

C0. Introduction

C0.1

**(C0.1) Give a general description and introduction to your organization.**

Klaveness Combination Carriers ASA (KCC) is a shipping company which owns and operates specialized vessels, combination carriers, within the deep-sea tanker and dry bulk segment. The combination carriers are unique vessels as they provide the transportation service of both a standard MR or LR1 product tanker and a standard panamax or kamsarmax dry bulk vessel. They are employed in trades where standard dry bulk and tanker vessels sail empty (sail in ballast) over long distances due to trade imbalances. Most of the time, KCC's combination carriers combine a tanker cargo in one direction and a dry bulk cargo on the return voyage with minimum ballast in-between. KCC strives to solve inefficiencies by consecutively switching between dry and wet cargo shipments with minimum ballast between laden voyages.

Due to their superior efficiency, each of KCC's combination carriers do the transportation work and replace roughly ¼ tanker vessel and ¼ dry bulk vessel in KCC's combination trades reducing emissions throughout their operational life from construction at the shipyard, through daily operation to recycling. Emissions from daily operation and fuel oil combustion of standard tanker and dry bulk vessels represent more than 90% emissions in a life cycle perspective.

KCC was established in 2018 and the share is listed on Oslo Stock Exchange. Rederiaksjeselskapet Torvald Klaveness is the main shareholder and holds 53.8 % of total shares. Klaveness has been an owner and operator of combination carriers since the early 1950s. Over this period the company has developed and refined vessel design, equipment, operational procedures and crew training to provide the customers with the most efficient and environmentally friendly, high-quality shipping services.

As per year end 2021, KCC had a fleet of 16 vessels in operation, of which three new vessels delivered during 2021. KCC's oldest vessel, built 2001, was sold in December 2021. KCC is the world leader in combination carriers, owning and operating eight CABU and eight CLEANBU combination carriers. KCC's combination carriers trade in dedicated trade patterns with consecutive switching between dry and wet cargo shipments with minimum ballast between the laden voyages. The vessels ship tanker cargoes into dry bulk export hubs such as Australia and South America and ship dry bulk cargoes on the return leg. The efficient trading pattern of KCC's combination carriers results in:

- Higher asset utilization through having two laden legs, which gives a higher number of revenue days compared to standard vessels.
- Substantial fuel cost advantage with 30-40% lower fuel consumption per ton-mile transported cargo compared to standard dry bulk and tanker vessels.
- Reduced emissions per transported ton of cargo, minimizing the environmental footprint of the fleet.
- Lower freight costs to our customers compared to the best alternative mode of transportation while at the same time giving our shareholders better earnings and downside protection compared to standard shipping segments.

Profit for the year 2021 was USD 22.6 million, based on solid earnings for the fleet and sales gain from sale of one vessel. Net revenue from operation of vessels increased by 27% from USD 91.1 million in 2020 to USD 115.9 million in 2021 mainly due to a larger fleet in operation. Average TCE earnings for the CABU fleet of 21,600 \$/d in 2021 corresponds to a multiple of 3.4 to standard spot earnings for MR tankers in 2021 as reported by brokers while average TCE earnings for the CLEANBU fleet of 20,200 \$/d in 2021 corresponds to a multiple of 1.9 to standard spot earnings for LR1 tankers in 2021 as reported by brokers.

C0.2

**(C0.2) State the start and end date of the year for which you are reporting data.**

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Reporting year	January 1 2021	December 31 2021	No	<Not Applicable>

C0.3

**(C0.3) Select the countries/areas in which you operate.**

Norway

C0.4

**(C0.4) Select the currency used for all financial information disclosed throughout your response.**

USD

C0.5

**(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.**

Financial control

C-T00.7/C-TS0.7

**(C-T00.7/C-TS0.7) For which transport modes will you be providing data?**

Marine

C0.8

**(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?**

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, a Ticker symbol	KCC
Yes, an ISIN code	NO0010833262 (share)
Yes, an ISIN code	NO0010874530 (bond)

C1. Governance

C1.1

**(C1.1) Is there board-level oversight of climate-related issues within your organization?**

Yes

C1.1a

**(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.**

Position of individual(s)	Please explain
Board Chair	<p>The highest responsibility for climate-related issues is with the Board Chair (Board of Directors). Climate-related risks and opportunities are on the agenda at every main Board of Directors meetings as part of the business review and strategy.</p> <p>The Board of Directors approved in 2019 the environmental policy and strategy for the period 2020-2050, which includes targets and ambitions both short-term and long-term. Climate-related risks and opportunities with emphasis on decarbonization are as well main building blocks in the business strategy for the period 2021-2025 both in relation to cargoes carried, customers served and decarbonization measures to be initiated including new fuels and propulsion technologies. This strategy was approved by the Board in November 2020.</p> <p>The Board of Directors is updated on performances against the four environmental KPIs in every monthly report to the Board. Climate-related risks are assessed as an integral part of the Group's overall risk review which is discussed with the Audit Committee and the Board of Directors every quarter.</p> <p>Examples of climate-related decisions by Chair of the Board and the Board of Directors:</p> <ul style="list-style-type: none"> <li>- In November 2021 the Chair of the Board and the Board of Directors approved an equity issue of USD 25 million in new equity which will be allocated exclusively to fund the Company's energy efficiency improvement program. The funding of the program will enable the Company to deliver significant cuts in carbon emission and further strengthen KCC's position as a leader in low carbon shipping, which is considered to be a key component in the Company's sustainability strategy.</li> <li>- The Board has given the management a mandate to invest up to USD 2.5 million per year in energy efficiency improvement initiatives.</li> <li>- In addition to the mandate of USD 2.5 million per year, the Board has approved installation of an air lubrication system and a shaft generator (energy-efficiency measures) on two vessels of approximately USD 7 million in total, with implementation in 2023.</li> </ul>

C1.1b

**(C1.1b) Provide further details on the board’s oversight of climate-related issues.**

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Scope of board-level oversight	Please explain
Scheduled – all meetings	<p>Reviewing and guiding strategy</p> <p>Reviewing and guiding major plans of action</p> <p>Reviewing and guiding risk management policies</p> <p>Setting performance objectives</p> <p>Monitoring implementation and performance of objectives</p> <p>Overseeing major capital expenditures, acquisitions and divestitures</p> <p>Monitoring and overseeing progress against goals and targets for addressing climate-related issues</p>	<Not Applicable>	<p>The Board of Directors:</p> <ul style="list-style-type: none"> <li>- Reviews, discusses with management, and approves the strategy and business plans including ESG topics and management of climate-related risks and opportunities</li> <li>- Reviews, approves, and monitors specific short-term targets and long-term goals and ambitions and monitors implementation and performance of objectives including climate-related ambitions and targets</li> <li>- Approves and oversees major capital expenditures e.g. with respect to investment in energy efficiency measures and major plans of action</li> <li>- Approves and oversees the environmental policy and strategy</li> <li>- Approves the risk management policy</li> </ul> <p>The Audit Committee of the Board:</p> <ul style="list-style-type: none"> <li>- Monitors and oversees the risk management policy and framework</li> <li>- Discusses with management the quarterly risk review, including climate-related risks</li> <li>- Together with the administration plans and follows up internal audits, including audit of environmental KPIs and other climate-related reporting</li> </ul>

**C1.1d**

**(C1.1d) Does your organization have at least one board member with competence on climate-related issues?**

Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues	Primary reason for no board-level competence on climate-related issues	Explain why your organization does not have at least one board member with competence on climate-related issues and any plans to address board-level competence in the future
Row 1 Yes	<p>In appointing members to the Board, it is emphasized that the Board shall have the requisite competency to independently evaluate the cases presented by the executive management team as well as the Company’s operation. It is also considered important that the Board can function well as a body of colleagues and that they meet the Company’s need for expertise and diversity. Cost-effective decarbonization of shipping is the centerpiece of KCC’s strategy for 2020-2025, hence Board members competence on climate-related issues is of high importance. Board member representatives of the majority owner, Torvald Klaveness, (Chair of the Board and one Board member) work with long-term strategic and short-term challenges related to climate-related issues for the shipping industry on a daily basis and the Torvald Klaveness Group has taken an active role in the transition to low carbon shipping.</p> <p>All Board members of KCC have access to the learning program Decarbonization by Klaveness Academy. This course provides overview of climate change, how shipping is contributing and why this industry is hard to decarbonize as well as details related to different regulations, policies and framework agreements targeting to reduce greenhouse gas emissions from shipping, and how/when these will affect the industry. The program is mandatory for the Board member representatives of Torvald Klaveness.</p>	<Not Applicable>	<Not Applicable>

**C1.2**

**(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.**

Name of the position(s) and/or committee(s)	Reporting line	Responsibility	Coverage of responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Quarterly
Chief Financial Officer (CFO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Quarterly

**C1.2a**

**(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).**

The CEO and the CFO are part of the Executive Management Team, both assessing and managing climate-related issues, risks and opportunities. They are overseeing and reporting directly to the Board of Directors on the management’s progress against strategic sustainability and climate-related objectives. Frequency of reporting to the Board on climate-related issues at least on a quarterly basis.

CEO:

The management level responsibility for climate-related risks and opportunities lies with the CEO. The CEO is responsible for developing the strategy and sets targets for the Company, ensuring the strategy is anchored in the organization, including with the main service providers, and with the Board of Directors. As an example, the Environmental Strategy and Policy published in 2020, and the five-year business strategy for 2021-2025 are both developed by and within the responsibility of the CEO. In addition, the responsibility of the CEO is to make sure that climate-related issues are considered in all decision making processes, both when interacting with customers, suppliers, and other stakeholders. For example, the CEO together with the chartering team and the commercial operations team plan how to improve the trading and operational efficiency of the fleet and he co-operates closely with the technical and project teams to decide on which technical solutions and prototypes to test and install to improve the fuel efficiency of the vessels. During 2020-2022, the CEO of KCC has as well initiated workshops with key customers to understand how they handle climate-related issues with focus on decarbonization, which again will impact KCC’s business activities. The discussions with customers also include how KCC in co-operation with customers can improve carbon efficiency of KCC’s services e.g. by reducing speed, increasing cargo intake and decrease waiting time in ports.

CFO:

Responsible for managing the Company’s financial strategy and operations. Main responsibilities include risk review of frameworks, policies, and establishing mitigation plans, including for climate-related risks. Further the CFO has the responsibility for monitoring and assessing climate-related risks and opportunities. The CFO is responsible for the quarterly company-wide risk management assessment performed by management together with a broad range of employees and discussed with the audit committee and the Board. Environmental risks are incorporated in this risk management process. The CFO is as well responsible for external ESG-reporting.

**C1.3**

**(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?**

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	Remuneration guidelines and remuneration report for 2021 is published on the Company’s homepage. The discretionary part of the 2021 bonus for the CEO and the CFO includes Company performance related to decarbonization; to show progress towards 2022 and 2030 decarbonization targets (Fleet EEOI and average CO2 emissions per vessel).

**C1.3a**

**(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).**

Entitled to incentive	Type of incentive	Activity incentivized	Comment
Chief Executive Officer (CEO)	Monetary reward	Emissions reduction target Efficiency target	One of the performance criteria in the variable cash salary (i.e. cash bonus) is progress towards 2022 and 2030 decarbonization targets.
Chief Financial Officer (CFO)	Monetary reward	Emissions reduction target Efficiency target	One of the performance criteria in the variable cash salary (i.e. cash bonus) is progress towards 2022 and 2030 decarbonization targets.

**C2. Risks and opportunities**

**C2.1**

**(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?**

Yes

**C2.1a**

**(C2.1a) How does your organization define short-, medium- and long-term time horizons?**

	From (years)	To (years)	Comment
Short-term	0	3	
Medium-term	3	10	
Long-term	10	30	

**C2.1b**

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**(C2.1b) How does your organization define substantive financial or strategic impact on your business?**

KCC has defined a substantive financial or strategic impact on its business using the following thresholds for impact on equity or cash and probability:

- Low: Probability < 3%, Impact < USD 2 million
- Medium: Probability 3-30%, Impact USD 2-10 million
- High: Probability > 30%, Impact > USD 10 million

This includes both direct and indirect risks affecting KCC and risk types considered include climate-related risks.

**C2.2**

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**(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.**

**Value chain stage(s) covered**

Direct operations  
Upstream  
Downstream

**Risk management process**

Integrated into multi-disciplinary company-wide risk management process

**Frequency of assessment**

More than once a year

**Time horizon(s) covered**

Short-term  
Medium-term  
Long-term

**Description of process**

KCC's process of identifying, assessing, and responding to climate related risks and opportunities is integrated into the overall multidisciplinary risk management process. The risk assessment is performed on a quarterly basis and the value chain is assessed both upstream and downstream in addition to direct effects on KCC's business activities. The aluminum industry is a good example of where KCC is dependent on the entire value chain as we transport caustic soda to the alumina refineries and alumina from the refineries to the aluminum smelters. In this value chain we assess for example how sourcing of caustic soda changes and how demand for the final product, aluminum, develops based on different types of risks, including climate-related risks.

When identifying and assessing climate-related risks as for other risk types, we have defined a substantive financial or strategic impact on our business using the thresholds for impact on equity or cash and probability (see C2.1b), over the next 12 months. In addition to the specific assessment for the rolling 12 months period, an assessment for the main risks from 12 months – 10 years is included at least annually. Impact and probability for the longer-term horizons are more uncertain, hence the assessment is less quantitative than the short-term assessment. The risk management process includes the following:

- i) On a quarterly basis a cross-functional team (finance, commercial, operations, management) discusses the overall risk development with focus on main risks and new risks discovered, including assessing impact and probability for each risk and define potential mitigating actions for the main risks.
- ii) The management discusses main risks with the Audit Committee and the Board of Directors on a quarterly basis. A main risk is a risk already identified and well understood that could materially impact our financial, reputation, business model, or strategy.
- iii) When the combination of probability and impact is higher than what is accepted, mitigating actions are implemented either based on management decision or if relevant, after discussions with the Board of Directors.

Climate-related opportunities especially for a longer-term time horizon are also potentially identified and assessed through this process. More information related the risk management process has been provided in the TCFD report published in 2021 on KCC's website.

**Example of a PHYSICAL RISK**

Situation: Through the cross-functional team discussions extreme weather events such as floods and storms have been identified as one of the main physical climate-related risks for KCC both in the short- and medium-term.

Assessing impact and probability: Extreme weather events such as floods, storms and heavy precipitation are increasing in certain areas and the probability of KCC's vessels or customer's production facilities or ports to be involved is assessed to be medium (3-30% probability). Such events might lead to trading inefficiencies such as waiting time, idling of vessels, damage to vessels or to temporary cuts in customers' production, whereof the latter likely will have the largest impact on KCC's business as it might take time to ramp up production after such events. Based on experience with similar events and an estimated financial impact based on lost cargo volumes or idling of vessels, the financial impact is estimated to be medium (USD 2-10 million).

Action: Risk to be monitored through the quarterly risk assessment meetings and mitigation actions to be assessed if probability and/or impact increases.

**Example of a TRANSITIONAL OPPORTUNITY**

Situation: The project team, commercial team and operations team have identified operational/trading efficiency and energy efficiency as a major transitional opportunity both in the short-, medium- and long-term. Low-/zero-emission fuels that vessels in the future will run on are likely to be substantially more costly than today's marine fuels. Efficient use of fuel will hence become increasingly important in the future. KCC has identified operational and energy efficiency as a transitional opportunity for existing vessels, but will also be a permanent opportunity for new vessels planned to run on zero-emission fuels as the combination of energy and operational efficiency will cut use of expensive future zero emission fuels substantially below alternative shipping solutions.

Assessing impact and probability: Probability is assessed to be high (> 30%) as new fuels will be likely be more expensive. Impact of more efficient use of fuels is assessed to have a high impact (> USD 10 million) based on estimated fuel savings.

Action: KCC has identified, assessed and the project team with assistance from crew and operations has started to implement several energy efficiency initiatives on board exiting vessels. The results of the initiatives are monitored and progress reported to management and the Board. Similarly, the chartering and operations teams are constantly working on improving trading/operational efficiency to minimize ballast and waiting time in its trades. KPIs have been established to monitor progress for the trading/operational efficiency initiatives.

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C2.2a

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**(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?**

	Relevance & Inclusion	Please explain
Current regulation	Relevant, always included	Adherence to and impact of potential changes to current regulations related to climate-related issues are monitored, assessed and acted upon on a regular basis. Non-compliance with global IMO regulations or local regulation might among other things lead to detention of vessels and fines by port authorities. Current regulation mainly includes the International Maritime Organization's (IMO) MARPOL (prevention of pollution from ship) and regional regulations for example related to bio diversity. Example: In June 2021, IMO through MEPC 76 approved technical and operational measures to reduce absolute CO2 emissions and carbon intensity of international shipping. The adopted measures will take effect from 2023 and will be implemented through amendments of several MARPOL Annexes. The EEXI regulation sets a minimum requirement to the energy efficiency of the design of all vessels in line with the Phase 2 EEDI requirements applicable for newbuilds. The current EEXI-Score of the CLEANBU vessels' design is considerably below (within) the EEXI requirements (-11%) while the CABU II vessels' design currently scores marginally above the EEXI requirements (+2%). The preliminary EEXI score of the design of the five old CABU I vessels built 2001-2007, calculated by DNV, suggests an EEXI score being around 13% above the set minimum requirements. KCC is in the process of making additional model tests to include the effect of energy efficiency measures to be installed on the vessels into the EEXI calculations of all vessel classes. This shall ensure that the eleven vessels built 2016-2021 (three CABU II and eight CLEANBU) will fully comply with 2023 EEXI-requirements and are expected to comply with likely tightening of this regulation going forward. The five CABU I vessels will likely have to reduce speed somewhat to comply, the operational impact is however expected to be limited as the fleet rarely operate at maximum load on the main engine.
Emerging regulation	Relevant, always included	Several global and regional regulations for the shipping industry related to climate change generally and emissions specifically are drawn up and more is likely to come over the next years. KCC is monitoring this closely, assessing potential impact and mitigation actions. Currently, the EU Taxonomy is under implementation, while the incorporation of shipping into the EU Emission Trading System (ETS) is likely to be approved within 2022 with implementation from 2023 or 2024. IMO has started its work on the longer term measures including a global carbon tax for shipping which was discussed at the MEPC-78 meeting in June 2022. Example: New policies and regulations within the financial sector as for example the EU Taxonomy might impact pricing and availability of capital as part of KCC's activities will not qualify as environmentally sustainable economic activities under the Taxonomy.
Technology	Relevant, always included	There is a lot of uncertainties related to future propulsion technology and fuels. New propulsion systems as e.g. fuel cells will possibly replace the traditional combustion engines and zero-emission fuels are not available for deep-sea shipping today, hence the choice of both are uncertain. Propulsion systems are a major part of the cost for new vessels, hence what to invest in and when to invest is of major relevance to all ship owners. Example: Early investment in new propulsion technology will be risky as the chosen technology and zero emission fuel might not be the winner in the long run. Waiting too long with investing in new vessels/new propulsion technology is also risky as this might negatively impact KCC's competitive advantage.
Legal	Relevant, sometimes included	Shipping is an industry where the effect of spills and other accidents can have large impacts on the environment. Hence, the risk of environmental claims, fines and legal proceedings are evaluated and monitored in KCC. However, this risk is currently quite constant and hence not included in every risk assessment. Example: KCC manages these risks together with the ship manager through being compliant on all legal matters, flag and class requirements including climate change and through ensuring that KCC and all assets are operated in accordance with local jurisdiction.
Market	Relevant, always included	KCC operates in an industry that today is heavily dependent on fossil fuels both in powering the engine of the vessels and through the cargos carried. This risk is hence one of the main longer-term risks. Example: Lower demand and shipment volumes for fossil fuels and changed customer policies with respect to minimum carbon emission requirements could reduce KCC's revenue stream and make operations more expensive.
Reputation	Relevant, sometimes included	The possible future stigmatization of shipping as an industry affects KCC and the risk of not delivering in line with or exceed set emission targets and other targets for improving KCC's environmental footprint can affect KCC's reputation. This can ultimately mean limited access to capital and impact negatively on customers/contracts and through this impact revenue. However, this risk is currently quite constant and hence not included in every risk assessment.
Acute physical	Relevant, sometimes included	Extreme weather events such as floods, storms and heavy precipitation might impact revenue negatively and increased costs as waiting time increases, vessel repairs and less efficient vessel trading due to: - Idling of vessels due to bad weather, - Damage to vessels, - Temporary cut in customer 's production. However, the impact of this risk is currently quite constant and hence the risk is not included in every risk assessment.
Chronic physical	Relevant, sometimes included	Lower food production in some areas due to climate-changes can change cargo volumes and trade patterns for transportation of grains etc. Approximately 7% of revenue came from grains, soya beans and vegoil in 2021 (2020: 2 %). The impact of this risk is currently considered to be quite constant and hence the risk is not included in every risk assessment.

