



Climate/Nature Risk assessment

Supplement to Annual Report 2022



ODFJELL

Version log

This document was made public in accordance with the NFRD/Norwegian Accounting Act at the launch of Annual Report 2022. The report must be read in conjunction with the annual report and other reports available on Odfjell.com. Because risk and materiality are dynamic, there can be updates throughout the year. To ensure transparency, this log will present modifications from the version released concurrently with the Annual report.

Version	Date	Changes
1.0	<ul style="list-style-type: none">• March 28, 2023	<ul style="list-style-type: none">• Launched parallel with Annual Report 2022
1.1	<ul style="list-style-type: none">• Aug 25, 25	<ul style="list-style-type: none">• Updated Scope-3 numbers on slide 9 and new slide 10. Page Numbers slide 3 are updated accordingly

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ESG information map

- This report covers additional sustainability reporting to what is reported in Annual Report.
- The Norwegian Accounting Act § 3-3c has identified following themes to be included in the sustainability reporting:
 - Environment
 - Social conditions
 - Labor environment
 - Diversity and non-discrimination
 - Human rights
 - Anti-bribe and corruption
- The same act also require companies to report on minimum:
 - Business model
 - Policies and due diligence process
 - Outcome
 - Principal risk
 - KPIs and metrics
- The table to the right, is a guide to related sustainability reporting.
- Director's report refer to this Climate/Nature Risk assessment
- The reporting is presented on Odfjell.com at the same time as Annual Report.
- The Annual report has separate sections on:
 - Sustainability
 - People
 - ESG reporting

Relevant ESG Reporting	Disclosed
Sustainability Strategy	• https://www.odfjell.com/sustainability-strategy
Management Approach	• https://www.odfjell.com/leadership
Reporting framework	• https://www.odfjell.com/our-performance
Materiality	• Climate/Nature Risk assessment
Environment, Climate Risk, TCFD Report	• Climate/Nature Risk assessment
Environment, Nature Risk, TNFD Report	• Climate/Nature Risk assessment
Scenario analysis	• Climate/Nature Risk assessment
Diversity, Equality & Inclusion report	• ESG section of annual report
Salary report leading personnel (2022 report released with AGM Invite April 23)	• https://www.odfjell.com/investors/reports-and-presentations
Policy salary leading personnel (2022 report released with AGM Invite April 23)	• https://www.odfjell.com/investors/reports-and-presentations
SASB/GRI	• Annual report and website
Emission Report	• ESG section of annual report • CDP Report,
SDG	• UN Communication on Progress • https://unglobalcompact.org/what-is-gc/participants/13517
Verification Sustainable Financing	• https://www.odfjell.com/investors/bonds
EU Taxonomy Report	• https://www.odfjell.com/eu-taxonomy
Climate target and progress	• Annual Report 2022 • Climate/Nature Risk assessment
Occupational Health & Safety	• https://www.odfjell.com/occupational-health • Annual Report 2022
Account of Human Rights Due Dilligence	• https://www.odfjell.com/investors/reports-and-presentations
Anti Bribes & Corruption	• ESG section of Annual Report 2022 • https://www.odfjell.com/governance-and-business-integrity
Sustainability Partnerships	• https://www.odfjell.com/partnerships
Social conditions	• Annual Report 2022, • https://www.odfjell.com/social

ESG Materiality and risk

Odfjell's Annual Report has included materiality and climate risk assessments in recent years. We are now seeing a greater demand for more information on materiality and risk assessments. We also report on nature risk in this year's report. To provide relevant information in line with stakeholder expectations, we decided to report on materiality, climate, and nature risk in a separate document this year.

The reporting is in line with the Norwegian Accounting regulation* on statement of corporate responsibility and EU-directive 2014/95/EU3 on Non Financial Reporting (NFRD). We have also used *EUs Guidelines on non-financial reporting (2017/C 215/01)*, *the EU supplement on reporting climate related information (2019/C 209/01)* and the report *"Informasjon om klimarelaterte forhold i årsrapportene"* from the Financial Supervisory Authority of Norway in 2022.

For the climate and nature risk assessment and reporting, we have used the guidelines and framework from Task Force for nature Related Financial Disclosure v0.3 (TNFD), and Task Force for Climate Related Financial Disclosures (TCFD).

In the table to the right we have presented how our reporting in TCFD aligns with the regulation and recommended disclosure from NFRD.

This report must also be read together with our Annual Report for 2022, where we report on various ESG metrics and KPIs.

We have also issued a separate report on EU Taxonomy for 2022 available on Odfjell.com.

