2 emissions factor per fuel type.
Tanker vessels	1,000 mt	Other operated vessels	CO_2 emissions from other tankers operated by NORDEN. CO_2emission factor for residual fuel oil is 3.114 and for marine diesel oil and marine gas oil it is 3.206.	Total fuel consumption multiplied with the CO_2 emissions factor per fuel type.
Direct CO_2 emissions	1,000 mt	Owned vessels Company cars	**Scope 1 GHG protocol**: CO_2 emissions from owned vessels as well as owned company cars.	Assumptions: all cars are diesel cars with a yearly usage of 20,000 km per car, 12 km/l, and CO_2 emissions of 2.65 kg/l. Conversion factor is from Key2Green.
Indirect CO_2 emissions	1,000 mt	Offices	**Scope 2 GHG protocol**: Land-based activities at NORDEN's offices worldwide based on electricity and heat consumption for each office. Excludes data from Annapolis (US), Santiago (Chile) and Melbourne (Australia) since electricity is integrated in rental costs.	CO_2 consumption = (MWh x CO_2 factor)/1000 International Energy Agency's conversion indicators 2009: US 508 grams CO_2/kWh Denmark 303 grams CO_2/kWh India 951 grams CO_2/kWh Singapore 519 grams CO_2/kWh

[2] Integrated Maritime Operating System
[3] Master's Operations and Environments Performance System

Indicator	Unit	Boundary	Definition	Calculation
			Rio (Brazil), Mumbai (India), Singapore, Shanghai (China) does not report heating as this is included in the electricity bill.	China 743 grams CO_2/kWh Brazil 64 grams CO_2/kWh.
Other indirect CO_2 emissions	1,000 mt	Chartered vessels Leased cars Business travel by air	**Scope 3 GHG protocol**: Business travel calculated according to guidelines from the travel agencies. For distances less than 1,000 km, factor 0.18 kg CO_2 per km is used, while for voyage distances of more than 1,000 km., factor 0.11 kg CO_2 per km.	Chartered vessels: CO_2 emissions calculated in the same way as described for owned vessels in "Direct CO2 emissions" (Scope 1). Assumptions: All are diesel cars with an annual usage of 20,000 km / car, 12 km/l, and CO_2 emissions of 2.65 kg/l. The conversion factor is from Key2Green.
Total EEOI	1,000 mt	Owned and operated	Total EEOI is EEOI is made up by 3 contributions: cargo, ballast and port operation of the journey	$\text{Average EEOI} = \frac{\sum_i \sum_j (FC_{ij} \times C_{Fj})}{\sum_i (m_{cargo,i} \times D_i)}$ Sum of all fuel consumption on all voyages including port stays multiplied by the CO_2 factors respectively divided by transport work. Ref: IMO "Guidelines for Voluntary Use of the Ship *Energy Efficiency Operational Indicator*" from 2009.
Cargo EEOI	1,000 mt	Owned and operated	CO_2 emitted per metric ton of cargo transported, per nautical miles sailed: • *j* is fuel type • *i* is voyage number • FC_{ij} is mass of consumed fuel *j* at voyage *i* • CF_j is fuel mass to CO_2 mass conversion factor for fuel *j* • m_{cargo} is cargo carried (tonnes) • *D* is distance in nautical miles corresponding to the cargo carried or work done.	$\text{Average EEOI} = \frac{\sum_i \sum_j (FC_{ij} \times C_{Fj})}{\sum_i (m_{cargo,i} \times D_i)}$ Sum of all fuel consumption on laden voyages multiplied by the CO_2 factors respectively divided by transport work. Ref: IMO "Guidelines for Voluntary Use of the Ship *Energy Efficiency Operational Indicator*" from 2009.
SO_x emissions	1,000 mt	Owned and operated	For all purchased fuels, the amount of sulphur content is registered including for fuel purchased for NPP. Based on this the weighted average sulphur content is calculated. Formula provided by MAN Diesel & Turbo SE. Weighted average sulphur content is used for calculating the total SO_x emitted for all NORDEN voyages.	Total fuel quantity consumed multiplied by the average Sulphur content multiplied by 2 since the molar mass of SO_2 is twice as heavy as oxygen. Average sulphur content: 2011: 2.06%, 2012: 2,31%, 2013: 2,18%, 2014: 2,13%, 2015: 2,02%, 2016: 2,13%

Indicator	Unit	Boundary	Definition	Calculation
NO_x emissions	1,000 mt	Owned and operated	NO_x emissions are perceived as NO_2 emissions since this is presumably, what the emissions will eventually become. The energy produced is calculated using the fuel oil consumed in kg divided by the SFOC, which in this case is estimated to be 0.173 kg/kWh. Source: "Project Guide for MAN S50MC-C7 two-stroke engine, 6th Edition, January 2009".	NO_2 emissions from the energy produced by main engine x Tier I NO_x limit Guidance: Tier I NO_x limit = 17 g/kwh, as NORDEN's owned and operated vessels are Tier I compliant.
Waste	m3	Owned, operated vessels	In accordance with the MARPOL convention, the total m3 Garbage/waste produced onboard is registered onboard and reported on a monthly basis to the office. The waste handled on board is categorized in 8 categories. Garbage related to cargo residues are excluded from the KPI.	# m^3 / (# Vessel days / 30)