**C2.3**

**(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?**

Yes

**C2.3a**

**(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.**

**Identifier**

Risk 1

**Where in the value chain does the risk driver occur?**

Direct operations

**Risk type & Primary climate-related risk driver**

Technology	Transitioning to lower emissions technology
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**Primary potential financial impact**

Decreased asset value or asset useful life leading to write-offs, asset impairment or early retirement of existing assets

**Climate risk type mapped to traditional financial services industry risk classification**

<Not Applicable>

**Company-specific description**

For deep sea shipping there are uncertainties related to future propulsion technology as there presently are no available alternative propulsion technologies and zero-emission fuels are not globally available for this shipping segment. Batteries are for example not possible to use for vessels sailing such large distances and ammonia and methanol is not available in large scale or in all regions. Early investment in new propulsion technology will hence be risky as the chosen technology might not be the winner in the long run. However, when new propulsion technologies and fuels are available, this can potentially have substantial financial impact on KCC's operations. As new technology matures, it can lead to decreased vessel asset value leading to write-offs of existing vessels running on fossil fuels or for new vessels if the wrong technology has been invested in.

The risks related to KCC's five oldest vessels built 2001-2007 which will be recycled in the period 2026-2032 is limited as the vessel values of these vessels have been depreciated over many years and lead time to building vessels with new propulsion systems are likely towards the end of this period (2026-2032). Hence the risk is to a larger extent linked to KCC's 11 vessels built 2016-2021 for which new propulsion technology and new fuels might lead to lower vessel values and impairment in the longer

term (10 years +) when new fuels and technology mature (useful life of a combination carrier is expected to be 25 years).

**Time horizon**

Long-term

**Likelihood**

Likely

**Magnitude of impact**

High

**Are you able to provide a potential financial impact figure?**

Yes, an estimated range

**Potential financial impact figure (currency)**

<Not Applicable>

**Potential financial impact figure – minimum (currency)**

10000000

**Potential financial impact figure – maximum (currency)**

80000000

**Explanation of financial impact figure**

The financial impact can materialize through for example decreasing revenue due to less competitive fleet, higher exposure to CO2 taxation, lack of access to capital if existing fleet is out of favor or lower vessel values and early recycling of vessels resulting in write-downs. The latter of these potential results will likely have the largest financial impact and is the basis for the estimated financial impact range.

The CLEANBU fleet consisting of eight vessels are built 2019-2021 and are assumed to have a useful life of 25 years with an annual depreciation of approx USD 2.0 million per vessel. The financial impact range is based on one to eight of these vessels being outdated and hence recycled five years prior to expected life, when they are 20 years old, leading to write downs of approximately USD 10 million per vessel (USD 2 million per year x 5 years) and hence a financial impact range of USD 10-80 million.

**Cost of response to risk**

70000000

**Description of response and explanation of cost calculation**

To maintain a fleet of similar size/capacity, each existing vessel being recycled needs to be replaced by a new vessel. Cost of response of this risk is hence illustrated through the cost of a new vessel to replace an existing vessel, which is currently estimated to be around USD 70 million per CLEANBU vessel for a green ammonia fuel based vessel.

KCC's combination carrier fleet, built to efficiently switch between dry bulk and tanker trades, ensure minimum days without cargo onboard (ballast) and a currently 30-40% lower fuel consumption and carbon emission per ton cargo transported. This will likely improve the possibility for KCC's vessels to maintain competitiveness for a longer time than today's standard vessels during the transition phase with introduction of new fuels and tougher environmental regulations. To mitigate this risk KCC focuses on further improving the operational and trading efficiency of the fleet.

To further mitigate this risk, KCC is rolling out a large energy efficiency program on the entire fleet to improve the fuel-efficiency performance of existing vessels. This will further improve the competitiveness of the fleet. The program includes twelve measures, including Mewis propeller duct, ultrasonic propeller cleaning, and an in-transit hull cleaning robot, ShipShave, being installed on all vessels. As part of this program, KCC will install Silverstream air lubrication system and a shaft generator on two modern vessels in 2023, and if successful, the intention is to install this measure on the remaining nine modern vessels in 2024-2026. These and likely additional measures can potentially further extend the current fleets life expectancy and ease transition to more costly low/zero emission fuels. We also see several potential zero emission fuels that can be used on KCC's existing vessels without the need of a large modification of the engine and tank systems (e-diesel, green methanol, biofuels etc) and KCC is testing out alternative fuels such as sustainable bio-fuel and has made two biofuel bunkerings in 2021.

When ordering newbuilds KCC' will mitigate this risk through only contracting vessels being prepared for a cost effective conversion to burning zero-emission fuels or be zero-emission vessels from delivery. KCC's target is to order the first zero-emission vessel before 2030. An internal project has been established to evaluate this further.

**Comment**

**Identifier**

Risk 2

**Where in the value chain does the risk driver occur?**

Direct operations

**Risk type & Primary climate-related risk driver**

Market	Changing customer behavior
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**Primary potential financial impact**

Decreased revenues due to reduced demand for products and services

**Climate risk type mapped to traditional financial services industry risk classification**

<Not Applicable>

**Company-specific description**

Demand for fossil fuels and hence demand for transportation of fossil fuels will decrease over the next decades. New trade flows and changes in existing trade flows might affect KCC's combination trading pattern and revenue. Such demand deterioration may as well negatively impact supply-demand balance in both the dry bulk and tanker markets resulting in more vessels competing for lower freight volumes or different types of cargo and freight rates might deteriorate and revenue decrease. When and to which extent is uncertain, but such a change in KCC's customers preferences for the transportation of fossil fuel can potentially have a substantial financial impact on KCC's revenue stream. In 2021 the transportation of fossil fuels represented 19% of KCC's total transported cargo. Therefore a reduction in demand for transportation of fossil fuels might have a substantial financial impact.

**Time horizon**

Long-term

**Likelihood**

Very likely

**Magnitude of impact**

Medium-high

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

7000000

**Potential financial impact figure – minimum (currency)**

<Not Applicable>

**Potential financial impact figure – maximum (currency)**

<Not Applicable>

**Explanation of financial impact figure**

The potential financial impact figure is based on the following assumptions:

- Lower demand for transportation of fossil fuels and hence increased competition for the available cargoes might as an example result in a loss of 50% of the transported volume of fossil fuels for the CLEANBU fleet
- To maintain a high degree of combination trading, KCC has to combine wet and dry cargoes. This example is based on KCC not being able to secure alternative wet cargoes for the lost fossil fuel (clean petroleum product/CPP) volume, resulting in lower combination trading. 50% lower CPP volume implies approx. 35 %-points lower combination trading for the CLEANBU vessels
- Given market levels for 2021, a round-voyage with dry and wet cargo (combination trade) would give earnings of approx 23,850 \$/d on average. Earnings for a standard dry bulk vessel for same round voyage (cargo one way, empty/ballast back) would be approx 21,000 \$/d. Hence, combination trade would give approx 2,850 \$/d in higher earnings.
- Assuming that the vessels will trade 100% in dry bulk instead of in combination trading for the 35%-points lower combination trading, estimated negative impact on revenue is approx. USD 7 million per annum based on 2021 numbers (2,450 onhire days for the 8 CLEANBU vessels in 2021 multiplied by 2,850 \$/day in lower average TCE earnings given market rates in 2021 when trading as standard dry bulk vessel rather than in combination trade = 2,450\*2,850 = USD 7 million in lower revenue). In a year with a full fleet on water throughout the year, the impact will be higher and this impact figure is as well dependent on the volatile dry bulk and product tanker markets rates.

**Cost of response to risk**

100000

**Description of response and explanation of cost calculation**

As demand for transportation of fossil fuels will decrease in the transition to a low-carbon economy, the Company targets to reduce its dependence on high intensive CO2-industries over time and to focus on low intensive CO2-industries such as biofuel or synthetic fuel industries and the growing lithium industry as well as industries that are in the transition to becoming low CO2 intensive, such as the aluminum/alumina industry, the steel industry and the petrochemical industry. KCC's strategy is among other things to increase transportation of caustic soda (CSS). CSS is already KCC's largest transported tanker (wet) cargo and KCC targets to increase further its market share with its traditional alumina industry customers and to build a position as the leading shipping company for transportation of caustic soda to the infant Australian lithium refinery industry which is likely to grow substantially over the coming years. KCC transports limited dry bulk fossil fuels (coal) in its combination trades to/from Australia and the Americas and targets to reduce this share further over the coming years by increasing further shipments of its non-fossil and easy to clean target dry bulk commodities like alumina, grains, salt, sugar, bauxite and iron ore.

The existing vessels can continue to be used for such products and industries and hence no large investment is needed related to the vessels themselves. The cost of the response is related to market and trade flow research and establishing customer dialogues. The cost is estimated based on time spent by internal resources and/or external consultants, is currently in total approx. half an employee-year (USD 100k) per annum. This is likely to increase over the coming years.

**Comment**

**Identifier**

Risk 3

**Where in the value chain does the risk driver occur?**

Direct operations

**Risk type & Primary climate-related risk driver**

Emerging regulation	Carbon pricing mechanisms
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**Primary potential financial impact**

Increased indirect (operating) costs

**Climate risk type mapped to traditional financial services industry risk classification**

<Not Applicable>

**Company-specific description**

Global carbon taxes on deep sea shipping are likely to be introduced over the next years. KCC's vessels operate globally and will be impacted by such regulations. A global regime will most likely be based on actual CO2 emissions (like the EU ETS which will be introduced in 2023 or 2024), which would be favorable for KCC, but could also be based on a carbon intensity indicator (proposed by some countries). This latter indicator may or may not be favorable, depending on the accuracy of such an indicator. The downside risk for KCC lays in the scenario where this taxation regime is based on a simple carbon intensity indicator based on the theoretical cargo intake of a vessels, not considering actual cargo transported. Mainly all standard dry bulk and tanker vessels sail empty 30-50% of the time, while KCC's vessels sail empty only 10-20% of the time. When sailing with cargo the vessel consumes more fuel and hence emit more. However, emissions per ton cargo transported is lower the less ballast (empty) the vessel sail. KCC is in simple terms, everything else equal, emitting more CO2 per sailed distance compared to the standard vessels, but less per transported ton. This is due to the KCC vessels higher utilization transporting substantially more cargo than standard vessels and sailing with cargo requires more energy than sailing empty. This means that in a carbon tax system based on theoretical cargo intake and not actual cargo intake, KCC would have to pay higher taxes (increased indirect (operating) costs) than a standard vessel owners even though the KCC vessel emit less than the standard vessels per transported ton cargo.

**Time horizon**

Medium-term

**Likelihood**

Unlikely

**Magnitude of impact**

Medium

**Are you able to provide a potential financial impact figure?**

Yes, an estimated range

**Potential financial impact figure (currency)**

&lt;Not Applicable&gt;

**Potential financial impact figure – minimum (currency)**

0

**Potential financial impact figure – maximum (currency)**

2100000

**Explanation of financial impact figure**

KCC's vessels are in average sailing empty approximately 30% less than standard vessels. Fuel consumed is about 25% higher per day sailing fully laden compared to sailing empty. This would indicate that KCC would be subject to abt 7.5% (30% $\times$ 25%) higher CO2 taxation than the standard vessel, if the CO2 taxation is linked to an inaccurate proxy like a carbon intensity indicator where cargo and transport work is not considered or assumed. Based on today's EUA pricing of approximately USD 90/mt CO2 and if we assume an average emission of 19,000 mts/year for the standard vessel, based on approximate figures for KCC's 2021 emissions, the estimated additional risk for KCC's fleet of 16 vessels is approx. USD 2.1 million per annum, assuming that KCC has to pay for the carbon tax beyond that of the average standard vessel. (7.5% of 19,000 mts CO2  $\times$  16 vessels  $\times$  USD 90 per mts CO2). It is likely that carbon tax for the average standard vessel will be factored into market freight and hence paid by the customer.

**Cost of response to risk**

0

**Description of response and explanation of cost calculation**

The regulation can be implemented in several different ways, each with different levels of impact for the Company. The cost of response for the outlined risk where the tax is based on an inaccurate carbon intensity indicator is for the current response set to 0. Nonetheless, this risk is mitigated through KCC's implementation of measures to improve the energy efficiency of the vessels, but these energy efficiency measures are being implemented independent of the above potential regulations. Such investments will be financed through lower fuel consumption, potentially with additional support of Governmental grants (like Enova, the Norwegian government enterprise promoting the transition to a low emission society) and possibly from customers. KCC has during 2021 considerably speeded up the process of evaluating, testing and implementing new fuel saving initiatives and specific initiatives can be found on page 9 in the Sustainability Report for 2021. USD 2.8 million was invested in such initiatives in 2021 and in 2022 KCC has approved an investment of approximately USD 7 million (to be implemented in 2023) for two specific measures, in addition to a general mandate of USD 2.5 million in such investments. KCC raised USD 25 million equity in November 2021 dedicated to such energy efficiency investments. In addition, KCC is mitigating this risk through working closely with our stakeholders for example through the Norwegian Shipowners Association to promote strong and fair regulations that incentivizes the industry to decarbonize.

**Comment**

## C2.4

**(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?**

Yes

## C2.4a

**(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.****Identifier**

Opp1

**Where in the value chain does the opportunity occur?**

Direct operations

**Opportunity type**

Resource efficiency

**Primary climate-related opportunity driver**

Use of more efficient modes of transport

**Primary potential financial impact**

Increased revenues resulting from increased demand for products and services

**Company-specific description**

There are large inefficiencies in deep-sea shipping. Standard dry bulk vessels sail empty 40-45% of the time and standard product tanker vessels trade empty around 30-40% of the time. KCC combines wet and dry cargoes and hence only ballast 10-20% of the time. Based on the efficient combination trading, the KCC's fleet emits up to 40% less greenhouse gases than standard dry bulk and tanker vessels for the same transport work, a competitive advantage for KCC. Carbon emissions are high on the agenda for many of KCC's customers. KCC evaluates this as an opportunity and targets to further improve its trading patterns and hence improve its trading efficiency to minimize ballasting and waiting time. Through these initiatives KCC will further strengthen its carbon efficiency advantage and its competitive advantage targeting to establish KCC as the preferred carrier for its customers in all its main trades. If successful, KCC expects this to be a "virtuous cycle" for the company as it would increase demand for KCC's services which would increase the number of days spent in efficient combination trading and again lead to reduced emissions and increased number of earning days and result in KCC's service becoming even more competitive and attractive. If customers in the future in addition are willing to pay for the reduced emissions, the earnings improve further. KCC had in 2021 68% combination trading and 17% ballast and the ambition for 2022 (and in the longer run) is above 85% (>90%) and below 13.5% (< 7.5%) respectively.

**Time horizon**

Short-term

**Likelihood**

Very likely

**Magnitude of impact**

Medium-high

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

4700000

**Potential financial impact figure – minimum (currency)**

<Not Applicable>

**Potential financial impact figure – maximum (currency)**

<Not Applicable>

**Explanation of financial impact figure**

Assuming that KCC reaches its ambition of 85% combination trading in 2022, up from 68% in 2021 and based on KCC's 2021 earnings, the financial impact is estimated to be USD 4.7 million. In 2021, KCC had 5,500 on-hire days for the CABU and CLEANBU fleet. Average earnings in combination pattern (dry leg + wet leg) is estimated at approx. 26,000 \$/d, which is approx. 5,000 \$/d above earnings of trading as a standard vessel in the same period.  $(85\% - \text{points} - 68\% - \text{points}) \times 5,500 \text{ days} \times 5,000 \text{ \$/d} = \text{USD } 4.7 \text{ million per annum}$ . The financial impact would change based on market levels and would be higher with a full fleet on water (KCC had three vessels delivered during 2021).

**Cost to realize opportunity**

200000

**Strategy to realize opportunity and explanation of cost calculation**

KCC is taking several active steps to realize this opportunity. From May 2022, the trading of the CABU fleet has been concentrated in trades to/from Australia after terminating its service between Brazil and US Gulf in early 2022. The Australian CABU trades offer a more efficient trading pattern with ballast limited to average around 10%. Furthermore, KCC works with customers to maximize the efficiency of each shipment including maximizing cargo intake, port turnaround, voyage and fleet planning and efforts on minimizing waiting time. In 2021, KCC as well signed a six-year contract of affreightment (COA) for shipments of caustic soda to Australia. The COA establishes a framework for how KCC and the customer will work together to deliver further reductions in carbon emissions associated with the customer's caustic soda ocean freight to Australia. The agreed sustainability framework includes detailed CO2 emission reporting and it establishes trajectories for annual CO2 reductions targets, and arrangements for how to co-operate to reach the set targets. KCC is as well as several of our customers, a signatory to the Sea Cargo Charter (SCC). The signatories will in 2022 start reporting their climate alignment based on the carbon intensity measure EEOI, incentivizing efficient operations and supporting KCC's competitive advantage. The increased focus on cutting carbon emissions in the shipping industry implies that emission reductions will going forward likely become an integrated part of customers chartering decisions and customers will seek the most cost-effective ways of cutting carbon emissions.