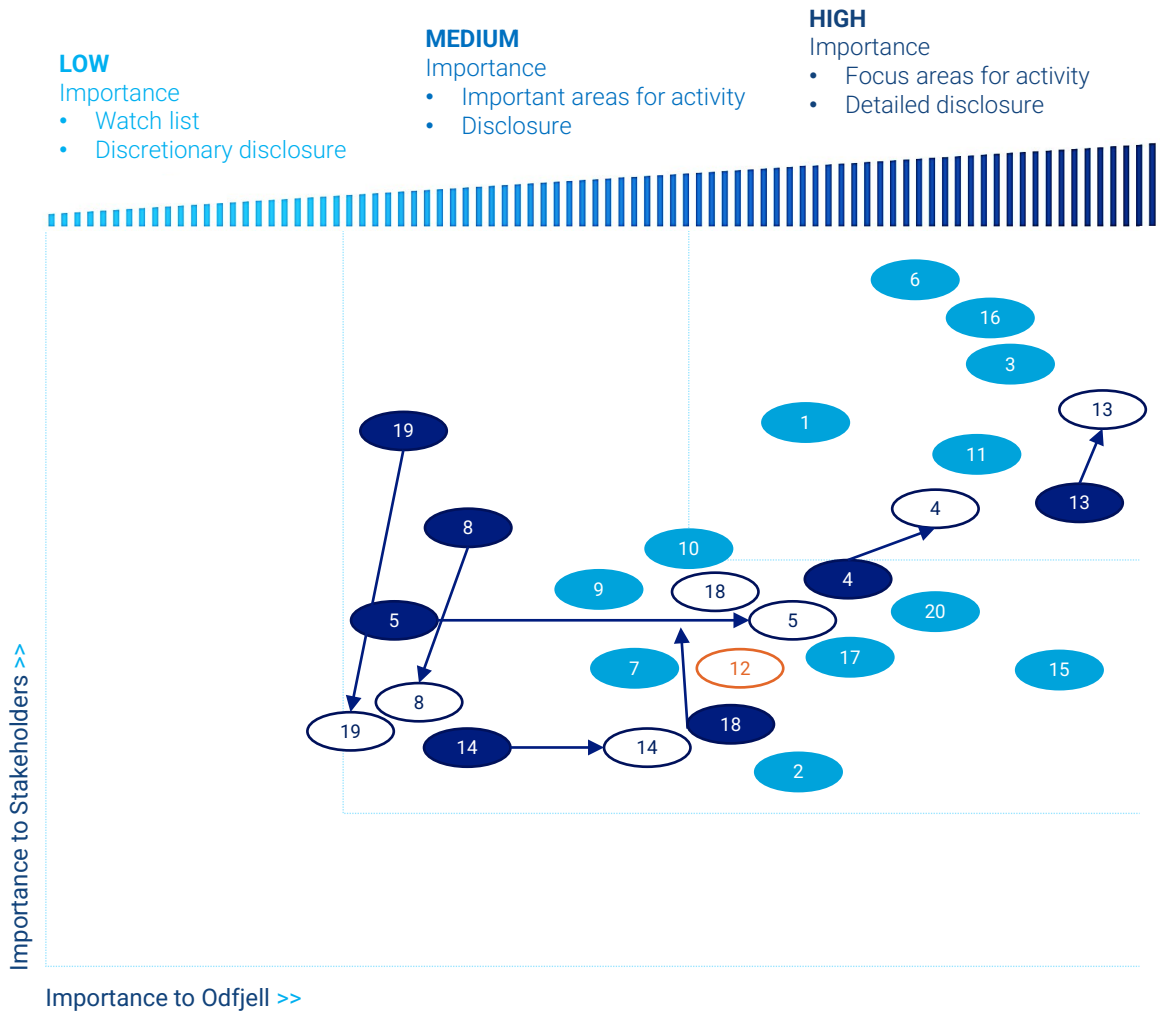
			NFRD and Norwegian Account law 3-3C				
TCFD + TNFD Recommended Disclosures			Business model	Policies and due diligence Processes	Outcomes	Principal risks and their management	Key performance information
Governance	a)	Boards oversight		✓			
	b)	Management's role		✓			
Strategy	a)	Climate related risks and opportunities				✓	
	b)	Impact of climate-related risks and opportunities	✓				
	c)	Resilience of the organization's strategy	✓				
Governance	a)	Process of identifying and assessing				✓	
	b)	Process for managing				✓	
	c)	Integration into overall risk management				✓	
Metrics & targets	a)	Metrics used to assess					✓
	b)	GHG emissions			✓		
	c)	Targets			✓		

*Lov om årsregnskap m.v. (regnskapsloven) § 3-3C

ESG stakeholders and engagement

	Employees	Investors	Customers	Suppliers	Community
Examples	<ul style="list-style-type: none"> • Own employees, potential employees, students, retirees 	<ul style="list-style-type: none"> • Banks, shareholders, bondholders, • Financial market • Analysts • Insurance companies 	<ul style="list-style-type: none"> • Oil majors, chemical produces, agriculture product producers, trading houses, brokers 	<ul style="list-style-type: none"> • Shipyards, technical providers, equipment, ship suppliers, port agents, logistic providers, ship chandlers, real estate 	<ul style="list-style-type: none"> • Government, regulators, media, general public, associations, seminars, conferences, media
Key Topics	<ul style="list-style-type: none"> • Engagement • Commitment • Collaboration • Training & development • Performance evaluations • Recruiting • Career 	<ul style="list-style-type: none"> • ESG Performance • Emission data • Sanctions • Due Diligence process • AML • ESG Reporting • Climate risk 	<ul style="list-style-type: none"> • Safety • Quality and performance • Commercial terms • Emissions • Satisfaction • Use of data • Vetting data 	<ul style="list-style-type: none"> • Quality and performance • Contribution to emission reduction • IDD • Human Rights Impact • Waste • Circularity 	<ul style="list-style-type: none"> • Climate, and social impact • Safety and security • Energy transition • Green shipping • Governance • Compliance • Employment (jobs)
How we engage	<ul style="list-style-type: none"> • Internal communication • People managers • Surveys • Works Council • Labor Committee • Performance management • Policies • Social/interests/sports • Townhalls • Whistle blow system • Student engagements 	<ul style="list-style-type: none"> • Annual and quarterly reports • Presentations • Bank and Capital market days • Press and stock exchange releases • Investor meeting • IR Activities • Roadshows • AGM 	<ul style="list-style-type: none"> • Emission reports • Customer meetings • Daily dialogue • Roadshows and industry events • Quarterly reporting • Customer portal 	<ul style="list-style-type: none"> • Policies • IDD • Pre-qualification/Screening • Business reviews • Supplier Code of Conduct principles • Responsible procurement • Contracts • Supplier visits and audits • Event handling system • Procurement collaboration 	<ul style="list-style-type: none"> • Participation in associations and partnerships • Proactive Contact with media • Signatory and collaboration with UN GC • Dialogue NGOs • Presentations • Visits • Membership in MACN • Shipowners' Association • Website and Reporting • School visits