8. Vessel Safety and Security

Indicator	Unit	Boundary	Definition	Calculation
Days off duty - (injuries)	Days	Owned, operated vessels	Days off duty while on board, due to work related injuries.	# Days
People sign-off	People	Owned, operated vessels	People signed off due to a work related injury	# People
TRCF	Injuries	Owned, operated vessels	TRCF (Total Recordable Case Frequency) measures the frequency of any work related injuries beyond first aid. Injuries are reported from the vessel to office in accordance with OCIMF's 'Marine Injury Reporting Guidelines'.	# TRC / (Working hours / 1000000)
SIRE Inspections	Observation	Owned, operated vessels	Vetting inspections are performed by inspectors from oil companies in accordance with the Ship Inspection Report Programme (SIRE). Observations identified during the inspection are reported to vessel and office by the inspector (results are also recorded in the SIRE database by OCIMF).	# Observations / # Inspections
Port State Control	Deficiencies	Owned, operated vessels	Port State Controls (PSC) are performed by inspectors from a relevant PSC MOU, and the result of the inspection is reported to the master of the inspected vessel, who forwards the inspection report to office.	# Deficiencies / # Inspections

Indicator	Unit	Boundary	Definition	Calculation
Safety reports	Reports	Owned, operated vessels	Safety reports refer to situations, which could have led to an accident if they had developed further. Reports are divided into 3 categories. Near-miss, Unsafe acts and Unsafe conditions. The KPI is amount of reports per week.	# reports / (vessel days / 7)
LTIF	Injuries	Owned, operated vessels	LTIF (Lost Time Injury Frequency) measures the frequency of work related accidents, which caused a seafarer to be unable to work for more than 24 hours. Injuries are reported from the vessel to office in accordance with OCIMF's 'Marine Injury Reporting Guidelines'. Based on exposure hours.	# LTI / (Working hours / 1000000)
Fatalities	Injuries	Owned, operated vessels	Work related accidents with fatal consequences for a NORDEN employee at sea. Excludes external personnel and fatalities resulting from a criminal act or suicide.	# Fatalities
Rest hours at sea	Violations	Owned, operated vessels	Rest hour non-conformity per full-time equivalent. Rest hours are monitored onboard in accordance with the ILO and STCW conventions. All violations of rest hours' conventions are recorded on board each vessel and they are all reported to office. Rest hour non-conformities is defined as number of days where a seafarer is not in compliance.	Non-conformities / (# on board days / 30)
Oil spills	Spills	Owned, operated vessels	Incidents where oil from the vessel came into contact with seawater. The KPI differentiates between spills over/under 1 barrel.	# Oil spills

9. People

Indicator	Unit	Boundary	Definition	Calculation
Total employed at sea	Headcount	Employees at sea	Total number of employees at sea is defined as total seafarers per 31 December holding a permanent or fixed term contract. Seafarers that are between fixed term contracts are not included in this KPI.	# Employed at sea
Employed on shore	Headcount	Employees on shore	Employees hired for a position on land in a NORDEN office. • Total workforce is the total number at 31 December • Incl. substitutes and trainees. • Full-time positions are 37h/week • Part-time are less than 37h/week incl. student assistants. • A permanent contract can be fulltime or part-time.	# FTE on shore New employees are registered manually in Fairsail, which registers data such as gender, age, nationality, position and work office.

			• A fixed-term contract ends when a specific time period expires, incl. trainees and maternity leave replacements. • Employees is NPP is excluded.	
Retention rate of employees at sea	%	Employees at sea	Based on INTERTANKO Retention Formula from March 2009. Resignations are excl. beneficial or unavoidable dismissals. Average employed based on seafarers with permanent contract, fixed term contracts as well as seafarers between fixed term contracts. Retention rate excludes employees from NORD QUEBEC, NORD MONTREAL and NORD PENGUIN, which are manned from Univan's Manila office. The at-home pool management is not applicable for agents with only 3 vessels in external crew management. The rotation includes other vessels under Univan management (non-NORDEN fleet) in order to uphold rotation. All off-signers are removed from the pool count upon repatriation of vessels in order to avoid influencing the retention incorrectly.	100 – (# Resignations / Average #employed x 100)
Retention rate of employees on shore	%	Employees on shore	Retention rate for onshore employees is calculated based on the average number of employees in the reporting period. Excl. of NPP employees.	100 – (# Resignations/ Average #employed x 100) Employee data is drawn from FairSale and sorted by employment date and potential dismissal date.
Leaders	Leaders	Employees on shore	A leader is an employee with leadership responsibilities, meaning leading a team of at least 1 other person, regardless of title. Excl. of NPP leaders.	# leaders
Women in leadership	%	Employees on shore	% women in leadership (of total pool of onshore leaders). Excl. of NPP leaders.	# women/total # leaders x 100)
Share of female board members	%	Board	Excl. of employee elected board members	# women/ board members x 100
Cadets	Headcount	Employees at sea	All cadets under education in NORDEN. Measured per ultimo December.	# cadets