The main cost of realizing this opportunity is to expand the number of CLEANBU trading patterns and customers and to optimize trading for the CABU vessels. The cost of this is limited as it is mainly based on work performed by existing employees and already an important scope of the work they perform. From year-end 2020 - YTD 2022, the chartering team has expanded the number of CLEANBU customers by 55% and the number of trades by 73%. The estimated cost related to this based on internal work allocated is 30% of three employees (USD 200k) per annum.

**Comment**

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**Identifier**

Opp2

**Where in the value chain does the opportunity occur?**

Direct operations

**Opportunity type**

Resilience

**Primary climate-related opportunity driver**

Other, please specify (New regulations)

**Primary potential financial impact**

Other, please specify (Increased revenue due to favourable effect of new regulations )

**Company-specific description**

KCC's combination carriers have a lower exposure to carbon taxes if these regulations, as expected, are designed to include positive effect of operational and trading efficiency (e.g. as the EU ETS) and not only being based on the technical measures/design of vessels. The proposed EU ETS for shipping, calculates CO2 emission from a voyage based on the fuel consumption of both the ballast and laden voyages. Due to KCC's superior efficiency, KCC's vessels have substantially lower time in ballast and transport more cargo than the competing standard dry bulk and tanker vessels of similar size, hence KCC's vessels have a much lower fuel consumption and CO2 emission per ton transported than standard vessels. This implies that KCC will need to buy and surrender substantially less EU emission allowances per mt transported than standard vessels, giving KCC an important competitive advantage in trades to and from EU. For example, in a round voyage with naphtha from Europe to Brazil and iron ore on the return leg to Europe the CLEANBUs have around 35% lower CO2 emissions than the sum of the CO2 emissions from the standard LR1 tanker and Kamsarmax bulk vessel doing the same transportation work. The standard vessel either ballast into Europe or have long ballast before loading the cargo to Europe, while the KCC combination carriers are laden both in and out of Europe. It is likely that carbon tax for the average standard vessel will be factored into market freight and hence paid by the customer and KCC are mainly priced as a standard vessel, hence KCC's earnings are positively impacted as actual carbon cost will be below the cost included in the hire.

**Time horizon**

Medium-term

**Likelihood**

Likely

**Magnitude of impact**

High

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

22000000

**Potential financial impact figure – minimum (currency)**

<Not Applicable>

**Potential financial impact figure – maximum (currency)**

<Not Applicable>

**Explanation of financial impact figure**

In an example with a round voyage with naphtha from Europe to Brazil and iron ore on the return leg to Europe and assuming both shipments in and out of EU are taxed in line with the EU ETS (50% for voyages in and out of EU fully implemented in 2026/2027), a KCC combination carrier would have USD 108,000 lower carbon tax per round voyage relative to the total for the LR1 tanker and the Kamsarmax bulker based on a cost of €83/USD 90 per metric ton (EUA price average 1 Jan-13 May 2022). Based on an example where KCC employs two of eight CLEANBU vessels in trades subject to carbon taxes, the impact on revenue would be USD 1.3 million per annum (USD 108k per voyage x 2 vessels x 6 voyages per year).

If carbon taxes are implemented on a global basis and 100% of emissions are charged (not 50% as in the example above), the effect on earnings is estimated to be USD 230,000 per round voyage based on the same trading pattern as above and based on the same price of €83/USD 90 per metric ton. In total the effect on revenue is estimated to be USD 22 million per annum (USD 230k per voyage x 16 vessels x 6 voyages per year).

**Cost to realize opportunity**

0

**Strategy to realize opportunity and explanation of cost calculation**

Based on KCC's business model the effect of a well structured carbon tax is positive without any further changes to the vessels or the business model. As such, the cost to realize this opportunity is set to zero, as the Company already is leading in its sector. However, KCC can utilize this opportunity further by improving the energy-, operational-, and trading efficiency. The Company invests in a broad range of energy efficiency measures (KCC raised USD 25 million equity in November 2021 dedicated to such energy efficiency investments) and works systematically to improve trading and operational efficiency, but these measures are being implemented independent of the above potential regulations.

In addition, KCC is working closely with our stakeholders for example through the Sea Cargo Charter and through the Norwegian Shipowners Association to promote strong and fair regulations that incentivizes the industry to decarbonize. See also Opportunity 1, Strategy to realize risk for more information related to measures taken and will help strengthen opportunity 2 as well.

**Comment****Identifier**

Opp3

**Where in the value chain does the opportunity occur?**

Direct operations

**Opportunity type**

Products and services

**Primary climate-related opportunity driver**

Shift in consumer preferences

**Primary potential financial impact**

Increased revenues through access to new and emerging markets

**Company-specific description**

In 2021 the transportation of fossil fuels represented 19% of KCC's total transported cargo. Demand for fossil fuels and hence demand for transportation of fossil fuels will decrease over the next decades. As fossil fuels are being phased out over time, there will likely be demand for transportation of new types of cargoes which is identified as an opportunity for KCC. One example is the increased exports of Australian mined spodumene rock used in the production of lithium hydroxide, a key cathode for batteries used e.g. in electric vehicles, to date mainly produced in China and Korea. Australia is now also establishing its own lithium refinery industry which will increase imports of caustic soda used in the process of refining spodumene to lithium hydroxide. The lithium refineries will likely be operational in the period 2022-2024, and additional refineries are likely to be established over the coming decade. The new Australian lithium refinery industry will increase demand for transportation in one of KCC's main trades as KCC is already the largest transporter of caustic soda into Australia, returning with dry bulk products. By securing part of this new caustic soda cargo volume into Australia, KCC can potentially employ more vessels in very efficient combination trading to/from Australia and hence further reduce dependency on wet fossil fuels and increase revenue.

**Time horizon**

Medium-term

**Likelihood**

Very likely

**Magnitude of impact**

Medium-high

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

4000000

**Potential financial impact figure – minimum (currency)**

<Not Applicable>

**Potential financial impact figure – maximum (currency)**

<Not Applicable>

**Explanation of financial impact figure**

Of total volumes transported by KCC in 2021, 19% were fossil fuels. This accounted for approximately 4% of total revenue (USD 8 million out of total revenue of USD 198 million for 2021). As a rough calculation, assuming that 10%-points of this cargo volume in the future will be substituted with non-fossil cargoes and that these 10%-points equals 2% of revenue in 2021 (19% fossil fuel = 4% or revenue, hence 10% fossil fuel = 2% revenue), the financial impact is estimated to be USD 4 million based on 2021 numbers (2% \* total revenue USD 198 million = USD 4 million). Please be aware that revenue related to transportation of such commodities is highly volatile and that this is only an example of the potential effect.

Context: Transportation of hydrocarbons are important for both the tanker and bulk segments and the drop in expected energy demand from fossil fuels will have an impact on demand for transportation and could lead to decreased revenues due to reduced demand for KCC's services. KCC is less dependent on transportation of hydrocarbons than its competitors (around 19% of transported volume in 2021), and KCC's ambition is to increase transportation of non-fossil cargoes. Coal accounts for around 40-50% of the total cargo volume transported by panamax/kamsarmax dry bulk vessels while LR1 tankers are employed close to 100% in transportation of clean petroleum products to the petroleum and petrochemical industries.

**Cost to realize opportunity**

100000

**Strategy to realize opportunity and explanation of cost calculation**

As it is predicted that fossil fuel products will be phased out over time, the Company's transported volume of fossil fuel will likely follow. Therefore, KCC needs to establish an awareness amongst existing clients within non-fossil commodities and new clients to enable new markets and increased volumes of non-fossil cargoes. The cost to realize this opportunity is considered to be low for the Company, as no changes have to be made to the existing vessels in order to change from transporting clean petroleum products to non-fossil cargoes. The vessels are suited to transport many such other cargoes and priority number one will be to find new cargoes for the existing vessels. However, due to the uncertainty related to the demand for, production of and trade patterns for such new products, a research project has been initiated to identify future trade flows and the shift in demand. The cost to realize the strategy is hence per now mainly related to market and trade flow research and establishing customer dialogues. The cost is estimated based on time spent by internal resources and/or external consultants, currently in total approx. half an employee-year (USD 100k) per annum. This will likely increase going forward.

In addition, KCC is constantly working to develop new combination carrier concepts. One major assumption in such projects is that new concepts will not be dependent on fossil fuels for their own propulsion or through transportation.

**Comment**

**C3. Business Strategy**

**C3.1**

**(C3.1) Does your organization's strategy include a transition plan that aligns with a 1.5°C world?**

**Row 1**

**Transition plan**

No, but our strategy has been influenced by climate-related risks and opportunities, and we are developing a transition plan within two years

**Publicly available transition plan**

<Not Applicable>

**Mechanism by which feedback is collected from shareholders on your transition plan**

<Not Applicable>

**Description of feedback mechanism**

<Not Applicable>

**Frequency of feedback collection**

<Not Applicable>

**Attach any relevant documents which detail your transition plan (optional)**

<Not Applicable>

**Explain why your organization does not have a transition plan that aligns with a 1.5°C world and any plans to develop one in the future**

KCC's ambition is to be net-zero by 2050. This ambition was part of the company's first environmental policy and strategy published in January 2020. Priority has so far been to reduce emissions from existing vessels through technical measures on our fleet and operational and trading efficiency. The company in 2020 set emission reduction targets for the existing fleet for 2022 and has during these three years worked systematically from Board level to daily operations towards these targets. The company will during 2022 work to establish a plan for both how to improve the foot print of the existing fleet and for net-zero newbuilds towards 2030 and 2050. The company aims at using the Science Based Targets when establishing the plan for net-zero in 2050 and is awaiting the SBTi's guidelines for the Shipping which are not yet available.

**Explain why climate-related risks and opportunities have not influenced your strategy**

<Not Applicable>

**C3.2**

**(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?**

	Use of climate-related scenario analysis to inform strategy	Primary reason why your organization does not use climate-related scenario analysis to inform its strategy	Explain why your organization does not use climate-related scenario analysis to inform its strategy and any plans to use it in the future
Row 1	Yes, qualitative, but we plan to add quantitative in the next two years	<Not Applicable>	<Not Applicable>

**C3.2a**

**(C3.2a) Provide details of your organization’s use of climate-related scenario analysis.**

Climate-related scenario		Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Transition scenarios	IEA 450	Company-wide	<Not Applicable>	<p>The scenario analysis is a qualitative analysis based on the “Sustainable Development Scenario” in line with 2°C based on IEA World Energy Outlook 2020. To achieve the GHG emissions targets, the IEA ETP 2020 report describes that in a Sustainable Development Scenario, the initiatives will be a combination of energy efficiency and technology. Oil-based fuels will be replaced by low-carbon and bio-energy. In the short term, consumption of bio-fuels will be the main contributor to the reduction, while hydrogen and ammonia will be a greater contributor and enable sufficient GHG-emissions in the long term. This will impact the demand for transportation services and the pricing of such services. Regulations related to emissions from vessels and potentially carbon taxes will be introduced and new propulsion technologies will have to be developed. This will potentially impact several aspects of KCC’s business through among other things change in customer behaviour, asset values and CAPEX needs.</p> <p>This scenario analysis was presented in KCC’s TCFD Report for 2020 and considered to be relevant also in 2021.</p> <p>The scenario analysis was divided into three time horizons (short term until 2030, medium term 2030-2050 (IPCC AR5 and IEA WEO2020) and long term 2050-2100 (IPCC AR5 and IEA WEO2020). As the 2°C and 4°C- scenarios are mainly time periods from 2030 onwards, the risk level for the short term is more of a subjective assessment based on current knowledge. The risk level was assessed based on a combination of probability and default.</p>
Physical climate scenarios	Customized publicly available physical scenario	Company-wide	3.1°C - 4°C	<p>The scenario analysis is a qualitative analysis based on IPCC AR5.</p> <p>The scenario analysis was divided into three time horizons (short term until 2030, medium term 2030-2050 (IPCC AR5 and IEA WEO2020) and long term 2050-2100 (IPCC AR5 and IEA WEO2020). As the 2°C and 4°C- scenarios are mainly time periods from 2030 onwards, the risk level for the short term is more of a subjective assessment based on current knowledge. The risk level was assessed based on a combination of probability and default.</p> <p>Scenario analysis for physical risks were based on the main trade routes with focus on South America, Australia, Far East and Middle East and cover both direct effects on KCC’s vessels and indirect effects through damages on customer’s infrastructure and plants. There is medium-high risk level with increased flood damages to infrastructure in short term (2030-2040) in US Gulf, Australia, South America and Middle East Gulf. The scenario analysis includes more extreme weather including floods, typhoons/monsoon, heavy precipitation and raising sea levels.</p>

**C3.2b**

**(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.**

**Row 1**

**Focal questions**

If the shipping industry aligns with the Paris Agreement, how will this impact KCC’s business directly and indirectly?

What are the main risks to KCC’s business if the world continues towards a 4°C-world?

How is KCC’s business impacted, e.g. permanent or temporary and in what time frame?

What is the potential financial and strategic impact on KCC (probability and impact) and how can KCC reduce the risk, avoid the risk or use this as an opportunity?

**Results of the climate-related scenario analysis with respect to the focal questions**

KCC has identified that the main risks are transition risks and that physical risks likely will have more temporary impact as the vessels operate on a global basis and can be transferred to new trading areas if needed.

1. In the short term, the likely major impact will be from regulations. Both global regulators (IMO) and regional regulator (e.g. EU) are developing and implementing regulations related to vessel emissions which will likely impact vessel operations (IMO EEXI), costs (EU ETS) and potentially access to funding (EU Taxonomy). While the IMO EEXI regulations likely will not impact KCC’s 11 modern vessels built 2016-2021, the five oldest vessels built 2001-2007 likely will have to operate at a somewhat lower speed, but with limited practical impact on the operations. Inclusion of shipping in the EU ETS will likely be approved within the end of 2022 for implementation in 2023 or 2024. This system is based on actual emissions and KCC has hence an advantage compared to standard vessels due to its lower emissions per transport work compared to that of standard vessels. Other emission trading systems might be designed based on other criteria and hence the impact on KCC is not yet known. The impact of the EU Taxonomy is still uncertain and KCC will assess alignment in 2022.

2. In the medium term, KCC has identified transition to lower emissions technology to be the main risk. The vessels are the revenue-generating items in the group and if demand for existing vessels decrease due to customer preferences for zero-emitting vessels, revenue will decrease and vessel values might deteriorate. The risk also relates to investment in new technology to replace existing vessels. It is still uncertain which low-carbon/zero-carbon fuels will be available for deep-sea shipping and hence what kind of propulsion technology will be the winner in the long run.

3. In the longer run, KCC has identified reduced demand for fossil fuels and hence transportation of fossil fuels as the main risk. While the CLEANBU vessels can trade in the same trades as the CABU vessels, the CLEANBU vessels are dependent on CPP to achieve an efficient combination trading pattern outside the transportation of caustic soda. Hence lower CPP volumes will impact revenue negatively and might result in lower vessel values and write-downs.

Based on all three risks, KCC works to improve the energy efficiency of the existing vessels, to optimize the trading and operational efficiency of the existing operations, to design new vessels and to work closely with its customers to align interests. In addition KCC targets to increase shipments of caustic soda and likely new tanker trades for biofuels and synthetic fuels which are likely to develop over the coming decade.

**C3.3**

**(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.**

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	<p>Environmental targets and ambitions are duly incorporated in the overall strategy of the Company and are one of the main building blocks of the strategy. To align with the Paris Agreement and the needed decarbonization trajectory, KCC's strategy sets decarbonization targets for 2022 with a 15% reduction in average CO2 emission per vessel and 25% reduction in the carbon intensity of KCC's fleet (EEOI) relative to KCC's actual performance in 2018. The carbon intensity requirement implies a 40% reduction compared to the tracked performance of competing standard vessels in KCCs' trades in 2018. KCC's 2022 targets based on 2018 figures substantially exceed IMO's 2030 targets based on 2008 figures. The ambition is to be carbon-neutral in 2030. To reach this strategic ambition, KCC has initiated activities related to trading and operational efficiency and implemented technical energy efficiency measures.</p> <p>KCC's ambition is to maintain the lead as the lowest carbon-emitting shipping service provider in dry bulk/ tanker shipping and provide the most cost-effective decarbonization, hence KCC as one of its most substantial strategic decisions in 2021, issued USD 25 million in equity to invest in energy efficiency measures on its existing fleet.</p>
Supply chain and/or value chain	Yes	<p>KCC's customers have an increased focus on their scope 3 emissions as the entire value chain has to reduce its emissions, hence:</p> <ul style="list-style-type: none"> <li>- KCC's ambition is to continue providing its customers with the lowest emission way of transportation and going forward provide the most cost-effective emission reductions through a highly efficient combi-trading service, an energy efficient fleet and early and smart application of new fuels and energy saving solutions.</li> <li>- In the longer-term, KCC shall as well build a leading position in growth trades for transportation of low carbon fuels and other non-fossil cargoes in dry/wet combination trades.</li> </ul> <p>The most substantial decision in this area in 2021 influenced by the climate-related risks was the negotiation and conclusion of a six-year contract of affreightment ("COA"). This COA includes a "Sustainability-linked" framework for how KCC and customer together will work to deliver further reductions in carbon emissions associated with the customer's caustic soda ocean freight consisting of three parts: 1) Detailed emission reporting; 2) Shared emission reduction targets based on initiated and identified specific initiatives; and 3) a carbon pricing whereby the freight under the COA will depend on KCC's emission performance vs. a set baseline. The latter initiative is under trials in 2022 and if successful will be included into this COA with effect from 2023.</p> <p>KCC has as well initiated workshops with key customers to understand how they handle climate-related issues with focus on decarbonization, which again will impact KCC's strategy and business activities. The discussions with customers also include how KCC in co-operation with customers can improve carbon efficiency of KCC's services e.g. by reducing speed, increasing cargo intake and decrease waiting time in ports.</p>
Investment in R&D	Yes	<p>In order to reach its decarbonization targets both short-term and long-term, KCC has to invest in R&amp;D as the path to low- or zero-carbon operations is not clear.</p> <p>The most substantial R&amp;D-decisions that were influenced by climate-related risks and opportunities in 2021 were:</p> <ul style="list-style-type: none"> <li>- KCC continued to test bio-fuels in 2021 through bunkering 30% biofuel-blend two times during the year.</li> <li>- KCC tested and implement several energy efficiency measures including becker mewis ducts, propeller boss cap fins and silicone anti-fouling paint, in 2021. KCC spent USD 2.8 million on such initiatives in 2021 and has in 2022 approved an investment of approximately USD 7 million (to be implemented in 2023) for two specific measures on two different vessels. KCC has received approx. USD 1.3 million in support from ENOVA (a Norwegian government enterprise responsible for promotion of environmentally friendly production and consumption of energy) for the initiative.</li> </ul>
Operations	Yes	<p>As for the other categories, products and services, supply chain and R&amp;D, KCC's operational strategy is as well impacted by the path to a low-, zero-emission future.</p> <p>Among the most substantial operational initiatives in 2021 impacted by the need to decarbonize, is a system improving daily consumption reporting in order to better monitor the efficiency of the vessels and conduct actions as discovered. Another important initiative is to avoid high speeds voyages and rather plan for lower sailing speeds of target in the range of 12-12.5 knots. We have also introduced a heat management plan to all ships, reducing the boiler consumption onboard and created management insights and dashboards for discovering vessels that are running the auxiliary engines sub optimal. Finally, we are also focusing on maintaining optimal trim during a voyage, and have sent out updated trim matrices for the majority of the fleet and are working on implementing this for the final few vessels.</p>