Materiality and updates 2023



1 ESG reporting and transparency	11 Ethics, anti-corruption
2 Talent and competence development	12 Scope-3
3 Health and safety	13 Human rights
4 Responsible procurement	14 Up/Downstream impact
5 Ship recycling	15 Information and cyber security
6 GHG emissions	16 Climate risk
7 Diversity, Equity, Inclusion	17 Governance structure
8 Innovation/ Technology	18 Biodiversity
9 Ocean health	19 Infections/diseases
10 Local environment	20 Water management

- 2022
- Change for 2023
- 2023, unchanged from 2022
- New 2023

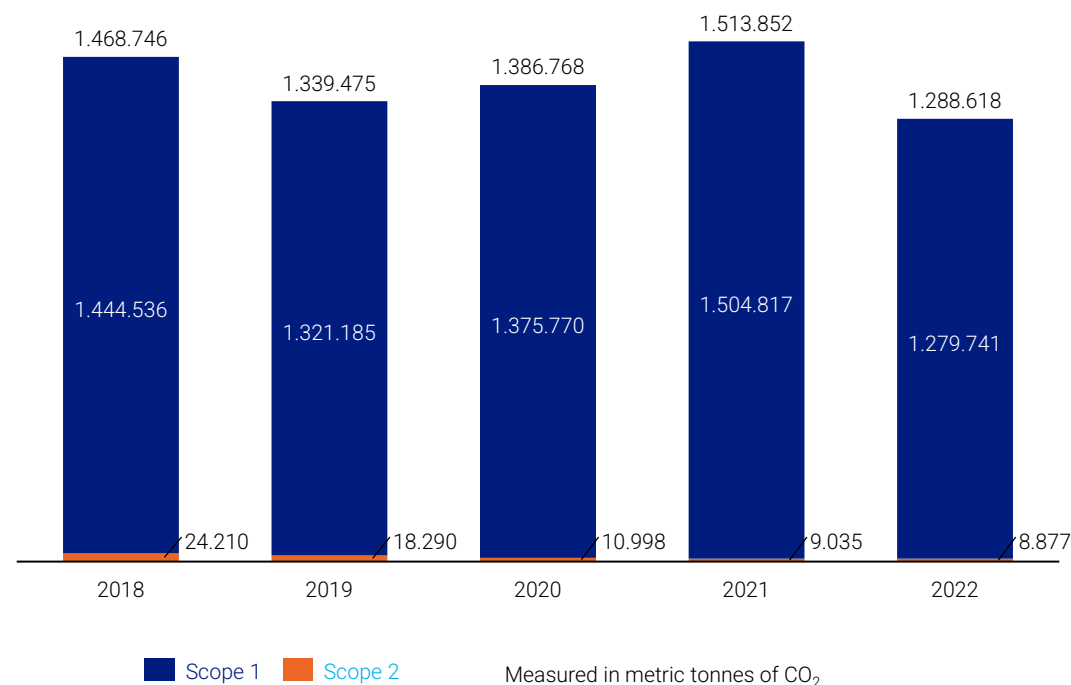
Odfjell and environmental impact

- International shipping is an important part of the global economy since it allows goods and commodities to flow across seas and continents. However, this industry contributes significantly to pollution and environmental damage. Ships emit pollutants such as sulphur oxide, nitrogen oxide, and particles, which can harm air and water quality. Furthermore, the sector emits large amounts of greenhouse gases, which contribute to climate change. As international trade grows, so does shipping's environmental effect, making it vital to address these issues and find long-term solutions.
- While international shipping contributes to pollution, it is also important to recognize the advantages it delivers in terms of efficiency and environmental friendliness. Shipping is significantly more energy efficient and has a lower carbon footprint than other modes of transportation, such as air or road transit. Shipping accounts for only 2.8% of global greenhouse gas emissions, according to the International Maritime Organization. Shipping is also crucial in enabling the global economy and supporting international trade, both of which can have a positive social and economic impact on communities worldwide. While international shipping has environmental consequences, it is also an important and efficient mode of transportation that may be made even more sustainable with continuing innovation and investment.
- Odfjell recognizes that its operations have an environmental impact and does everything possible to mitigate it. This is a critical component of our strategy.
- Our biggest impact to the environment is our emission of greenhouse gas. The main sources of emissions are carbon dioxide (CO₂) from the combustion engines of ships operated by Odfjell. Most significant factors for emitted CO₂ are:
 - Fleet size (Number of operated ships)
 - Efficiency of the ships (Technology, fuel efficiency)
 - Operation of the ships (Speed, routing, port time)
- These factors will vary from year to year. Most important factors for absolute emission, is the size of the fleet. The Odfjell fleet consists of:
 - Controlled fleet (Owned, financial lease, bareboat)
 - Operated Fleet (Controlled fleet + time-chartered vessels and pool vessels)
- The fleet size fluctuates throughout the year. Odfjell's overall emissions will rise if new ships are added to a pool or chartered ships are included. When they exit the pool or a TC contract, they continue to release CO₂, but Odfjell will not report the emissions. As a result, absolute emissions are not a useful measure of progress and improvement.
- Because of our size, program, and platform, we can operate ships more efficiently than other smaller operators in our segment. This means that even if we increase our absolute emissions from our operating fleet as a result of more ships, we contribute to an absolute reduction since we can run ships more efficiently. Carbon intensity is a better KPI for deep-sea shipping since it represents a KPI on efficiency and operations. This is the IMO's KPI, and it is the KPI Odfjell uses for climate targets.

Scope 1 and 2 emissions and benchmark

- Shipping was not included as a part of the Paris Agreement. The IMO presented a greenhouse gas strategy for shipping in 2018, with 4 levels of ambition, that sets the target for international shipping's decarbonization trajectories.
- The direct emissions from our vessels (Scope 1) are the biggest source of emissions for Odfjell. This is the factor that has biggest impact on environment. The absolute emissions does not tell the full story, as it is so dependent on fleet size.
- Odfjell reports emissions from both the managed (owned) and operated fleets. This means that we will take ships on time charter (TC) from other owners and also include other owners' vessels in an Odfjell-managed pool. If this pool or fleet of TC grows, Odfjell's absolute numbers will grow, but the vessels will not be recorded by the owner, so emissions will not rise overall. Odfjell has shown that we can trade and run ships more efficiently than others, therefore by including additional vessels, we can lower total emissions from a holistic standpoint.
- That is why Odfjell has set a target on carbon intensity and not a target on absolute emissions
- Scope 2 covers the indirect emissions created by the production of energy we buy (i.e power for offices).
- The EU Benchmark (BMR*) of 7% annual reduction does not cover global shipping, and this commonly used benchmark is not a good benchmark for shipping. The IMO has therefor established the Carbon Intensity Indicator (CII), where all ships are rated on CII, and categorized from A to E on a trajectory iaw IMO Policy and climate targets.

Absolute emissions Scope 1 and 2 2018 - 2022



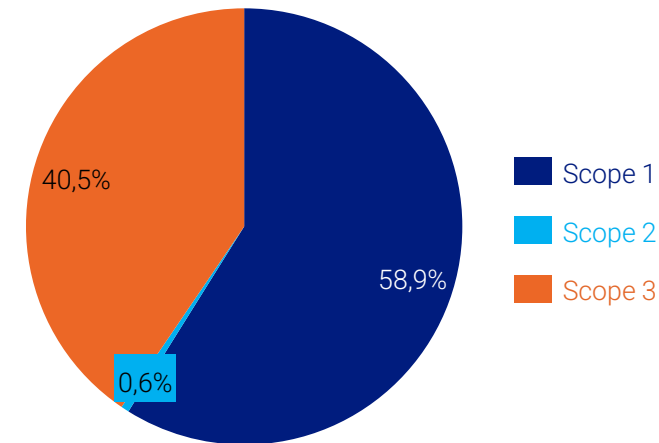
*The EU Benchmark Regulation (BMR), as amended by the EU Regulation on Climate Transition Benchmarks, EU Paris-aligned Benchmarks and sustainability-related disclosures for benchmarks (the Low-Carbon Regulation) entered into force in December 2019 and created two new categories of benchmark under the BMR – Climate Transition Benchmarks (CTBs) and Paris-aligned Benchmarks (PABs). In September 2019, the Technical Expert Group on Sustainable Finance (TEG) published a report setting out its recommendations relating to the new climate benchmarks and ESG disclosure requirements. International shipping was not included in this work, and the EU benchmark guidance is less relevant for shipping. TEG https://finance.ec.europa.eu/system/files/2019-06/190618-sustainable-finance-teg-report-climate-benchmarks-and-disclosures_en.pdf

Scope – 3 emissions

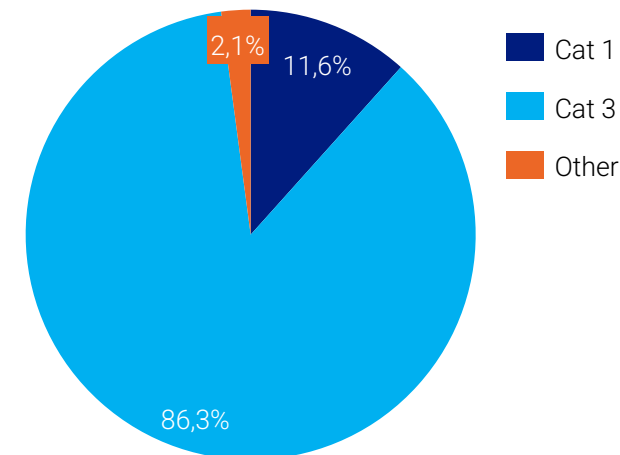
- Scope 3 covers our upstream and downstream value chain emissions. Scope 3 is divided into 15 different categories, where 8 are relevant for Odfjell. Odfjell has for several years reported on scope-3 to CDP and in annual report, but not had sufficient data for fuel activities and purchased goods.
- Odfjell has for 2022 used a spend based approach to measure Scope-3 cat 1, Purchased Goods and Services, and cat 3 Fuel-and energy related activities (Fuel production). The methodology is in line with CDP* requirements. The data on cat 1 and cat 3 represent a confidence fraction of 97.4%.
- The project to calculate Scope-3 cat 1 and 3 was accomplished by following the GHG Protocol methodology, more specifically in what refers the spend-based approach. We resort to the Simapro 9.5 software for data modulation, supported by Re-Flow*** where we have access to Exiobase database to select the necessary emission factors for the spend-based approach
- Cat 12** is based on emission report from yard, and recycling supervisor.
- Cat 2 and 4 is calculated using Quantis Scope-3 Calculator iaw CDP
- Our biggest Scope-3 source is related to production of fuel, and represent 86% of our Scope-3 emissions

Upstream Scope 3 in metric tonnes 2022		Downstream Scope 3 in metric tonnes 2022	
Cat 1 - Purchased goods and services	103 650	Cat 9 - Downstream transportation and distribution	Not relevant
Cat 2 - Capital goods	6 568	Cat 10 - Processing of sold products	Not relevant
Cat 3 - Fuel- and energy- related activities (not included in scope 1 or scope 2)	768 275	Cat 11 - Use of sold products	Not relevant
Cat 4 - Upstream transportation and distribution	2 189	Cat 12 - End-of-life treatment of sold products**	3 593
Cat 5 - Waste generated in operations	423	Cat 13 - Downstream leased assets	Not relevant
Cat 6 - Business travel	4 949	Cat 14 - Franchises	Not relevant
Cat 7 - Employee commuting	1 056	Cat 15 - Investments	Not relevant
Cat 8 - Upstream leased assets	Not relevant		

Scope 1-3 percentage of total emissions 2022



Categories as percentage of total Scope – 3 emissions 2022



* CDP is a not-for-profit charity that runs the global disclosure system for investors, companies, cities, states and regions to manage their environmental impacts. (See CDP.net)

** Odfjell recycled one vessel in 2022. The direct emissions related to the recycling is included in this category, as the vessel was sold for recycling. Odfjell has not recycled any vessels since 2016. Emission numbers are verified by contracted supervisor Grieg Green AS.