**C3.4**

**(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.**

	Financial planning elements that have been influenced	Description of influence
Row 1	Capital expenditures Access to capital	<p>KCC has in the Environmental strategy released in January 2020 high short- and long-term ambitions to further reduce the carbon footprint of KCC's business and to play an active role in the transition to a low carbon shipping industry. The effect of decarbonization on cargoes carried, customers served and vessel technology and how to position the Company to benefit from the changes that are coming are some of the main building blocks in the five years strategy plan for 2021-2025 that was resolved in November 2020. Financial planning related to several elements is hence influenced by climate-related risks and opportunities:</p> <ul style="list-style-type: none"> <li>- KCC has started to improve the emission-performance of the existing fleet through identifying, promoting and testing new technologies and solutions to improve energy efficiency. Initiatives will first be tested out on one or more vessels, and if successful, will be implemented on the whole fleet. The Board of Directors has given the management a general mandate to invest (capital expenditure) up to USD 2.5 million per year in energy efficiency improvement initiatives in the period 2020-2022. In 2021, KCC invested USD 2.8 million million and has YTD-June 2022 approved investments of approx. USD 9 million, to be implemented in 2022 and 2023.</li> <li>- KCC as well believes that access to capital will be influenced by emissions performance in the medium- to long-term and has hence in 2020 and 2021 raised bank debt through sustainability-linked bank facilities. KCC will continue to raise capital through similar structures to maintain access to capital and secure competitive pricing of capital in the future.</li> </ul>

**C4. Targets and performance**

**C4.1**

**(C4.1) Did you have an emissions target that was active in the reporting year?**

Intensity target

**C4.1b**

**(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).**

**Target reference number**

Int 1

**Year target was set**

2020

**Target coverage**

Company-wide

**Scope(s)**

Scope 1

Scope 2

**Scope 2 accounting method**

Location-based

**Scope 3 category(ies)**

&lt;Not Applicable&gt;

**Intensity metric**

Other, please specify (CO2 emitted per transported cargo per nautical mile (EEOI))

**Base year**

2018

**Intensity figure in base year for Scope 1 (metric tons CO2e per unit of activity)**

7.64

**Intensity figure in base year for Scope 2 (metric tons CO2e per unit of activity)**

0.00001

**Intensity figure in base year for Scope 3 (metric tons CO2e per unit of activity)**

&lt;Not Applicable&gt;

**Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)**

7.64

**% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure**

100

**% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure**

100

**% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this Scope 3 intensity figure**

&lt;Not Applicable&gt;

**% of total base year emissions in all selected Scopes covered by this intensity figure**

100

**Target year**

2022

**Targeted reduction from base year (%)**

25

**Intensity figure in target year for all selected Scopes (metric tons CO2e per unit of activity) [auto-calculated]**

5.73

**% change anticipated in absolute Scope 1+2 emissions**

25

**% change anticipated in absolute Scope 3 emissions**

0

**Intensity figure in reporting year for Scope 1 (metric tons CO2e per unit of activity)**

7.4

**Intensity figure in reporting year for Scope 2 (metric tons CO2e per unit of activity)**

0.00001

**Intensity figure in reporting year for Scope 3 (metric tons CO2e per unit of activity)**

&lt;Not Applicable&gt;

**Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)**

7.4

**% of target achieved relative to base year [auto-calculated]**

12.565445026178

**Target status in reporting year**

Underway

**Is this a science-based target?**

Yes, we consider this a science-based target, and we have committed to seek validation of this target by the Science Based Targets initiative in the next two years

**Target ambition**

Well-below 2°C aligned

**Please explain target coverage and identify any exclusions**

KCC's target is for carbon intensity (EEOI) to improve by 25% compared to its actual 2018 performance in 2022, as well as meeting IMO's 2030 target of a 40% reduction in carbon intensity per transported tonmile (EEOI) relative to tracked performance of competing standard vessels in its trades in 2018 already within 2022.

EEOI (Energy Efficiency Operational Index) is defined by IMO and represents CO2 emitted per transported cargo per nautical mile for a period of time (both fuel consumption at sea and in port included). Prior to 2020, end date of a voyage is decisive for which period EEOI for a voyage is included. From 2020 and onwards, reporting system provider was changed so that we are able to calculate EEOI on a per day basis, allocated to the corresponding quarter.

The EEOI metric states the strong energy efficiency for KCC's combination carriers as the vessels have substantially lower ballast (sailing empty) than standard vessels. However, as the fleet is relatively small, the reported EEOI is sensitive to periods of non-optimal trading, e.g. when trading a vessel as a standard vessel with ballast in line with standard vessels or when positioning one or more vessels to docking leading to longer ballast voyages. These variations are evident in historic numbers but will most likely become more stable as the CLEANBU newbuilding program was completed in 2021.

#### Plan for achieving target, and progress made to the end of the reporting year

The underlying targets are among others:

- i) Achieve 85% of on-hire days for the fleet in combination trades in 2022 90% over time,
- ii) Reduce ballast days on total on-hire days to below 13.5% in 2022 and 7.5% over time, and
- iii) Improve absolute fuel consumption of the vessels through technical measures on the fleet.

KCC's EEOI for 2021 remained unchanged from 2020, at 7.4, which is above the trajectory to reach the 2022 EEOI target. The CABU II fleet had a 50% increase in the time spent in ballast condition due to increasing COVID-19 related congestion and operational restrictions during second half of 2021. With increasing port delays, especially CABU II vessels were replaced by CLEANBU vessels in the caustic soda service to KCC's Australian alumina refinery customers and traded instead as standard dry bulk vessels offering substantially lower trading efficiency and higher ballast. This directly affected the EEOI negatively as no transport work is conducted when vessels are sailing in ballast. However, both the CABU I fleet and the CLEANBU fleet achieved an improved EEOI compared to 2020, partly due to improved performance following drydockings and newbuild deliveries, but also because of an increase in the distance sailed, increase in average cargo weight and increased combination trading for the CLEANBU fleet. KCC is taking active steps to further improve trading efficiency of its fleet. From May 2022, the trading of the CABU fleet will be concentrated in trades to/from Australia after terminating its service between Brazil and US Gulf in early 2022. The Australian CABU trades offer the ultimate trading efficiency with ballast limited to average around 10%. The trading efficiency of the CLEANBU vessels has also improved during second half of 2021 and early 2022 after getting most of the fleet into efficient combination trade. As an effect, the percent of days in ballast for the CLEANBU fleet was down from 26% to 13% from first half to second half of 2021.

#### List the emissions reduction initiatives which contributed most to achieving this target

<Not Applicable>

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#### Target reference number

Int 2

#### Year target was set

2020

#### Target coverage

Company-wide

#### Scope(s)

Scope 1  
Scope 2

#### Scope 2 accounting method

Location-based

#### Scope 3 category(ies)

<Not Applicable>

#### Intensity metric

Other, please specify (Metric tons CO2e emitted per transported cargo per nautical mile (EEOI))

#### Base year

2018

#### Intensity figure in base year for Scope 1 (metric tons CO2e per unit of activity)

7.64

#### Intensity figure in base year for Scope 2 (metric tons CO2e per unit of activity)

0.00001

#### Intensity figure in base year for Scope 3 (metric tons CO2e per unit of activity)

<Not Applicable>

#### Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)

7.64

#### % of total base year emissions in Scope 1 covered by this Scope 1 intensity figure

100

#### % of total base year emissions in Scope 2 covered by this Scope 2 intensity figure

100

#### % of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this Scope 3 intensity figure

<Not Applicable>

#### % of total base year emissions in all selected Scopes covered by this intensity figure

100

#### Target year

2030

#### Targeted reduction from base year (%)

40

#### Intensity figure in target year for all selected Scopes (metric tons CO2e per unit of activity) [auto-calculated]

4.584

#### % change anticipated in absolute Scope 1+2 emissions

40

**% change anticipated in absolute Scope 3 emissions**

0

**Intensity figure in reporting year for Scope 1 (metric tons CO2e per unit of activity)**

7.4

**Intensity figure in reporting year for Scope 2 (metric tons CO2e per unit of activity)**

0.00001

**Intensity figure in reporting year for Scope 3 (metric tons CO2e per unit of activity)**

&lt;Not Applicable&gt;

**Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)**

7.4

**% of target achieved relative to base year [auto-calculated]**

7.85340314136124

**Target status in reporting year**

Underway

**Is this a science-based target?**

Yes, we consider this a science-based target, and we have committed to seek validation of this target by the Science Based Targets initiative in the next two years

**Target ambition**

Well-below 2°C aligned

**Please explain target coverage and identify any exclusions**

KCC's target is for carbon intensity (EEOI) to improve by 40% compared to its actual 2018 performance in 2030. This is well above IMO's ambition of 40% reduction in carbon intensity compared to a 2008-baseline year.

EEOI (Energy Efficiency Operational Index) is defined by IMO and represents CO2 emitted per transported cargo per nautical mile for a period of time (both fuel consumption at sea and in port included). Prior to 2020, end date of a voyage is decisive for which period EEOI for a voyage is included. From 2020 and onwards, reporting system provider was changed so that we are able to calculate EEOI on a per day basis, allocated to the corresponding quarter.

**Plan for achieving target, and progress made to the end of the reporting year**

The underlying targets are among others:

- i) Achieve 90% of on-hire days for the fleet in combination trades,
- ii) Reduce ballast days on total on-hire days to below 7.5%, and
- iii) Improve absolute fuel consumption of the vessels through technical measures on the fleet

KCC's EEOI for 2021 remained unchanged from 2020, at 7.4, which is above the trajectory to reach the 2022 EEOI target. The CABU II fleet had a 50% increase in the time spent in ballast condition due to increasing COVID-19 related congestion and operational restrictions during second half of 2021. With increasing port delays, especially CABU II vessels were replaced by CLEANBU vessels in the caustic soda service to KCC's Australian alumina refinery customers and traded instead as standard dry bulk vessels offering substantially lower trading efficiency and higher ballast. This directly affected the EEOI negatively as no transport work is conducted when vessels are sailing in ballast. However, both the CABU I fleet and the CLEANBU fleet achieved an improved EEOI compared to 2020, partly due to improved performance following drydockings and newbuild deliveries, but also because of an increase in the distance sailed, increase in average cargo weight and increased combination trading for the CLEANBU fleet. KCC is taking active steps to further improve trading efficiency of its fleet. From May 2022, the trading of the CABU fleet will be concentrated in trades to/from Australia after terminating its service between Brazil and US Gulf in early 2022. The Australian CABU trades offer the ultimate trading efficiency with ballast limited to average around 10%. The trading efficiency of the CLEANBU vessels has also improved during second half of 2021 and early 2022 after getting most of the fleet into efficient combination trade. As an effect, the percent of days in ballast for the CLEANBU fleet was down from 26% to 13% from first half to second half of 2021.

**List the emissions reduction initiatives which contributed most to achieving this target**

&lt;Not Applicable&gt;

**Target reference number**

Int 3

**Year target was set**

2020

**Target coverage**

Company-wide

**Scope(s)**

Scope 1

Scope 2

**Scope 2 accounting method**

Location-based

**Scope 3 category(ies)**

&lt;Not Applicable&gt;

**Intensity metric**

Other, please specify (Metric tons CO2e emitted per transported cargo weight in kg per nautical mile (EEOI))

**Base year**

2018

**Intensity figure in base year for Scope 1 (metric tons CO2e per unit of activity)**

7.64

**Intensity figure in base year for Scope 2 (metric tons CO2e per unit of activity)**

0.00001

**Intensity figure in base year for Scope 3 (metric tons CO2e per unit of activity)**

&lt;Not Applicable&gt;

**Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)**

7.64

**% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure**

100

**% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure**

100

**% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this Scope 3 intensity figure**

<Not Applicable>

**% of total base year emissions in all selected Scopes covered by this intensity figure**

100

**Target year**

2050

**Targeted reduction from base year (%)**

70

**Intensity figure in target year for all selected Scopes (metric tons CO2e per unit of activity) [auto-calculated]**

2.292

**% change anticipated in absolute Scope 1+2 emissions**

70

**% change anticipated in absolute Scope 3 emissions**

0

**Intensity figure in reporting year for Scope 1 (metric tons CO2e per unit of activity)**

7.4

**Intensity figure in reporting year for Scope 2 (metric tons CO2e per unit of activity)**

0.00001

**Intensity figure in reporting year for Scope 3 (metric tons CO2e per unit of activity)**

<Not Applicable>

**Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)**

7.4

**% of target achieved relative to base year [auto-calculated]**

4.4876589379207

**Target status in reporting year**

Underway

**Is this a science-based target?**

Yes, we consider this a science-based target, and the target is currently being reviewed by the Science Based Targets initiative

**Target ambition**

Well-below 2°C aligned

**Please explain target coverage and identify any exclusions**

KCC aims at exceeding IMO's 2050 target (70% reduction in intensity with 2008 as baseline year) by continuing to improve its carbon intensity by at least 70% reduction in carbon intensity (EEOI) relative to 2018. The ultimate ambition is to reach zero-emission operations in 2050.

EEOI (Energy Efficiency Operational Index) is defined by IMO and represents CO2 emitted per transported cargo per nautical mile for a period of time (both fuel consumption at sea and in port included). Prior to 2020, end date of a voyage is decisive for which period EEOI for a voyage is included. From 2020 and onwards, reporting system provider was changed so that we are able to calculate EEOI on a per day basis, allocated to the corresponding quarter.

**Plan for achieving target, and progress made to the end of the reporting year**

The underlying targets are among others:

- i) Achieve 90% of on-hire days for the fleet in combination trades,
- ii) Reduce ballast days on total on-hire days to below 7.5%,
- iii) Improve absolute fuel consumption of the vessels, and
- iv) Gradually replacing the existing fleet with vessels capable of zero-emission transportation

**List the emissions reduction initiatives which contributed most to achieving this target**

<Not Applicable>

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**Target reference number**

Int 4

**Year target was set**

2020

**Target coverage**

Company-wide

**Scope(s)**

Scope 1

Scope 2

**Scope 2 accounting method**

Location-based

**Scope 3 category(ies)**

<Not Applicable>

**Intensity metric**

Other, please specify (Average CO2 emissions per vessel-year)

**Base year**

2018

**Intensity figure in base year for Scope 1 (metric tons CO2e per unit of activity)**

20800

**Intensity figure in base year for Scope 2 (metric tons CO2e per unit of activity)**

0.05

**Intensity figure in base year for Scope 3 (metric tons CO2e per unit of activity)**

<Not Applicable>

**Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)**

20800

**% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure**

100

**% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure**

100

**% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this Scope 3 intensity figure**

<Not Applicable>

**% of total base year emissions in all selected Scopes covered by this intensity figure**

100

**Target year**

2050

**Targeted reduction from base year (%)**

100

**Intensity figure in target year for all selected Scopes (metric tons CO2e per unit of activity) [auto-calculated]**

0

**% change anticipated in absolute Scope 1+2 emissions**

100

**% change anticipated in absolute Scope 3 emissions**

0

**Intensity figure in reporting year for Scope 1 (metric tons CO2e per unit of activity)**

18800

**Intensity figure in reporting year for Scope 2 (metric tons CO2e per unit of activity)**

0.04

**Intensity figure in reporting year for Scope 3 (metric tons CO2e per unit of activity)**

<Not Applicable>

**Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)**

18800

**% of target achieved relative to base year [auto-calculated]**

9.61538461538462

**Target status in reporting year**

Underway

**Is this a science-based target?**

Yes, we consider this a science-based target, and we have committed to seek validation of this target by the Science Based Targets initiative in the next two years

**Target ambition**

Well-below 2°C aligned

**Please explain target coverage and identify any exclusions**

KCC's ambition is to exceed the IMO target of 50% reduction in total emissions with baseline year 2008, with an ultimate ambition to reach a zero-emission operation within 2050.

Average CO2 emissions per vessel = Total CO2 emissions from Scope 1+2 in metric tons/vessel years. Vessel years = days available – off-hire days at yard. When new vessels are delivered to the fleet, the vessel years are calculated from the date the vessel is delivered.

**Plan for achieving target, and progress made to the end of the reporting year**

The targeted reduction in absolute CO2 emissions may be achieved by the following measures:

- Partly by improving the energy efficiency of the vessels
- Partly by installing energy saving devices on the vessels
- Partly through improving the operational efficiency of the fleet
- Partly through burning fuels with lower carbon footprint

The average CO2 emissions per vessel-year for the KCC fleet decreased to 18,800 tons CO2 in 2021 from 20,700 tons CO2 in 2020, a reduction of approximately 9%. This reduction is mainly due to the improved technical performance of the KCC fleet. KCC took delivery of three new energy efficient CLEANBU vessels in 2021, as well as drydocking of four CABU vessels. During drydocking the vessels were recoated with top grade silicone anti-fouling coating and they had several energy saving devices installed, such as ultrasound fouling protection, LED lights to replace older flood lights, Mewis ducts and new oil filter systems. KCC also pioneered welding seam fearning on two vessels, to further smoothen the hull resistance from uneven welding seams on the hull.

In addition, the targeted reduction in CO2 emissions within 2050 will also be achieved by gradually replacing the existing fleet with vessels capable of zero-emission transportation, and KCC has a strategic target to order a zero-emission vessel prior to 2030.