*** ReFlow (<https://re-flow.io/>)

Double materiality in Odfjell

Background

In accordance with the expectations of new EU rules such as the (Corporate Sustainability Reporting Directive) CSRD and the *EU Guidelines on non-financial reporting: Climate-related data reporting supplement* (2019), Odfjell has also performed a double materiality analysis. We previously used materiality assessment to determine which ESG concerns are important to stakeholders and the company in order to prioritize activities and reporting. Following our climate risk assessment, we have also assessed the effect climate change can have on company value and our business. (In line with TCFD). We have now also assessed how Odfjell's activity can impact climate change and the environment.

Double perspective

The concept of double materiality acknowledges that a company should report simultaneously on sustainability matters that are:

- 1) financially material in influencing business value and;
- 2) material to the market, the environment, and people.

Odfjell approach

In this assessment, we look at the inherent and potential impact we can have on climate, as well as the potential impact climate can have on Odfjell. Because climate change has been high on the agenda for years, Odfjell has established a broad spectrum of both mitigating and adaptation initiatives. The Double Materiality assess the inherent and possible impact prior to our mitigating actions.

The assessment represents a relative scoring of the identified ESG topics, as it is per now impossible to quantify the impact value in short term.

In line with the guidelines, the assessment are seen in a longer perspective than one year

Conclusion

We assess that we have a material impact on society due to carbon emissions. With all mitigating actions in place, we regard the impact on company value as low.

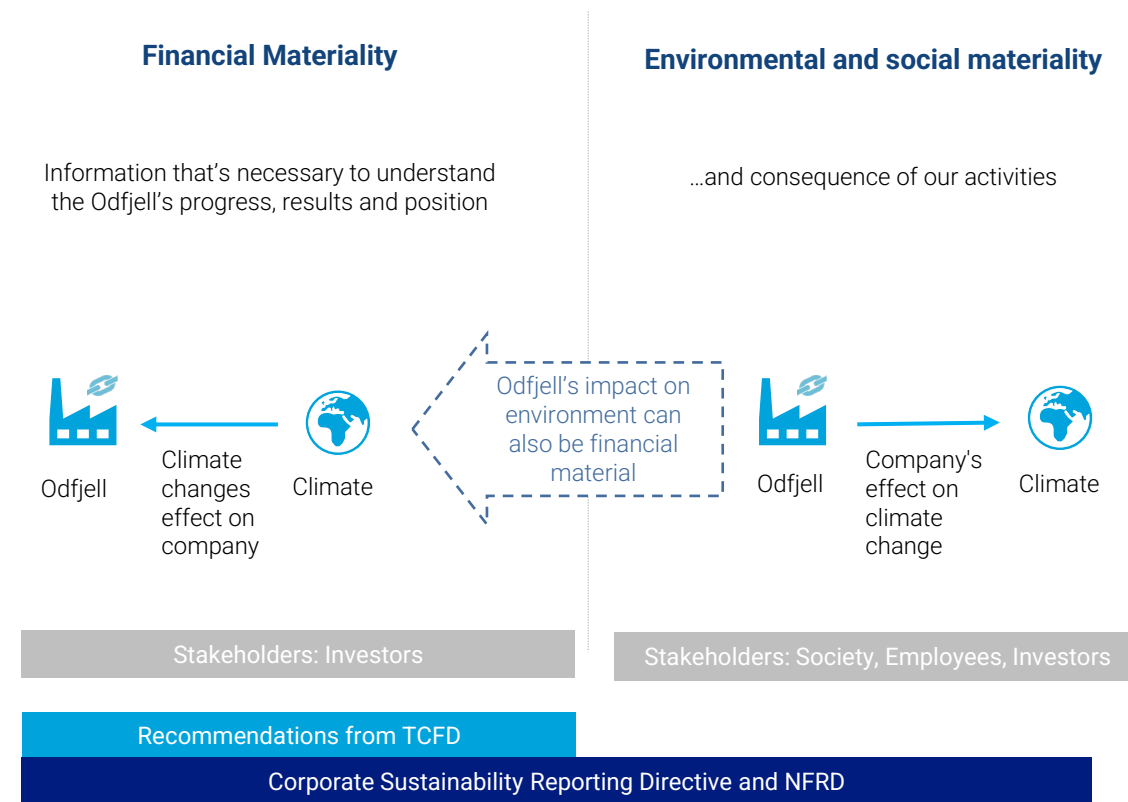
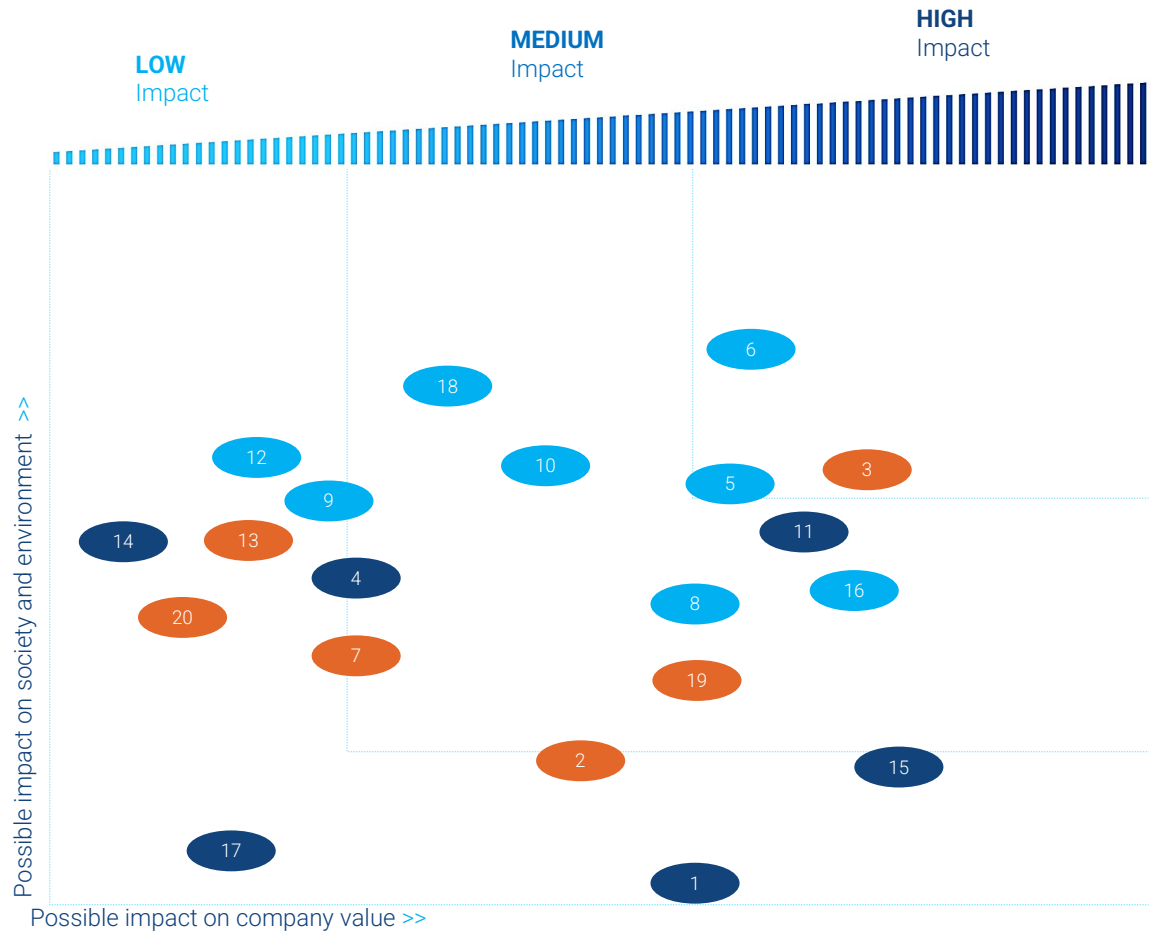