**List the emissions reduction initiatives which contributed most to achieving this target**

<Not Applicable>

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**Target reference number**

Int 5

**Year target was set**

2020

**Target coverage**

Company-wide

**Scope(s)**

Scope 1

Scope 2

**Scope 2 accounting method**

Location-based

**Scope 3 category(ies)**

<Not Applicable>

**Intensity metric**

Other, please specify (Average CO2 emissions per vessel-year)

**Base year**

2018

**Intensity figure in base year for Scope 1 (metric tons CO2e per unit of activity)**

20800

**Intensity figure in base year for Scope 2 (metric tons CO2e per unit of activity)**

0.05

**Intensity figure in base year for Scope 3 (metric tons CO2e per unit of activity)**

<Not Applicable>

**Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)**

20800

**% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure**

100

**% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure**

100

**% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this Scope 3 intensity figure**

<Not Applicable>

**% of total base year emissions in all selected Scopes covered by this intensity figure**

100

**Target year**

2022

**Targeted reduction from base year (%)**

15

**Intensity figure in target year for all selected Scopes (metric tons CO2e per unit of activity) [auto-calculated]**

17680

**% change anticipated in absolute Scope 1+2 emissions**

15

**% change anticipated in absolute Scope 3 emissions**

0

**Intensity figure in reporting year for Scope 1 (metric tons CO2e per unit of activity)**

18800

**Intensity figure in reporting year for Scope 2 (metric tons CO2e per unit of activity)**

0.04

**Intensity figure in reporting year for Scope 3 (metric tons CO2e per unit of activity)**

<Not Applicable>

**Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)**

18800

**% of target achieved relative to base year [auto-calculated]**

64.1025641025641

**Target status in reporting year**

Underway

**Is this a science-based target?**

Yes, we consider this a science-based target, and we have committed to seek validation of this target by the Science Based Targets initiative in the next two years

**Target ambition**

Well-below 2°C aligned

**Please explain target coverage and identify any exclusions**

KCC aims at reducing average CO2 emissions per vessel to 17,700 mt in 2022, a reduction of 15% vs. actual 2018.

Average CO2 emissions per vessel = Total CO2 emissions from Scope 1+2 in metric tons/vessel years. Vessel years = days available – off-hire days at yard. When new vessels are delivered to the fleet, the vessel years are calculated from the date the vessel is delivered

**Plan for achieving target, and progress made to the end of the reporting year**

The targeted reduction in absolute CO2 emissions may be achieved by the following measures:

- Partly by improving the energy efficiency of the vessels
- Partly by installing energy saving devices on the vessels
- Partly through improving the operational efficiency of the fleet
- Partly through burning fuels with lower carbon footprint

The average CO2 emissions per vessel-year for the KCC fleet decreased to 18,800 tons CO2 in 2021 from 20,700 tons CO2 in 2020, a reduction of approximately 9%.

This reduction is mainly due to the improved technical performance of the KCC fleet. KCC took delivery of three new energy efficient CLEANBU vessels in 2021, as well as drydocking of four CABU vessels. During drydocking the vessels were re-coated with top grade silicone anti-fouling coating and they had several energy saving devices installed, such as ultrasound fouling protection, LED lights to replace older flood lights, Mewis ducts and new oil filter systems. KCC also pioneered welding seam fearing on two vessels, to further smoothen the hull resistance from uneven welding seams on the hull.

**List the emissions reduction initiatives which contributed most to achieving this target**

<Not Applicable>

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**C4.2**

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**(C4.2) Did you have any other climate-related targets that were active in the reporting year?**

Target(s) to increase low-carbon energy consumption or production

Net-zero target(s)

**C4.2a**

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**(C4.2a) Provide details of your target(s) to increase low-carbon energy consumption or production.**

**Target reference number**

Low 1

**Year target was set**

2020

**Target coverage**

Product level

**Target type: energy carrier**

Other, please specify (Ship fuel)

**Target type: activity**

Consumption

**Target type: energy source**

Renewable energy source(s) only

**Base year**

2020

**Consumption or production of selected energy carrier in base year (MWh)**

64300

**% share of low-carbon or renewable energy in base year**

0.12

**Target year**

2050

**% share of low-carbon or renewable energy in target year**

100

**% share of low-carbon or renewable energy in reporting year**

0.3

**% of target achieved relative to base year [auto-calculated]**

0.180216259511414

**Target status in reporting year**

Underway

**Is this target part of an emissions target?**

Indirectly, as zero-emission fuels are needed for KCC reach its emission targets.

**Is this target part of an overarching initiative?**

No, it's not part of an overarching initiative

**Please explain target coverage and identify any exclusions**

KCC is currently testing new fuel types with low carbon footprint including sustainable bio-fuels on the existing fleet, as well as investigating low- and zero-carbon fuels for the future fleet. In addition, KCC is promoting the supply of such fuels in our trading patterns and aims be an early mover in using such fuels. Part of this strategy is the target to start developing a zero-emission combination carrier concept and contract such a vessel within 2030.

**Plan for achieving target, and progress made to the end of the reporting year**

KCC is studying the development of zero emission engines, fuel handling technologies and fuel tanks in order to prepare for selection of systems for future generation of new buildings, that will be in operation within 2030.

When it comes to low carbon fuels, KCC had one pilot bunkering of 100% sustainable biofuel on vessel Baru in 2020 in order to test this fuel for propulsion on our ships, and performed another two bunkerings of 30% sustainable biofuel blend in 2021. Biofuel may be one of the fuels suitable for a future net zero emission vessel, or as pilot fuel for zero-carbon renewable fuels such as green ammonia or green methanol.

**List the actions which contributed most to achieving this target**

<Not Applicable>

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**C4.2c**

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**(C4.2c) Provide details of your net-zero target(s).**

**Target reference number**

NZ1

**Target coverage**

Company-wide

**Absolute/intensity emission target(s) linked to this net-zero target**

Int1

Int2

Int3

Int4

Int5

**Target year for achieving net zero**

2050

**Is this a science-based target?**

Yes, we consider this a science-based target, and we have committed to seek validation of this target by the Science Based Targets initiative in the next 2 years

**Please explain target coverage and identify any exclusions**

KCC shall well exceed the IMO target of 50% reduction in total emissions in 2050 vs 2008, with an ambition to reach net zero operations within 2050 aligned with the Paris Agreement's long term goals.

As SBTi does not yet have any published guidelines for the shipping sector, we have not yet had the net-zero target validated by SBTi, but KCC considers this target to be aligned with SBTi draft guidelines, mainly due to the inclusion of both Well To Tank (WTT) and Tank To Wake (TTW) emissions, as well as meeting the 1.5DS carbon budget requirements within 2050.

**Do you intend to neutralize any unabated emissions with permanent carbon removals at the target year?**

Unsure

**Planned milestones and/or near-term investments for neutralization at target year**

<Not Applicable>

**Planned actions to mitigate emissions beyond your value chain (optional)**

No planned actions per now.

**C4.3**

**(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.**

Yes

**C4.3a**

**(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.**

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	7	
To be implemented*	6	32045
Implementation commenced*	3	7957
Implemented*	8	11042
Not to be implemented	1	

**C4.3b**

**(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.**

**Initiative category & Initiative type**

Other, please specify	Other, please specify (Reduced fuel consumption - Silicone based antifouling)
-----------------------	---

**Estimated annual CO2e savings (metric tonnes CO2e)**

2238

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

712700

**Investment required (unit currency – as specified in C0.4)**

600000

**Payback period**

<1 year

**Estimated lifetime of the initiative**

3-5 years

**Comment**

Silicone based antifouling was applied on 4 vessels during dry-docking in 2021 and on 2 vessels in 2020, and will be implemented on remaining ships within 2025 at each ship's 5-year drydockings. A advanced silicone anti fouling is expected to further prevent biofouling on underwater hull, which reduces the friction forces from the hull, thus results in less fuel consumption on the vessels. Expected to be applied on all three vessels drydocking in 2022, and on additional 9 ships within end of 2025. All numbers assuming every vessel already installed with the solution. Annual CO2e savings calculated based on total CO2e emissions for 2021 multiplied by 2.68% reduction in fuel consumption and estimated fuel price of 1000 USD per mt .

**Initiative category & Initiative type**

Other, please specify	Other, please specify (Reduced fuel consumption - Ultrasonic propeller protection system)
-----------------------	---

**Estimated annual CO2e savings (metric tonnes CO2e)**

4477

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

1425800

**Investment required (unit currency – as specified in C0.4)**

270000

**Payback period**

<1 year

**Estimated lifetime of the initiative**

3-5 years

**Comment**

All numbers assuming every vessel installed with the solution in 2021, even though two pilot vessels had this initiative installed in 2020. Annual CO2e savings calculated based on average CO2e emissions per vessel multiplied by 1 % reduction in fuel consumption. Prevents growth of biofouling on the propeller.

**Initiative category & Initiative type**

Other, please specify	Other, please specify (Improved propeller efficiency - Becker Mewis Duct)
-----------------------	---

**Estimated annual CO2e savings (metric tonnes CO2e)**

1865

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

594000

**Investment required (unit currency – as specified in C0.4)**

1000000

**Payback period**

<1 year

**Estimated lifetime of the initiative**

16-20 years

**Comment**

This initiative was installed during ship's 5-year drydocking on 2 vessels in 2021, and target 3 more vessels for 2022 and remaining fleet (11 vessels) within end 2025. Annual CO2e savings calculated based on average CO2 emissions per vessel multiplied by 4.18% expected reduction in fuel consumption. Improves the propeller efficiency thus creating less required power from the engine. The ducts lifetime is the same as remaining lifetime of the vessel, meaning that the older vessels will have a lower lifetime (less than 5 years), while the newer vessels will have long lifetime. (20+)

**Initiative category & Initiative type**

Other, please specify	Other, please specify (Welding seam fearning of underwater hull)
-----------------------	--

**Estimated annual CO2e savings (metric tonnes CO2e)**

560

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

178300

**Investment required (unit currency – as specified in C0.4)**

195000

**Payback period**

1-3 years

**Estimated lifetime of the initiative**

3-5 years

**Comment**

This initiative was installed on 3 vessels in 2021, and target 3 more vessels for 2022, and another 9 vessels within end of 2025. The lifetime is until next full blasting of the paint and new coating. All numbers assuming every vessel installed with the solution. Annual CO2 savings calculated based on average CO2 emissions per vessel multiplied by 0.39% expected reduction in fuel consumption. Improves the welding seams on the submerged part of the hull, creating less friction when sailing.

**Initiative category & Initiative type**

Other, please specify	Other, please specify (Change to LED flood lights)
-----------------------	--

**Estimated annual CO2e savings (metric tonnes CO2e)**

298

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

95000

**Investment required (unit currency – as specified in C0.4)**

5000

**Payback period**

<1 year

**Estimated lifetime of the initiative**

1-2 years

**Comment**

Installed on all 16 vessels within end 2020-2021. All numbers assuming every vessel installed with the solution. Annual CO2e savings calculated based on average less required Watt between old halogen flood lights versus new LED flood lights. Savings expected to be about 0.09%.

**Initiative category & Initiative type**

Other, please specify	Other, please specify (ShipShave - In transit hull cleaning drone)
-----------------------	--

**Estimated annual CO2e savings (metric tonnes CO2e)**

373

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

119000

**Investment required (unit currency – as specified in C0.4)**

138000

**Payback period**

1-3 years

**Estimated lifetime of the initiative**

1-2 years

**Comment**

We had 4 robots in operation during 2021 and are planning to use them for suitable ships in full 2022 as well. All numbers assuming every vessel installed with the solution. Annual CO2e savings calculated based on estimates of the effect of performing in transit hull cleaning through a newly develop robot solution. This tool is found best suited for vessels that are reaching the end of the dry docking cycles as fouling is being more present. The robot with its equipment can be circulated on the fleet.

**Initiative category & Initiative type**

Other, please specify	Other, please specify (Optimal trim CABU I)
-----------------------	---

**Estimated annual CO2e savings (metric tonnes CO2e)**

933

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

297100

**Investment required (unit currency – as specified in C0.4)**

10000

**Payback period**

&lt;1 year

**Estimated lifetime of the initiative**

16-20 years

**Comment**

Initiative started on 5 vessels in 2021 (CABU I fleet), and to be rolled out over 2022 and 2023 to additional 11 vessels. We are working on implementing and training the crew on using new performance monitoring and optimization system on the bridge, in order to sail with optimal trim, less unnecessary consumers running and safeguard ME performance.

**Initiative category & Initiative type**

Other, please specify	Other, please specify (Energy efficient system oil filters)
-----------------------	---

**Estimated annual CO2e savings (metric tonnes CO2e)**

298

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

95000

**Investment required (unit currency – as specified in C0.4)**

544000

**Payback period**

4-10 years

**Estimated lifetime of the initiative**

6-10 years

**Comment**

Energy efficient system oil filters were successfully piloted on one vessel in 2020, and subsequently rolled out to the entire fleet in 2021.

**C4.3c****(C4.3c) What methods do you use to drive investment in emissions reduction activities?**

Method	Comment
Dedicated budget for energy efficiency	The Board of Directors have given the Administration a general mandate of USD 2.5 million per annum for the years 2020-2022 for emission reduction initiatives. Initiatives exceeding this limit shall be presented to the Board for approval.  In addition, USD 7 mill was approved in 2022 for implementation of two large projects on two ships in 2023.  The company has also raised USD 25 million dedicated to decarbonization efforts on the existing fleet.
Employee engagement	About monthly decarbonization presentations for waiting onsigners and decarbonization academy for onshore staff.

**C4.5****(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?**

No

**C5. Emissions methodology**

C5.1

**(C5.1) Is this your first year of reporting emissions data to CDP?**

No

C5.1a

**(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?**

**Row 1**

**Has there been a structural change?**

Yes, other structural change, please specify (Three new vessels delivered to KCC in 2021 and 2 new vessels in 2020. One vessel sold in December 2021)

**Name of organization(s) acquired, divested from, or merged with**

Vessels delivered in 2020 = MV Baleen and MV Bangus  
 Vessels delivered in 2021= MV Baiacu, MV Bass and MV Balzani  
 Vessel sold in 2021 = MV Banasol

**Details of structural change(s), including completion dates**

The structural change of new vessels and sold vessels affect mostly the total Scope 1 emissions, but also Scope 3 emissions due to changes in Well To Tank emissions from fuel consumed and capital goods due to carbon footprint of steel used in the construction of new vessels.

- Delivery dates new vessels:
- MV Baleen - August 2020
  - MV Bangus - October 2020
  - MV Baiacu - January 2021
  - MV Bass - March 2021
  - MV Balzani - May 2021
- Date sale of vessel
- MV Banasol - December 2021

C5.1b

**(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?**

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	Yes, a change in boundary	In 2021 KCC expanded the Scope 3 boundary to include the three additional categories 1, 4 and 7 based on the GHG Protocol. In addition, the boundary of category 2 related to capital goods was expanded to not only include carbon emissions from the production of steel used in construction of new vessels, but also for the steel used in repair work on existing vessels during their 5-year drydocking. Also the boundary of category 5 was expanded to include waste generated from vessels in addition to waste generated in office. As such we define our Scope 3 base year as 2021, even though some Scope 3 emissions were reported in 2020.

C5.1c

**(C5.1c) Have your organization's base year emissions been recalculated as result of the changes or errors reported in C5.1a and C5.1b?**

	Base year recalculation	Base year emissions recalculation policy, including significance threshold
Row 1	No, because the impact does not meet our significance threshold	The inclusion of categories 1, 4 and 7 and the expansion of categories 2 and 5 only increased the total Scope 3 emissions by about 1.5%, which is below KCC's recalculation policy based on the significance threshold of 10% change as suggested by the GHG protocol's "Corporate Value Chain (Scope 3) Accounting and Reporting Standard", and recalculation of base year was therefore not considered necessary even though boundaries have changed.

C5.2

**(C5.2) Provide your base year and base year emissions.**

## Scope 1

### Base year start

January 1 2018

### Base year end

December 31 2018

### Base year emissions (metric tons CO2e)

183578

### Comment

New vessels delivered in 2019 and 2020. Fleet expansion in the period, hence resulting in increased Scope 1 emissions in 2021 compared to 2020.

## Scope 2 (location-based)

### Base year start

January 1 2018

### Base year end

December 31 2018

### Base year emissions (metric tons CO2e)

0.7

### Comment

Electricity purchased in office building

## Scope 2 (market-based)

### Base year start

January 1 2020

### Base year end

December 31 2020

### Base year emissions (metric tons CO2e)

5.4

### Comment

Electricity purchased in office building

## Scope 3 category 1: Purchased goods and services

### Base year start

January 1 2021

### Base year end

December 31 2021

### Base year emissions (metric tons CO2e)

1193

### Comment

The scope is wide ranging from spare parts, new equipment and maintenance, to food, clothes and personal protective equipment (PPE) for the ships' crew. KCC does not have a direct overview of CO2 emissions related to purchased goods and services. However, CO2 emissions from purchased goods and services in KCC in 2021 was estimated using spend-based emission factors provided by CEMAsys. The sum in USD for 13 different purchasing categories were mapped with 10 different spend-based emission factors, covering 85% of the sum invoiced, and the remaining 15% were covered through a general ship-specific emission factor.

## Scope 3 category 2: Capital goods

### Base year start

January 1 2021

### Base year end

December 31 2021

### Base year emissions (metric tons CO2e)

135200

### Comment

Emissions related to the steel used for building new vessels and reparations and upgrading of existing vessels during drydocking. Conversion factors from steel to CO2e provided by CEMAsys and sourced from Ecoinvent 3.8.

## Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

### Base year start

January 1 2021

### Base year end

December 31 2021

### Base year emissions (metric tons CO2e)

68000

### Comment

Emissions related to the production, refining and transportation of fossil fuels consumed by the vessels. Conversion factors from mt fuel to Well-to-tank CO2e provided by CEMAsys and sourced from DEFRA 2021.

#### Scope 3 category 4: Upstream transportation and distribution

**Base year start**

January 1 2021

**Base year end**

December 31 2021

**Base year emissions (metric tons CO2e)**

520

**Comment**

The CO2 footprint of the transportation of goods purchased in 2021 was calculated using distance-based emission factors. The weight of all shipments and deliveries was mapped, as well as the distance transported, and emission factors were collected from US EPA Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2019, April 1st 2021.

#### Scope 3 category 5: Waste generated in operations

**Base year start**

January 1 2021

**Base year end**

December 31 2021

**Base year emissions (metric tons CO2e)**

53

**Comment**

Emissions related to the disposal, recycling and incineration of various types of garbage onboard ships and in office. Emission factors converting different categories of waste to equivalent CO2 emissions were collected from CEMAsys.