Figure: Illustration of dual materiality and how the CSRD differentiates between climate risks and opportunities, as well as companies' impact on climate. Throughout, TCFD focuses on risk and opportunity for investors.

Double Materiality 2023



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7 Diversity, Equity, Inclusion	17 Governance structure
8 Innovation/ TECH	18 Biodiversity
9 Ocean health	19 Infections/diseases
10 Local environment	20 Water management

- 18 Environment
- 18 Social
- 18 Governance

Climate targets and progress

Climate targets

1. We will cut greenhouse gas emission by 50% by 2030 compared to 2008*
2. We are dedicated to pursuing a zero-emission strategy and will only order vessels with zero-emission capable technology from 2030
3. We will have a climate-neutral fleet from 2050
4. Odfjell will actively support initiatives to develop technology and infrastructure for decarbonization, energy efficiency, and zero emissions and support international regulation to drive zero emissions for our industry and our value chain

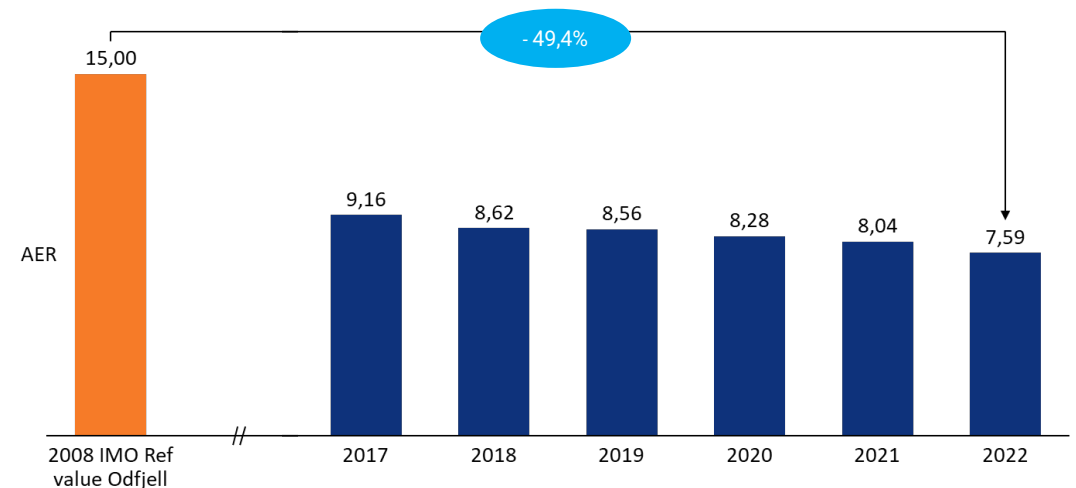
Status of target

Odfjell has reported the carbon intensity (CI) for its fleet since 2008, using the Annual Efficiency Ratio (AER). The results are published in our quarterly reports.

In 2018, the International Maritime Organization (IMO) introduced a proposal to reduce the carbon intensity of all ships by 40% by 2030 compared to a vessel-specific 2008 baseline.

Because the IMO regulates ships, not companies, Odfjell established its 2008 company baseline on the average vessel-specific 2008 baseline.

In 2022, the AER for Odfjell's fleet was 49% lower than its 2008 baseline. The AER in the graph to the left refers to Odfjell's controlled fleet



* Measured in Carbon Intensity, using the Annual Efficiency Ratio, compared to benchmark 2008

Calculations done in accordance with IMO regulations as per MARPOL Annex VI regulation 2.49, and document MEPC.336 (76), MEPC.337 (76), MEPC.338 (76), MEPC.339 (76)

Status on targets 2022-23, and further actions

Status of the climate targets 2022 - 2023

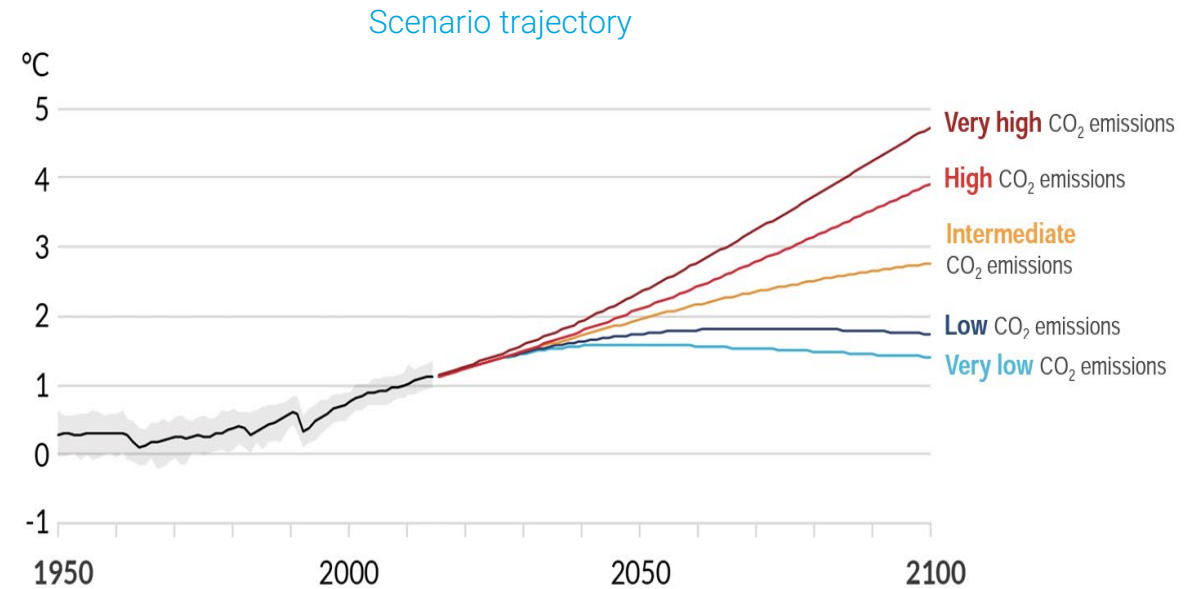
- We reduced our carbon intensity by 5.5% in 2022 compared to 2021. Compared to the average IMO baseline, Odfjell has now reduced carbon intensity, measured by AER, by 49% compared to 2008, a strong indication that we will meet the 50% target already in 2023. We anticipate that the IMO will adopt the revised IMO Strategy for Reducing GHG Emissions from Ships in 2023, but we do not anticipate that the revised strategy will necessitate changes to our own long-term GHG reduction ambitions.
- There are no simple solutions for decarbonizing shipping. To completely decarbonize our sector, we must first have access to renewable electricity to produce green fuels, while avoiding a global net increase in GHG emissions by transferring emissions to other sectors. Then we need bunker infrastructure, sufficient green fuel volumes in key ports, technology, zero-emission regulation, or market-based measures to close the cost gap between conventional and green fuels.
- We expect that this will take a long time to materialize. As we work towards a net-zero future, we are focusing on improving the energy efficiency of our existing ships and future newbuilds. Our future newbuildings will be zero-emission capable.

Actions to achieve our targets

- Odfjell has systematically and methodically addressed energy efficiency and emission reductions since 2007. We have several departments dedicated to this work and are addressing reductions through operational and technical measures.
- In addition, we established a cross-departmental task force in 2022, comprised of ten different disciplines, ranging from chartering to operations, finance, and technology, to drive and coordinate our decarbonization efforts. The work is centered on ensuring that Odfjell meets our carbon intensity reduction targets, and positions itself for a net-zero future.
- Since 2014, we have invested over USD 30 million in energy-saving technology and installed more than 100 energy-saving devices in our fleet, with 18 new installations completed in 2022.
- We continue to work on several new projects to reduce carbon intensity and emissions in 2023. Looking ahead, we are in the engineering phase of developing some novel and advanced energy-efficiency technology which we hope to pilot in 2023 and 2024.

Scenarios for climate risk assessment

- To assess climate risk, we used several climate change scenarios to assess influence our business. The time perspective is one of the scenarios' challenges. The scenarios for the next ten years are not too different. Business strategy typically has shorter cycles (3-6 years) than climate change scenarios, making it difficult to examine different scenarios from a business strategy standpoint.
- We have evaluated development of:
 - Temperature
 - Rain
 - Droughts
 - Tropical Cyclones
 - Sea Level Rise
 - Migration
- In three of the scenarios from the IPCC report*:
 - 1.5 degree
 - 2.0 degree
 - 4.0 degree
- Our key observations is that we are most exposed to transitional risk in the short term, and more exposed to direct risk in the longer term. We have not included the full evaluation of each climate effect on the scenarios in this report. See a summary on next slide.