#### Scope 3 category 6: Business travel

**Base year start**

January 1 2021

**Base year end**

December 31 2021

**Base year emissions (metric tons CO2e)**

2.2

**Comment**

Although the CO2 emissions from business travel for the ten KCC employees are considered immaterial and hence not relevant, but is still reported. In 2021, KCC had 2 domestic flights, 2 continental flights and 3 intercontinental flights. This amounts to 2.2 mt CO2e, well below the threshold for relevancy at 0.1% of total GHG emissions. Emission numbers provided by travel agency Berg-Hansen's web portal "Business Insight", calculated using a distance-based method.

#### Scope 3 category 7: Employee commuting

**Base year start**

January 1 2021

**Base year end**

December 31 2021

**Base year emissions (metric tons CO2e)**

0.8

**Comment**

Although the CO2 emissions from employee commuting for the ten KCC employees are considered immaterial and hence not relevant, but is still reported. GHG-emissions related to commuting have been calculated by estimation of commuting methods and distance per employee, converted to CO2e using factors provided by CEMAsys and sourced from Ecoinvent 3.8 and DEFRA 2021.

#### Scope 3 category 8: Upstream leased assets

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

0

**Comment**

KCC does not operate leased assets, and this category has been evaluated to be not relevant.

#### Scope 3 category 9: Downstream transportation and distribution

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

0

**Comment**

KCC does not sell products, only transportation services, and CO2 emissions related to the transportation of goods are reported in Category 1, and this category has been evaluated to be not relevant.

**Scope 3 category 10: Processing of sold products**

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

0

**Comment**

KCC does not sell products, only transportation services, and this category has been evaluated to be not relevant.

**Scope 3 category 11: Use of sold products**

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

0

**Comment**

KCC does not sell products, only transportation services, and this category has been evaluated to be not relevant.

**Scope 3 category 12: End of life treatment of sold products**

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

0

**Comment**

KCC does not sell products, only transportation services, hence no emissions from "End of life treatment of sold products", and this category has been evaluated to be not relevant.

**Scope 3 category 13: Downstream leased assets**

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

0

**Comment**

KCC does not operate leased assets, and this category has been evaluated to be not relevant.

**Scope 3 category 14: Franchises**

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

0

**Comment**

KCC does not have franchises or have operations in a franchise model, and this category has been evaluated to be not relevant.

**Scope 3 category 15: Investments**

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

0

**Comment**

KCC owns no interests in other companies than subsidiaries already included on 100 % basis as part of the consolidation approach in Greenhouse Gas Accounting Report 2021, therefore KCC does not consider this category as relevant.

**Scope 3: Other (upstream)**

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

0

**Comment**

KCC does not consider any other upstream category, except those already disclosed above, as relevant.

### Scope 3: Other (downstream)

Base year start

Base year end

Base year emissions (metric tons CO<sub>2</sub>e)

0

Comment

KCC does not consider any other downstream category as relevant.

## C5.3

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**(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.**

Defra Environmental Reporting Guidelines: Including streamlined energy and carbon reporting guidance, 2019

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

Other, please specify (IMO.....4th greenhouse gas report)

## C6. Emissions data

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### C6.1

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**(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO<sub>2</sub>e?**

Reporting year

Gross global Scope 1 emissions (metric tons CO<sub>2</sub>e)

302657

Start date

<Not Applicable>

End date

<Not Applicable>

Comment

Nearly 100% of Scope 1 emissions come from combustion of fossil fuels on KCC's vessels.

Increase in total Scope 1 emissions from 2020 mainly due to the addition of three new vessels to the KCC fleet in 2021 and two vessels during 2020 (first full year in 2021).

### C6.2

---

**(C6.2) Describe your organization's approach to reporting Scope 2 emissions.**

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

Scope 2 emissions for KCC in the year 2021 include only indirect CO<sub>2</sub> emissions related to purchased electricity for the office building, as no district heating/cooling is in use in the office building. The electricity emission factors used are based on national gross electricity production mixes from the International Energy Agency's statistics (IEA Stat). Emission factors per fuel type are based on assumptions in the IEA methodological framework.

As the power supplier for the office building of KCC does not have any Guarantees of Origin (GoOs) or Renewable Energy Certificates (RECs), we have chosen to report Scope 2 emissions according to the location-based method, which reflects the average emission intensity of the grids on which energy consumption occurs. This is based on statistical emissions information and electricity output aggregated and averaged within a defined geographic boundary and during a defined time period. Within this boundary, the different energy producers utilize a mix of energy resources, where the use of fossil fuels (coal, oil, and gas) results in direct GHG emissions. These emissions are reflected in the location-based Nordic mix emission factor.

In addition, KCC has also reported Scope 2 emissions according to the market-based method. This emission factor is based on the remaining electricity production after all GoOs and RECs for renewable energy are sold. This is called a residual mix, which is normally substantially higher than the location-based factor. As an example, the market-based Norwegian residual mix factor is approximately 7 times higher than the location-based Nordic mix factor. The reason for this high factor is due to Norway's large export of GoOs/RECs to foreign consumers. In a market perspective, this implies that Norwegian hydropower is largely substituted with an electricity mix including fossil fuels.

### C6.3

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**(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?**

**Reporting year**

**Scope 2, location-based**

0.6

**Scope 2, market-based (if applicable)**

4.6

**Start date**

<Not Applicable>

**End date**

<Not Applicable>

**Comment**

Emissions from the generation of purchased electricity to the office in Oslo, based on Nordic Electricity Mix. The number is slightly lower due to a whole year of pandemic and office lockdowns.

**C6.4**

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**(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?**

No

**C6.5**

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**(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.**

**Purchased goods and services**

**Evaluation status**

Relevant, calculated

**Emissions in reporting year (metric tons CO2e)**

1192.7

**Emissions calculation methodology**

Spend-based method

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

0

**Please explain**

The scope is wide ranging from spare parts, new equipment and maintenance, to food, clothes and personal protective equipment (PPE) for the ships' crew. KCC does not have a direct overview of CO2 emissions related to purchased goods and services. However, CO2 emissions from purchased goods and services in KCC in 2021 was estimated using spend-based emission factors provided by CEMAsys. The sum in USD for 13 different purchasing categories were mapped with 10 different spend-based emission factors, covering 85% of the sum invoiced, and the remaining 15% were covered through a general ship-specific emission factor.

**Capital goods**

**Evaluation status**

Relevant, calculated

**Emissions in reporting year (metric tons CO2e)**

135213

**Emissions calculation methodology**

Average product method

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

100

**Please explain**

Emissions related to the steel used for building new vessels and reparations and upgrading of existing vessels during drydocking. Conversion factors from steel to CO2e provided by CEMAsys and sourced from Ecoinvent 3.8.

**Fuel-and-energy-related activities (not included in Scope 1 or 2)**

**Evaluation status**

Relevant, calculated

**Emissions in reporting year (metric tons CO2e)**

67963

**Emissions calculation methodology**

Fuel-based method

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

100

**Please explain**

Emissions related to the production, refining and transportation of fossil fuels consumed by the vessels. Conversion factors from mt fuel to Well-to-tank CO2e provided by CEMAsys and sourced from DEFRA 2021.

## Upstream transportation and distribution

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO2e)

520.33

### Emissions calculation methodology

Distance-based method

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

### Please explain

The CO2 footprint of the transportation of goods purchased in 2021 was calculated using distance-based emission factors. The weight of all shipments and deliveries was mapped, as well as the distance transported, and emission factors were collected from US EPA Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2019, April 1st 2021.

## Waste generated in operations

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO2e)

52.6

### Emissions calculation methodology

Waste-type-specific method

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

### Please explain

Emissions related to the disposal, recycling and incineration of various types of garbage onboard ships and in office. Conversion factors from mt waste to CO2e provided by CEMAsys and sourced from Ecoinvent 3.8 and DEFRA 2021.

## Business travel

### Evaluation status

Not relevant, calculated

### Emissions in reporting year (metric tons CO2e)

2.2

### Emissions calculation methodology

Distance-based method

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

### Please explain

Although the CO2 emissions from business travel for the ten KCC employees are considered immaterial and hence not relevant, but is still reported. In 2021, KCC had 2 domestic flights, 2 continental flights and 3 intercontinental flights. This amounts to 2.2 mt CO2e, well below the threshold for relevancy at 0.1% of total GHG emissions. Emission numbers provided by travel agency Berg-Hansen's web portal "Business Insight", calculated using a distance-based method.

## Employee commuting

### Evaluation status

Not relevant, calculated

### Emissions in reporting year (metric tons CO2e)

0.8

### Emissions calculation methodology

Distance-based method

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

### Please explain

Although the CO2 emissions from employee commuting for the ten KCC employees are considered immaterial and hence not relevant, but is still reported. GHG-emissions related to commuting have been calculated by estimation of commuting methods and distance per employee, converted to CO2e using factors provided by CEMAsys and sourced from Ecoinvent 3.8 and DEFRA 2021.

## Upstream leased assets

### Evaluation status

Not relevant, explanation provided

### Emissions in reporting year (metric tons CO2e)

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Please explain

KCC does not operate leased assets, and this category has been evaluated to be not relevant.

## Downstream transportation and distribution

### Evaluation status

Not relevant, explanation provided

### Emissions in reporting year (metric tons CO2e)

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Please explain

KCC does not sell products, only transportation services, and CO2 emissions related to the upstream transportation of goods are reported in Category 1, and this category has been evaluated to be not relevant.

## Processing of sold products

### Evaluation status

Not relevant, explanation provided

### Emissions in reporting year (metric tons CO2e)

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Please explain

KCC does not sell products, only transportation services, and this category has been evaluated to be not relevant.

## Use of sold products

### Evaluation status

Not relevant, explanation provided

### Emissions in reporting year (metric tons CO2e)

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Please explain

KCC does not sell products, only transportation services, and this category has been evaluated to be not relevant.

## End of life treatment of sold products

### Evaluation status

Not relevant, explanation provided

### Emissions in reporting year (metric tons CO2e)

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Please explain

KCC does not sell products, only transportation services, hence no emissions from "End of life treatment of sold products", and this category has been evaluated to be not relevant.

## Downstream leased assets

### Evaluation status

Not relevant, explanation provided

### Emissions in reporting year (metric tons CO2e)

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Please explain

KCC does not operate leased assets, and this category has been evaluated to be not relevant.

## Franchises

### Evaluation status

Not relevant, explanation provided

### Emissions in reporting year (metric tons CO2e)

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Please explain

KCC does not have franchises or have operations in a franchise model, and this category has been evaluated to be not relevant.

## Investments

### Evaluation status

Not relevant, explanation provided

### Emissions in reporting year (metric tons CO2e)

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Please explain

KCC has not made investments in other companies other than subsidiaries already included on 100 % basis as part of the consolidation approach in Greenhouse Gas Accounting Report 2021, therefore KCC does not consider this category as relevant.

## Other (upstream)

### Evaluation status

Not relevant, explanation provided

### Emissions in reporting year (metric tons CO2e)

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Please explain

KCC does not consider any other upstream category, except those already disclosed above, as relevant.

## Other (downstream)

### Evaluation status

Not relevant, explanation provided

### Emissions in reporting year (metric tons CO2e)

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Please explain

KCC does not consider any other downstream category as relevant.

## C6.7

### (C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?

Yes

## C6.7a

### (C6.7a) Provide the emissions from biogenic carbon relevant to your organization in metric tons CO2.

	CO2 emissions from biogenic carbon (metric tons CO2)	Comment
Row 1	57.6	In 2021, vessels Baru and Baiacu both bunkered a total of 1070 mt 30% biofuel blends in Rotterdam.

## C6.10

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**(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO<sub>2</sub>e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.**

**Intensity figure**

0.001502362

**Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO<sub>2</sub>e)**

302658

**Metric denominator**

unit total revenue

**Metric denominator: Unit total**

197955000

**Scope 2 figure used**

Location-based

**% change from previous year**

5

**Direction of change**

Decreased

**Reason for change**

Gross global combined scope 1 and 2 emissions increased by 16 % from 257,200 tons CO<sub>2</sub> (261,715 tons CO<sub>2</sub>e) in 2020 to 297,423 tons CO<sub>2</sub> (302,658 tons CO<sub>2</sub>e) in 2021 due to increase in fleet from 14 to 17 vessels by mid-2021 (approx +16 %). KCC sold one vessel in December 2021 making only minor impact on the overall annual emission. Despite increase in total CO<sub>2</sub> emissions from the vessels in 2021, average CO<sub>2</sub> emissions per vessel year decreased by approximately 9 % from 2020 to 2021 mainly due to improved technical performance for the fleet following delivery of three new energy efficient CLEANBU vessels and implemented energy efficiency initiatives on existing fleet (e.g. implementation of silicone anti-fouling coating as a fuel saving initiative).

Revenue increased by 22 % from USD 163 million in 2020 to USD 198 million in 2021 driven by increased capacity (more vessels in operation), but also driven by market rates (dry bulk market, product tanker market and fuel prices). Freight rates for global seaborne transportation is highly volatile and cyclical. The demand for global seaborne transportation depends on global economic growth, and in particular the development in the energy and commodities markets. Hence intensity figure of emissions in metric tons CO<sub>2</sub> per unit currency total revenue is not a good environmental performance measure for the company. The company focus on EEOI as carbon intensity measure (measures as CO<sub>2</sub> emissions per ton of transported cargo per nautical mile). This metric states the strong energy efficiency for KCC's combination carriers as the vessels have substantially lower ballast than standard vessels.

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## C-TS6.15

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**(C-TS6.15) What are your primary intensity (activity-based) metrics that are appropriate to your emissions from transport activities in Scope 1, 2, and 3?**

**Marine**

**Scopes used for calculation of intensities**

Report Scope 1 + 2

**Intensity figure**

7.6

**Metric numerator: emissions in metric tons CO2e**

302658

**Metric denominator: unit**

t.mile

**Metric denominator: unit total**

39817978688

**% change from previous year**

0.5

**Please explain any exclusions in your coverage of transport emissions in selected category, and reasons for change in emissions intensity.**

EEOI based on metric tons CO2 emissions for 2021 improved from 7.5 in 2020 to 7.4 in 2021. However, using the common unit of metric tons CO2e (equivalents), the intensity factor becomes 7.6. The CLEANBU trading patterns are still under development as the full fleet of CLEANBU vessels were delivered in period 2019-mid 2021. Hence the CLEANBU trading have not yet reached the targeted efficiency, resulting in higher than targeted ballast. However, the CLEANBU new builds are more fuels efficient than some of the older CABU vessels, which impacts the figures positively. We also had parts of the CABU fleet trading inefficiently in 2021, and one vessel out on TC, trading as a standard dry bulk vessel thus negatively impacting this utilization driven intensity indicator.

**ALL**

**Scopes used for calculation of intensities**

Report Scope 1 + 2 + 3 (category 4)

**Intensity figure**

7.6

**Metric numerator: emissions in metric tons CO2e**

303177

**Metric denominator: unit**

t.mile

**Metric denominator: unit total**

39817978688

**% change from previous year**

6.7

**Please explain any exclusions in your coverage of transport emissions in selected category, and reasons for change in emissions intensity.**

The reason for the decrease in intensity is mainly the inclusion of estimated emissions from Scope 3 Category 4.

**C7. Emissions breakdowns**

**C7.1**

**(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?**

No

**C7.2**

**(C7.2) Break down your total gross global Scope 1 emissions by country/region.**

Country/Region	Scope 1 emissions (metric tons CO2e)
Norway <i>As the majority of Scope 1 emissions come from KCC's fleet sailing all over the globe, only Scope 1 emissions from office building can be directly attributed to a geographical area.</i>	0.1
Other, please specify (Global. CO2 Emissions from vessels are not broken down into geographical region as majority of emissions occur on open seas / international waters.)	302657

**C7.3**

**(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.**

By business division

### C7.3a

(C7.3a) Break down your total gross global Scope 1 emissions by business division.

Business division	Scope 1 emissions (metric ton CO2e)
CABU I fleet (6 vessels - 1 vessel sold in Dec 2021)	108573
CABU II fleet (3 vessels)	58090
CLEANBU fleet (5 vessels + 3 new vessel deliveries in H1 2021)	135994
Headquarters	0.1

### C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

	Gross Scope 1 emissions, metric tons CO2e	Net Scope 1 emissions, metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Electric utility activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (midstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	302657	<Not Applicable>	Nearly 100% of Scope 1 emissions come from combustion of fossil fuels on KCC's vessels.

### C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/region.

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Norway	0.6	4.6

### C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

By facility

### C7.6b

(C7.6b) Break down your total gross global Scope 2 emissions by business facility.

Facility	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Headquarters	0.6	4.6

### C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7

**(C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7) Break down your organization's total gross global Scope 2 emissions by sector production activity in metric tons CO2e.**

	Scope 2, location-based, metric tons CO2e	Scope 2, market-based (if applicable), metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (midstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	0	0	No electricity purchased for transport services activities, but in the future this might become an option in the near future as the development of shore power in ports becomes commercialized.

**C7.9**

**(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?**

Increased

**C7.9a**

**(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.**

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	535	Decreased	0.2	In 2021, a total of 321 mt of 100% sustainable biofuel was bunkered and consumed, compared to 207 mt in 2020. The combustion of biofuels replaces the combustion of fossil fuels in the ships' engines, and with an emission factor of 3.1144 tCO2/mt, the amount of CO2 emissions from fossil fuel combustion that was avoided changed from 645 mt CO2 in 2020 to approx. 1000 mt CO2 in 2021, a change of 545 mt CO2. However, there are also some CO2 emissions attributable to the combustion of biofuels, and with an emission factor of 0.1675 tCO2/mt the related CO2 emissions to the annual change of 114 mt biofuel amounted to 19 mt CO2. Thus, the decrease in CO2 emissions due to the consumption of renewable energy was 526 mt CO2 in 2021, or a decrease in total emissions of 0.2% when dividing by total Scope 1+2 emissions in 2020.
Other emissions reduction activities	19385	Decreased	7.4	Average annual emission per ship year was 20,700 MTS CO2 per year in 2020, and estimated to be about 19,300 MTS CO2 per vessel-year in 2021 when comparing for the same trading fleet, meaning that we are excluding the three new highly efficient delivered vessels in 2021.  This is a result of the emission reduction efforts as explained in C4.3 and the company's focus on decarbonization. A vessel in trade is also sensitive to factors such as trading utilization, weather, cargo intake and speed. These factors are fairly similar over time, and therefore not further investigated.
Divestment	0	No change	0	
Acquisitions	60828	Increased	23.2	We received 3 new vessels during 2021, having a reported fuel consumption that equates to a total CO2 emission of abt. 39.500 mts CO2.  In addition, we received 2 vessels second half 2020, further increasing the fleet size in 2021 vs 2020. This contributes to an increase by about 1.05 additional ship years in 2021. The CO2 effect is thus estimated to be about 20.200 mts CO2, when using the average emission per ship year for the 2021 fleet.
Mergers	0	No change	0	
Change in output	0			
Change in methodology	0	No change	0	
Change in boundary	0	No change	0	
Change in physical operating conditions	0	No change	0	
Unidentified	0	No change	0	
Other	0	No change	0	

**C7.9b**

**(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?**

Location-based

## C8. Energy

### C8.1

**(C8.1) What percentage of your total operational spend in the reporting year was on energy?**

More than 25% but less than or equal to 30%

### C8.2

**(C8.2) Select which energy-related activities your organization has undertaken.**

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	No

### C8.2a

**(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.**

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	3289.7	1089683	1092972
Consumption of purchased or acquired electricity	<Not Applicable>	14641.5	4374	19015
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Total energy consumption	<Not Applicable>	17931.3	1094056.2	1111987.9

### C8.2b

**(C8.2b) Select the applications of your organization's consumption of fuel.**

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

### C8.2c

**(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.**

**Sustainable biomass****Heating value**

LHV

**Total fuel MWh consumed by the organization**

3289.7

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

&lt;Not Applicable&gt;

**MWh fuel consumed for self-generation of cooling**

&lt;Not Applicable&gt;

**MWh fuel consumed for self- cogeneration or self-trigeneration**

&lt;Not Applicable&gt;

**Comment**

This is related to the consumption of 30% biofuel blend on two vessel bunkerings during 2021, and is certified 2nd generation sustainable biodiesel.

**Other biomass****Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

0

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

&lt;Not Applicable&gt;

**MWh fuel consumed for self-generation of cooling**

&lt;Not Applicable&gt;

**MWh fuel consumed for self- cogeneration or self-trigeneration**

&lt;Not Applicable&gt;

**Comment**

No other biomass burned for energy in 2021.

**Other renewable fuels (e.g. renewable hydrogen)****Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

0

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

&lt;Not Applicable&gt;

**MWh fuel consumed for self-generation of cooling**

&lt;Not Applicable&gt;

**MWh fuel consumed for self- cogeneration or self-trigeneration**

&lt;Not Applicable&gt;

**Comment**

No other renewable fuels burned for energy in 2021.

## Coal

### Heating value

Unable to confirm heating value

### Total fuel MWh consumed by the organization

0

### MWh fuel consumed for self-generation of electricity

0

### MWh fuel consumed for self-generation of heat

0

### MWh fuel consumed for self-generation of steam

<Not Applicable>

### MWh fuel consumed for self-generation of cooling

<Not Applicable>

### MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

### Comment

No coal burned for energy in 2021.

## Oil

### Heating value

Unable to confirm heating value

### Total fuel MWh consumed by the organization

1089682.7

### MWh fuel consumed for self-generation of electricity

0

### MWh fuel consumed for self-generation of heat

0.3

### MWh fuel consumed for self-generation of steam

<Not Applicable>

### MWh fuel consumed for self-generation of cooling

<Not Applicable>

### MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

### Comment

The main fuel for KCC fleet is either VLSFO (Very low sulfur fuel oil) or ULSMGO (ultra low sulfur marine gas oil). Also 0.3 MWh consumed by office building boiler.

## Gas

### Heating value

Unable to confirm heating value

### Total fuel MWh consumed by the organization

0.1

### MWh fuel consumed for self-generation of electricity

0

### MWh fuel consumed for self-generation of heat

0

### MWh fuel consumed for self-generation of steam

<Not Applicable>

### MWh fuel consumed for self-generation of cooling

<Not Applicable>

### MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

### Comment

Very small amounts of LPG used for fireplaces in office building.

**Other non-renewable fuels (e.g. non-renewable hydrogen)**

**Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

0

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

<Not Applicable>

**MWh fuel consumed for self-generation of cooling**

<Not Applicable>

**MWh fuel consumed for self- cogeneration or self-trigeneration**

<Not Applicable>

**Comment**

No other non-renewable fuels burned for energy in 2021.

**Total fuel**

**Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

1092991.9

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

<Not Applicable>

**MWh fuel consumed for self-generation of cooling**

<Not Applicable>

**MWh fuel consumed for self- cogeneration or self-trigeneration**

<Not Applicable>

**Comment**

Total amount of fuel include fossil and biogenic fuel oil consumed on KCC's fleet as well as burning oil, diesel and propane gas consumed in KCC's office building.

C8.2e

---

**(C8.2e) Provide details on the electricity, heat, steam, and/or cooling amounts that were accounted for at a zero or near-zero emission factor in the market-based Scope 2 figure reported in C6.3.**

**Sourcing method**

Default delivered electricity from the grid (e.g. standard product offering by an energy supplier), supported by energy attribute certificates

**Energy carrier**

Electricity

**Low-carbon technology type**

Hydropower (capacity unknown)

**Country/area of low-carbon energy consumption**

Norway

**Tracking instrument used**

Contract

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

19

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

Norway

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

1907

**Comment**

Electricity provider Hydro Energi only brings hydropower and some wind power into their power grid portfolio, which is traded at Nordpool, excluding fossil fueled power plants and nuclear power plants in the electricity mix. No numbers for exact CO2 emissions given by power company, and Hydro Energy does not acquire any GoOs (Guarantee of Origin) or RECs (Renewable Energy Certificate).

When selling GoOs or RECs, a supplier certifies that the electricity is produced exclusively by renewable sources, which has an emission factor of 0 grams CO2e per kWh. However, for electricity without the GoO or REC, the emission factor is based on the remaining electricity production after all GoOs and RECs for renewable energy are sold. This is called a residual mix, which is normally substantially higher than the location-based factor. As an example, the market-based Norwegian residual mix factor is approximately 7 times higher than the location-based Nordic mix factor. The reason for this high factor is due to Norway's large export of GoOs/RECs to foreign consumers. In a market perspective, this implies that Norwegian hydropower is largely substituted with an electricity mix including fossil fuels.

For these reasons, KCC is using average emissions for Norwegian electricity gathered from The Norwegian Water Resources and Energy Directorate (NVE).

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**C8.2g**

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**(C8.2g) Provide a breakdown of your non-fuel energy consumption by country.**

**Country/area**

Norway

**Consumption of electricity (MWh)**

19

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

19

**Is this consumption excluded from your RE100 commitment?**

<Not Applicable>

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**C-TS8.5**

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**(C-TS8.5) Provide any efficiency metrics that are appropriate for your organization's transport products and/or services.**

**Activity**

Marine

**Metric figure**

0.65

**Metric numerator**

Other, please specify (Number of ships achieved minimum EEDI)

**Metric denominator**

Other, please specify (Total number of ships in the fleet)

**Metric numerator: Unit total**

11

**Metric denominator: Unit total**

17

**% change from last year**

13.2

**Please explain**

This energy efficiency metric shows KCC's EEDI attainment ratio, which serves as an indicator of the overall efficiency of the fleet. EEDI attainment ratio is the proportion of ships in KCC's fleet that achieved minimum EEDI, and this changed from 2020 due to three new deliveries of EEDI verified vessels.

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**C9. Additional metrics**

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**C9.1**

**(C9.1) Provide any additional climate-related metrics relevant to your business.**

**Description**

Waste

**Metric value**

447

**Metric numerator**

metric ton

**Metric denominator (intensity metric only)**

**% change from previous year**

**Direction of change**

<Not Applicable>

**Please explain**

Waste is reported for KCC office in Oslo (0.4899 mt) and for KCC's fleet (446.3mt), converted into metric tons using conversion factors from CEMAsys. 2021 was first reporting year, no data available for 2020.

All KCC vessels have a Garbage Management Plan onboard in accordance with the IMO guidelines published in resolution MEPC.201(62). Onboard waste is sorted into 11 different garbage categories and recorded in an onboard garbage record book before being disposed at a waste reception facility in port or incinerated onboard, except for minor food waste which may be disposed at open sea. Ash from incineration is also delivered to the appropriate reception facility. Both ANNEX I and ANNEX II slops, including wash water, are discharged in accordance with relevant MARPOL regulations.

Efforts have been made to reduce waste from plastic bottles onboard by installing freshwater drinking fountains easily available for the crew. The average number of plastic bottles per ship-year was reduced from 666 in 2020 to 585 in 2021, a total reduction of 80% since the 2018 baseline, and well exceeding our 2022 goal of 50% reduction.

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**Description**

Other, please specify (Spills to the environment)

**Metric value**

0

**Metric numerator**

number of incidents

**Metric denominator (intensity metric only)**

**% change from previous year**

100

**Direction of change**

Decreased

**Please explain**

KCC had no spills to the environment in 2021 (2020: 1 incident reported as one of the vessels experienced a leakage onto the deck, the leakage was limited, however due to heavy rain it was not possible to stop it from reaching the water).

**(C-TO9.3/C-TS9.3) Provide tracking metrics for the implementation of low-carbon transport technology over the reporting year.****Activity**

Marine

**Metric**

Fleet adoption

**Technology**

Other, please specify (Delivery of new vessels)

**Metric figure**

7.4

**Metric unit**

Other, please specify (EEOI)

**Explanation**

EEOI (Energy Efficiency Operational Index) is defined by IMO and represents CO2 emitted per transported cargo per nautical mile for a period of time (both fuel consumption at sea and in port included) was 7.4 in 2021, down from 7.64 in 2018 (base year). KCC took delivery of three CLEANBU newbuilds in 2021, two CLEANBU newbuilds in 2020 and three in 2019. These vessels are more fuel efficient than the existing fleet and will contribute positively towards reaching KCC's 2022 and 2030 emission targets.

KCC's EEOI for 2021 remained unchanged from 2020, at 7.4, which is above the trajectory to reach the 2022 EEOI target. The CABU II fleet had a 50% increase in the time spent in ballast condition due to increasing COVID-19 related congestion and operational restrictions during second half of 2021. With increasing port delays, especially CABU II vessels were replaced by CLEANBU vessels in the caustic soda service to KCC's Australian alumina refinery customers and traded instead as standard dry bulk vessels offering substantially lower trading efficiency and higher ballast. This directly affected the EEOI negatively as no transport work is conducted when vessels are sailing in ballast. However, both the CABU I fleet and the CLEANBU fleet achieved an improved EEOI compared to 2020, partly due to improved performance following drydockings and newbuild deliveries, but also because of an increase in the distance sailed, increase in average cargo weight and increased combination trading for the CLEANBU fleet.

**Activity**

Marine

**Metric**

Other, please specify (Vessel performance)

**Technology**

Other, please specify (Efficient combi-trading)

**Metric figure**

7.4

**Metric unit**

Other, please specify (EEOI)

**Explanation**

EEOI (Energy Efficiency Operational Index) is defined by IMO and represents CO2 emitted per transported cargo per nautical mile for a period of time (both fuel consumption at sea and in port included) was 7.4 in 2021 and 2020, down from 7.64 in 2018 (base year). % of days in main combination trades ended at 68% for the fleet in 2021, down from 77% in 2020. High utilization of vessels through a high degree of combination trading is one of the key elements in the strategy to reaching KCC's emission targets.

**Activity**

Marine

**Metric**

Other, please specify

**Technology**

Other, please specify (Vessel performance - technical initiatives for increased energy efficiency)

**Metric figure**

18800

**Metric unit**

Other, please specify (Average Co2 emissions per vessel)

**Explanation**

The actual CO2 emissions of the KCC fleet are expressed as an average of all the vessels' emissions divided by vessel-years, excluding only the time the vessel is laying still in drydock. The average CO2 emissions per vessel-year for the KCC fleet decreased to 18,800 tons CO2 in 2021 from 20,700 tons CO2 in 2020, a reduction of approximately 9%. This reduction is mainly due to the improved technical performance of the KCC fleet. KCC took delivery of three new energy efficient CLEANBU vessels in 2021, as well as drydocking of four CABU vessels. During drydocking the vessels were recoated with top grade silicone anti-fouling coating and they had several energy saving devices installed, such as ultrasound fouling protection, LED lights to replace older flood lights, Mewis ducts and new oil filter systems. KCC also pioneered welding seam fearning on two vessels, to further smoothen the hull resistance from uneven welding seams on the hull. The vessel MV Bakkedal was the worst performer in 2021, suffering from an old and worn hull coating due to a long drydocking interval. She will enter drydock in the middle of 2022 where she will be equipped with all the suitable fuel saving initiatives discovered by KCC so far and pioneer a stable engine load management system for her main engine while sailing. All these efforts lead to an expected 25% improvement in CO2 performance. She will in the future have twice as frequent drydocking intervals, safeguarding her hull coating condition and her fuel efficiency. Like MV Bakkedal, also the CABU II fleet was negatively influencing the overall CO2 performance of the full fleet in 2021 due to a long drydocking interval and poor hull condition. Two CABU II vessel were dry-docked during second half of 2021 with similar energy efficiency measures implemented and installed as for the CABU I fleet, which will result in significant reduction in CO2 emissions for 2022 from this class of vessels as well.

(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

	Investment in low-carbon R&D	Comment
Row 1	Yes	

C-TO9.6a/C-TS9.6a

(C-TO9.6a/C-TS9.6a) Provide details of your organization’s investments in low-carbon R&D for transport-related activities over the last three years.

**Activity**

Marine

**Technology area**

Other, please specify (Technical energy efficiency initiatives on existing vessels )

**Stage of development in the reporting year**

Full/commercial-scale demonstration

**Average % of total R&D investment over the last 3 years**

41-60%

**R&D investment figure in the reporting year (optional)**

2800000

**Comment**

KCC is determined to substantially improve further our carbon efficiency advantage by delivering large reductions in our carbon footprint over the coming years. In 2021 we have advanced well in our work to identify, test and start implementing energy efficiency measures across our fleet. This includes installation of the first Mewis ducts, improving propeller efficiency, which will be installed across KCC’s fleet in 2021-2024. Several additional measures will be rolled out over the coming years. To fund this energy efficiency program, KCC successfully raised USD 25 million in equity in November 2021.

Investments of USD 2.8 million in 2021 relates to Mewis Ducts (1.0 million), Hempel paint for dry-docking (USD 0.8 million), Green oil filter (USD 0.54 million), Hasytech Dynamic Biofilm Protection system (USD 0.3 million) and Shipshave (USD 0.14 million).

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

21 KCC EY Letter for CDP report 02.06.22.pdf  
ISAE3000\_Independent\_accountants\_assurance\_report\_\_KCC.pdf

**Page/ section reference**

1-3

**Relevant standard**

ISAE3000

**Proportion of reported emissions verified (%)**

100

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## C10.1b

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(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

**Scope 2 approach**

Scope 2 location-based

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

21 KCC EY Letter for CDP report 02.06.22.pdf  
ISAE3000\_Independent\_accountants\_assurance\_report\_\_KCC.pdf

**Page/ section reference**

1-3

**Relevant standard**

ISAE3000

**Proportion of reported emissions verified (%)**

100

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## C10.1c

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(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

**Scope 3 category**

Scope 3: Capital goods  
Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

21 KCC EY Letter for CDP report 02.06.22.pdf  
ISAE3000\_Independent\_accountants\_assurance\_report\_\_KCC.pdf

**Page/section reference**

1-3

**Relevant standard**

ISAE3000

**Proportion of reported emissions verified (%)**

100

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## C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

Yes

## C10.2a

(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C4. Targets and performance	Year on year emissions intensity figure	ISAE 3000	EEOI (Energy Efficiency Operational Index) is defined by IMO and represents grams CO2 emitted per transported ton cargo per nautical mile for a period of time (both fuel consumption at sea and in port included). KCC's ambition is improved carbon intensity by 25 % within 2022 compared to its actual 2018 performance. EEOI performance is reported on a quarterly basis and verified by EY on an annual basis. ISAE3000_Independent_accountants_assurance_report_KCC.pdf
C4. Targets and performance	Year on year emissions intensity figure	ISAE 3000	KCC aims at reducing average Co2 emissions per vessel-year by 15 % in 2022 to 17,700 mt vs actual 2018, and 50 % reduction in total emissions in 2050 vs 2018. Performance is reported on a quarterly basis and verified by EY on an annual basis. ISAE3000_Independent_accountants_assurance_report_KCC.pdf
C5. Emissions performance	Emissions reduction activities	ISAE 3000	Ballast days in % of onhire days is a KPI that reflect how much the vessels sails empty with no cargo onboard. Performance is reported on a quarterly basis and verified by EY on an annual basis. ISAE3000_Independent_accountants_assurance_report_KCC.pdf
C5. Emissions performance	Emissions reduction activities	ISAE 3000	% in combination trade is a KPI that reflect how much of fleet capacity that is employed in dry bulk - tanker combination trades where cargoes are combined with limited ballast in between discharge and load ports. Performance is reported on a quarterly basis and verified by EY on an annual basis. ISAE3000_Independent_accountants_assurance_report_KCC.pdf

## C11. Carbon pricing

### C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

No, but we anticipate being regulated in the next three years

### C11.1d

(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

KCC is closely following the upcoming EU emission trading system (ETS) and its implications as well as potential carbon pricing schemes in other parts of the world. The proposal is for a gradual inclusion of shipping into EU's ETS in the period 2023 or 2024 to 2026/2027. After the gradual inclusion, shipowners will from 2026 OR 2027 surrender emission allowances for 50% of the reported CO2 emission for voyages in and out of EU AND 100% of the emission for voyages within EU. In the short and medium term, carbon taxes or emission trading schemes in shipping are believed to mainly be an opportunity for KCC with its solutions having 30-40% lower CO2 emissions per ton transported compared to standard vessels in its main trades due to substantially lower ballast. Hence, KCC's combination carriers will have a lower exposure to new carbon taxes than standard vessels. A large part of standards vessel either ballast into Europe or have long ballast before loading the cargo to Europe, while the KCC combination carriers usually are laden both in and out of Europe. KCC's strategy sets decarbonization targets which requires improvements in trading efficiency including further reductions in time in ballast (trading empty). Over a longer time-horizon, the financial implications for KCC of such regulations are uncertain and might impact revenue, cost and assets impairment, both positively through for example carbon pricing and negatively through for example investments in new vessels or retrofit of existing vessels. KCC works closely with other stakeholders to promote strong and fair regulations that incentivize the industry to decarbonize.

### C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

No

### C11.3

(C11.3) Does your organization use an internal price on carbon?

Yes

### C11.3a

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**(C11.3a) Provide details of how your organization uses an internal price on carbon.**

**Objective for implementing an internal carbon price**

Drive energy efficiency  
Drive low-carbon investment  
Stress test investments

**GHG Scope**

Scope 1

**Application**

Carbon prices are used internally to calculate alternative business cases for investments in various energy efficiency technologies to reduce the GHG emissions from KCC's fleet. There is not yet a global carbon price for the international shipping industry, but we do expect one to be introduced within the next 10 years.

Alternatively, there might be local or regional carbon pricing schemes applicable for international shipping, and the EU will be the first region to expand their EU ETS to also cover shipping within, into and out of EU ports.

Assuming a future carbon price in internal calculations is also helpful when planning for the design and construction of future ships, in particular in the scenario analysis of future renewable fuel technologies such as green ammonia, green methanol and green hydrogen.

**Actual price(s) used (Currency /metric ton)**

90

**Variance of price(s) used**

KCC is currently using differentiated carbon pricing, where the price varies by time scale and type of decision.

**Type of internal carbon price**

Shadow price

**Impact & implication**

By using a theoretical carbon price in internal calculations investments in energy efficiency initiatives are stress-tested and the upside potential is as well evaluated. Such investments can provide KCC with a competitive advantage carrying cargo from/to areas with regional carbon prices. The same is relevant if and when global carbon prices are introduced to the international shipping industry. Many of these investments are already paying off in the form of additional fuel savings without carbon taxes, however the investments will make KCC more resilient in the future when carbon pricing will be introduced to global and regional shipping as marked-based measures to reach decarbonization targets.

Internal carbon pricing used on a broader basis in KCC will likely be evaluated and implemented over the next years.

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## C12. Engagement

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### C12.1

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**(C12.1) Do you engage with your value chain on climate-related issues?**

Yes, our suppliers  
Yes, our customers/clients  
Yes, other partners in the value chain

### C12.1a

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**(C12.1a) Provide details of your climate-related supplier engagement strategy.**

**Type of engagement**

Information collection (understanding supplier behavior)

**Details of engagement**

Other, please specify (Know Your Counterparty Procedures)

**% of suppliers by number**

100

**% total procurement spend (direct and indirect)**

100

**% of supplier-related Scope 3 emissions as reported in C6.5**

100

**Rationale for the coverage of your engagement**

KCC has a strong commitment to our values and ethical standards, as communicated in our Code of Conduct. All suppliers and other counterparties are asked to adhere to KCC's Counterparty Code of Conduct (CCoC). Adherence is partly secured through the Know Your Counterparty Procedures (KYC Procedures). As part of the KYC Procedures, KCC performs a business ethics check. This control includes an adverse media check related to, among other things, ESG-issues such as spills to the environment and for ship owners, their practice related to scrapping of vessels/beaching.

**Impact of engagement, including measures of success**

The impact of the engagement is that KCC through the KYC Procedures to a degree secures that the counterparties, including suppliers, adhere to KCC's standards. Success is measured through findings and how KCC acts upon findings. If the KYC procedures reveals any issues that are not aligned with our Counterparty Code of Conduct, KCC in some instances reach out to the potential supplier/counterparty and in some instances the counterparty has changed their policy or in other instances explained how they are working to solve e.g. a situation with spills to the environment. In other instances, KCC has decided to withstand business relations. An example of a positive outcome is that a counterparty (a major shipowning group) with suspected history of beaching vessels non-compliant with the Hong Kong convention, declared a recycling policy compliant with the convention.

**Comment**

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**Type of engagement**

Innovation & collaboration (changing markets)

**Details of engagement**

Run a campaign to encourage innovation to reduce climate impacts on products and services

**% of suppliers by number**

0

**% total procurement spend (direct and indirect)**

0

**% of supplier-related Scope 3 emissions as reported in C6.5**

0

**Rationale for the coverage of your engagement**

KCC supported by Klaveness Ship Management, Klaveness' in-house ship manager, has an ambition of being an innovator and early adaptor of energy efficiency measures. KCC has been outspoken on its willingness to try out new solutions and work closely with suppliers of energy efficiency solutions to improve the practical application and efficiency of these solutions. This position has attracted interest from start-ups and other companies with new solutions and ideas. We are, however, not able to quantify % of suppliers, spend and emissions as this is collaboration on a case by case basis.

During 2021 and in Q1 2022, KCC worked closely with three suppliers of energy efficiency measures to improve the solution to better fit with dry bulk/tanker vessels. These suppliers can replicate this to other customers.

**Impact of engagement, including measures of success**

Success is measured through the improved design of and that this solution hopefully can be replicated on other dry bulk/tanker vessels in the global fleet of standard vessels.

**Comment**

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**C12.1b**

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**(C12.1b) Give details of your climate-related engagement strategy with your customers.**

**Type of engagement & Details of engagement**

Collaboration & innovation	Run a campaign to encourage innovation to reduce climate change impacts
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**% of customers by number**

40

**% of customer - related Scope 3 emissions as reported in C6.5**

0

**Please explain the rationale for selecting this group of customers and scope of engagement**

During 2020-2022, KCC has initiated workshops with key customers informing about the development and likely impact of concluded and possible new environmental regulations in shipping and to understand how these customers handle climate-related issues with focus on decarbonization, which again will impact KCC's business activities. The discussions with customers also include how KCC in co-operation with customers can improve carbon efficiency of KCC's services and the customer's scope 3 emissions e.g., by reducing speed, increasing cargo intake and decrease waiting time in ports. The customers have been selected due to their focus on scope 3 emissions and/or being companies KCC has worked closely with or intend to work closely with over time. The intention over time is to include mechanisms into all freight contracts to strengthen co-operation and to incentivize KCC to further reduce emissions from its fleet.

**Impact of engagement, including measures of success**

Impact of engagement is even closer co-operation with important customers and further down the road the intended impact is reduced emissions from the KCC fleet. KCC has presented and discussed in detail its sustainability-linked COA solution to three major customers in 2021-2022. Measured success is increased number of workshops and customers that report their scope 3 emissions and finally the most important success factor is the implementation of the sustainability-linked COA solution into contracts with a target to achieve emission reductions from KCC's fleet through co-operation with customers. A success late 2021/early 2022, is the signing of a six-year contract of affreightment (COA) for shipments of caustic soda to Australia with one of KCC's major customers. The COA includes a sustainability-linked framework developed by KCC for how KCC and the customer will work together to deliver further reductions in carbon emissions associated with the customer's caustic soda ocean freight to Australia. The agreed sustainability framework includes: 1) A detailed CO2 emission reporting; 2) the establishing of trajectories for annual shared CO2 reductions targets, and arrangements for how to co-operate to reach the set targets; as well as 3) A carbon pricing mechanism whereby the freight paid under the COA is dependent on KCC's emission performance relative to an agreed baseline. The latter initiative is under trials in 2022 and if successful will be implemented into the COA with effect from 2023. The sustainability-linked COA concept is furthermore discussed with two other customers and is to date partly included into the COA with one of these customers.

**C12.1d**

**(C12.1d) Give details of your climate-related engagement strategy with other partners in the value chain.**

KCC strongly believes access to capital going forward will be impacted by how sustainable our assets and our business model is in the future. It is hence important to actively engage with banks, shareholders, bond investors and financial regulators. KCC among other initiatives, reports on the Poseidon Principles to the banks, discusses the implications of the EU taxonomy with investors, through one-to-one meetings educate the financial stakeholders on KCC's sustainability issues and discuss alternative incentive structures. The bond issue has an undertaking related to sustainability reporting and two out of four bank facilities are sustainability-linked in which the credit margin is adjusted, up or down, based on KCC's sustainability performance, as defined by the company's ability to meet its goal of reducing CO2 emissions per ton of transported cargo per nautical mile (EEOI) and reducing absolute CO2 emissions per vessel. On the way to the sustainability goals, KCC's sustainability performance/KPIs will be disclosed on a quarterly basis and main KPIs will be subject to an annual external audit.

**C12.2**

**(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?**

Yes, suppliers have to meet climate-related requirements, but they are not included in our supplier contracts

**C12.2a**

**(C12.2a) Provide details of the climate-related requirements that suppliers have to meet as part of your organization's purchasing process and the compliance mechanisms in place.**

**Climate-related requirement**

Other, please specify (Waste reduction and circularity, spills and emissions)

**Description of this climate related requirement**

The requirements are not systematic, but for some categories the purchasing team has high attention on specific issues. For provisions, there is high attention on single-use plastic and for other high risk categories such as chemical supplies we use large suppliers that have high standards on ESG-related issues.

**% suppliers by procurement spend that have to comply with this climate-related requirement**

0

**% suppliers by procurement spend in compliance with this climate-related requirement**

0

**Mechanisms for monitoring compliance with this climate-related requirement**

Other, please specify (Research made by the purchasing team on a case by case basis)

**Response to supplier non-compliance with this climate-related requirement**

Other, please specify (Retain, suspend and/or engage decided on a case by case basis. )

**(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?****Row 1****Direct or indirect engagement that could influence policy, law, or regulation that may impact the climate**

Yes, we engage directly with policy makers

Yes, we engage indirectly through trade associations

Yes, we engage indirectly by funding other organizations whose activities may influence policy, law, or regulation that may significantly impact the climate

**Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?**

Yes

**Attach commitment or position statement(s)**

Part of the Getting to Zero Coalition: "Through a 2021 industry-led Call to Action for Shipping Decarbonization, the Coalition has raised their ambition to fully decarbonize the sector by 2050, keeping in line with science based climate targets." KCC through the majority owner, Torvald Klaveness, is a signatory to the "Call to Action for Shipping Decarbonization" attached.

KCC as well in the Environmental Policy and Strategy published in January 2050 stated for the first time that the Company's ambition is to reach a zero-emission operation within 2050.

Call-to-Action-for-Shipping-Decarbonization.pdf

**Describe the process(es) your organization has in place to ensure that your engagement activities are consistent with your overall climate change strategy**

KCC engages with the Getting to Zero Coalition that are aligned with KCC's ambitions. The Company is also engaged in CLIMMS (aiming to develop a robust understanding of the actual and complete climate impacts associated with different mitigation options for the global maritime fleet) and Smart Maritime (aiming to find out how we can improve energy efficiency and reduce emissions from the maritime sector) to support the zero-emission ambition of KCC.

The engagement activities are subject to CEO approval to make sure that the different engagements are aligned with the strategy.

**Primary reason for not engaging in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate**

<Not Applicable>

**Explain why your organization does not engage in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate**

<Not Applicable>

## C12.3a

**(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?****Focus of policy, law, or regulation that may impact the climate**

Minimum energy efficiency requirements

**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

IMO's new Carbon Intensity (CII) Regulations

**Policy, law, or regulation geographic coverage**

Global

**Country/region the policy, law, or regulation applies to**

<Not Applicable>

**Your organization's position on the policy, law, or regulation**

Support with major exceptions

**Description of engagement with policy makers**

IMO's Short Term Measures approved in June 2021 for implementation in January 2023 include the so-called Carbon Intensity Indicator (CII) regulations setting minimum requirements to the operational efficiency of vessels. KCC pointed out already in 2020 directly to the Norwegian Ministry of Climate and Environment and through the Norwegian Shipowners Association a major weakness in this regulation being linked to the IMO's choice of using the AER-metrics as the basis for its CII regulation, a metrics which measures the theoretical carrying capacity of a vessel (the deadweight). KCC and many others have argued that IMO should rather use the EEOI-metrics measuring the actual cargo transported by each vessel and thereby the actual transportation work performed. IMO's decision to use the AER-measure leads e.g. to a vessel with high utilization will have a worse CII-score than a vessel with low utilization. Shipowners are disincentivized to improve operational/trading efficiency of its vessels. KCC together with Klaveness Ship Management (KSM) prepared in co-operation with the Norwegian Ministry of Climate and Environment a proposal to IMO to reduce the negative effects of the use of the AER-metric through introduction of an adjustment factor for vessels with a higher utilization than the average vessel within each vessel class to eliminate the negative effect on the CII-score of higher fuel emission due to transporting a higher cargo quantity. The proposal was not approved by IMO during the MEPC meeting in June 2022.

KCC also pointed out to the Norwegian Ministry of Climate and Environment that IMO's proposed baseline for combination carriers (like KCC's CABU and CLEANBU vessels) was incorrectly calculated as IMO based their proposal on few and inconsistent vessel observations. As a result, IMO's proposed CII-baseline for combination carriers was stricter than for standard dry bulk vessels despite the combination carriers being both tankers and dry bulk vessels. KCC/KSM prepared in co-operation with the Norwegian Ministry of Climate and Environment a proposal to IMO during the autumn of 2021 for an adjusted baseline applicable for combination carriers which correctly takes into account the nature of these vessels and their differences compared to standard tankers and dry bulk vessels. This proposal was approved by IMO during the MEPC meeting in June 2022 and is now included into the final CII regulation.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

n.a.

**Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?**

No, we have not evaluated

## C12.3b

**(C12.3b) Provide details of the trade associations your organization engages with which are likely to take a position on any policy, law or regulation that may impact the climate.**

**Trade association**

Other, please specify (Norwegian Ship Owners Association)

**Is your organization's position on climate change consistent with theirs?**

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We publicly promote their current position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

Under the umbrella of the Norwegian Shipowners' Association (NSA), Norwegian shipping companies have taken action by adopting four ambitious goals laid out in a climate strategy. The goals state that members will cut their greenhouse gas emissions by 50% per transported unit by 2030, compared to 2008. From 2030, Norwegian Shipowners' Association members will only order vessels with zero emission technology. From 2050, the Norwegian fleet will be climate neutral. The strategy also entails an international ban from 2050 on fuel types that are not climate neutral.

KCC participates in several NSA committees and through this influences the position of association: Deep Sea Group (particularly focused on safety at sea, and reducing the environmental impact of shipping through technological innovations and appropriate international regulations). Reference Group for Ship Recycling (advocating responsible recycling of ships both in relation to safety, work conditions and environmental impact). Capital and Tax Committee and the Reference group for ESG issues (ESG regulations and reporting).

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

55000

**Describe the aim of your organization's funding**

Membership fee based on a given formula developed by the association.

Promoting Norwegian ship owner's/KCC's interests towards Norwegian and international regulators. Information sharing and discussion partner.

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

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**Trade association**

Other, please specify (Getting to Zero Coalition)

**Is your organization's position on climate change consistent with theirs?**

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We publicly promote their current position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

KCC is through Torvald Klaveness, the majority owner of KCC, a member of the Getting to Zero Coalition.

The Getting to Zero Coalition is a partnership between the Global Maritime Forum and the World Economic Forum. It brings together decision-makers from across the shipping value chain with key stakeholders from the energy sector as well as from governments and IGOs. Its aim is to accelerate maritime shipping's decarbonization with the development and deployment of commercially viable deep sea zero emission vessels by 2030 towards full decarbonization by 2050.

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

0

**Describe the aim of your organization's funding**

<Not Applicable>

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

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C12.3c

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**(C12.3c) Provide details of the funding you provided to other organizations in the reporting year whose activities could influence policy, law, or regulation that may impact the climate.**

**Type of organization**

University or other educational institution

**State the organization to which you provided funding**

The Company is together with its ship manager, Klaveness Ship Management (KSM), engaged in CLIMMS (aiming to develop a robust understanding of the actual and complete climate impacts associated with different mitigation options for the global maritime fleet) and Smart Maritime (aiming to find out how we can improve energy efficiency and reduce emissions from the maritime sector). The active participation in CLIMMS is through KCC and KSM based on personnel resources funded by KCC.

**Funding figure your organization provided to this organization in the reporting year (currency as selected in C0.4)**

10000

**Describe the aim of this funding and how it could influence policy, law or regulation that may impact the climate**

Participation in the CLIMMS project aims at understanding how the maritime sector can achieve the IMO's climate goals of halving emissions from the maritime sector by 2050, towards the 2 degree goal in the Paris Agreement. The project will contribute to strengthening the knowledge base for the formulation of policies and instruments through well-documented analyzes of the consortium's own proposals for solutions.

Through the participation in Smart Maritime KCC aims at increasing knowledge about energy efficiency through innovative use, improvement and combination of technologies made by the research projects in Smart Maritime. Smart Maritime actively contributes to international policy debate in e.g. IMO and EU.

**Have you evaluated whether this funding is aligned with the goals of the Paris Agreement?**

No, we have not evaluated

**C12.4**

**(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).**

**Publication**

In mainstream reports

**Status**

Complete

**Attach the document**

KCC Sustainability Report 2021.pdf

**Page/Section reference**

Page 3-12, 20-28

**Content elements**

- Governance
- Strategy
- Risks & opportunities
- Emissions figures
- Emission targets
- Other metrics

**Comment**

**C15. Biodiversity**

**C15.1**

**(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?**

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity	Scope of board-level oversight
Row 1	Yes, both board-level oversight and executive management-level responsibility	<p>Biodiversity is in focus both directly from executive management-level as well as indirectly from board-level oversight.</p> <p>Directly through specific measures, such as early implementation of ballast water treatment systems which ensure no spread of potentially invasive species from one geographical region to another, as well as the focus on choosing anti-fouling hull coating paint with minimal biocides.</p> <p>Indirectly through the company's ambitious decarbonization strategy, as climate change is accelerating the rate of biodiversity loss through extreme temperatures, changing weather patterns and ocean warming and acidification.</p> <p>Other implemented measures intended to increase the vessel performance and thus reduce GHG emissions have positive direct impacts on biodiversity as well, such as using hull cleaning robots capable of removing and capturing biofouling in port, and utilizing semi-autonomous cleaning brushes while the vessels are sailing on deep ocean, where biological residue cleaned from the hull sinks to the ocean floor and adds to deep-water marine snow.</p>	<Not Applicable >

**C15.2**

**(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?**

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed
Row 1	Yes, we have endorsed initiatives only	<Not Applicable>	SDG

**C15.3**

**(C15.3) Does your organization assess the impact of its value chain on biodiversity?**

	Does your organization assess the impact of its value chain on biodiversity?	Portfolio
Row 1	Yes, we assess impacts on biodiversity in our downstream value chain only	<Not Applicable>

**C15.4**

**(C15.4) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?**

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity-related commitments
Row 1	Yes, we are taking actions to progress our biodiversity-related commitments	Land/water protection Education & awareness

**C15.5**

**(C15.5) Does your organization use biodiversity indicators to monitor performance across its activities?**

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	No, we do not use indicators, but plan to within the next two years	Pressure indicators

**C15.6**

**(C15.6) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).**

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In mainstream financial reports	Impacts on biodiversity	P21. KCC Sustainability Report 2021.pdf

**C16. Signoff**

**C-FI**

**(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.**

**C16.1**

**(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.**

	Job title	Corresponding job category
Row 1	CFO	Chief Financial Officer (CFO)

Submit your response

**In which language are you submitting your response?**

English

**Please confirm how your response should be handled by CDP**

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

**Please confirm below**

I have read and accept the applicable Terms