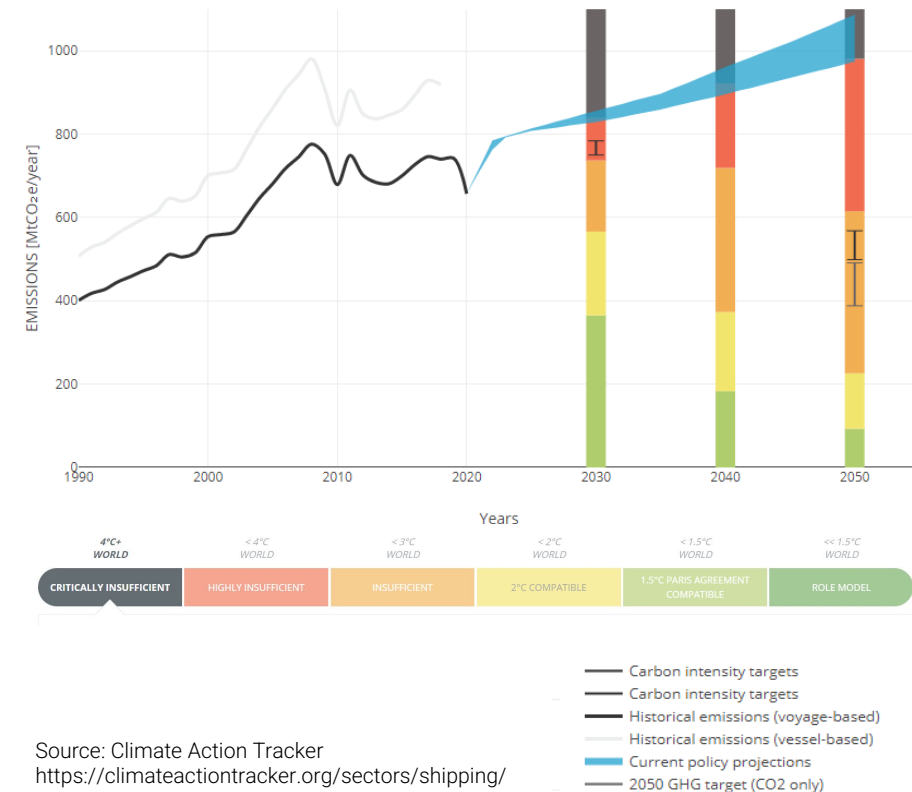


Summary - climate change and scenarios

- Human-induced climate change, including more frequent and intense extreme events, has caused widespread adverse impacts and related losses and damages to nature and people, beyond natural climate variability. Some development and adaptation efforts have reduced vulnerability. Across sectors and regions, the most vulnerable people and systems are observed to be disproportionately affected. The rise in weather and climate extremes has led to some irreversible impacts as natural and human systems are pushed beyond their ability to adapt.
- Near-term actions that limit global warming to close to 1.5°C would substantially reduce projected losses and damages related to climate change in human systems and ecosystems, compared to higher warming levels, but cannot eliminate them all.
- Odfjell has evaluated different scenarios related to different topics from IPCC AR6, but only present the highlights of expected climate change in this report:
- We can expect:
 - Warmer and/or more frequent hot days and nights over most land areas. Highest increase of temperature of hottest days, at about 1.5 times to twice the rate of global warming
 - Warmer and/or fewer cold days and nights over most land areas. Highest increase of temperature of coldest days, at about three times the rate of global warming
 - Warm spells/heat waves; Increases in frequency or intensity over most land areas
 - Cold spells/cold waves: Decreases in frequency or intensity over most land areas
 - Heavy precipitation events: increase in the frequency, intensity, and/or amount of heavy precipitation
 - Increase in precipitation associated with tropical cyclones (TC), Increase of 11% in 1.5 degree to 28% in 4.0 degree scenario)
 - Increase in mean tropical cyclone lifetime-maximum wind speed
 - Increase in likelihood that a TC will reach major TC intensity (Cat. 4-5), Increase of 10% in 1.5degree to 20% in 4.0 degree scenario)
 - Increase in compound events both in frequency and intensity

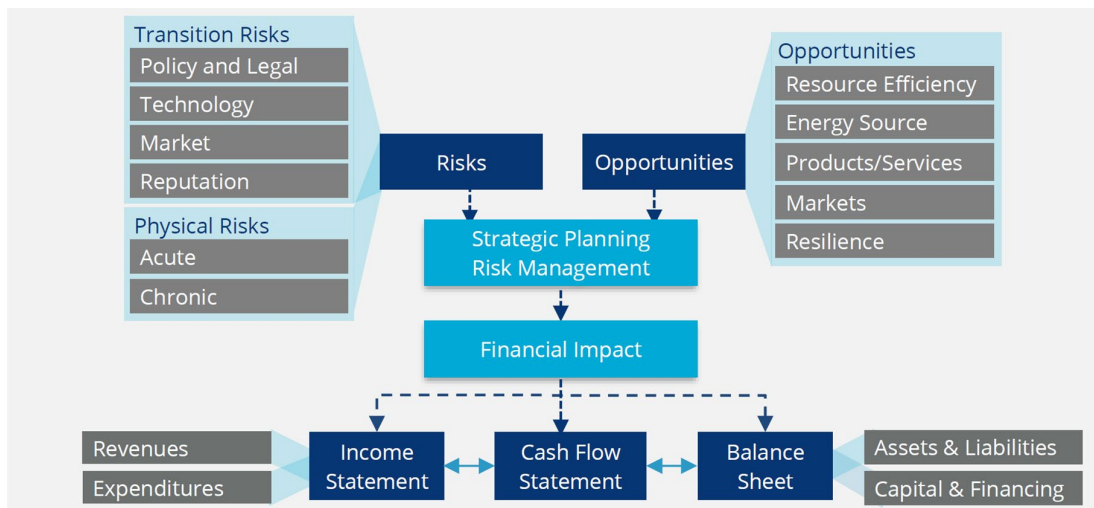
Shipping's contribution to climate change and mitigation

The graph below shows historic and predicted emissions from global shipping, and how much reduction is needed to be in line with a 1,5 degree target.



About climate risk

- On our climate risk assessment, we have identified relevant climate risk, using the TCFD framework*. We have also identified mitigation actions. The risks are inherent risks, and we have not presented residual risk or scored the risks identified in the TCFD model.
- Based on the TCFD and TNFD Risk, we have categorized 8 climate and Nature risks, that we use in our corporate risk management system.
- Some details on actions and scoring of risk 1-8 are regarded confidential and not presented. (Examples are investment plans, fleet transition, technology)
- Many of the risks are very difficult to quantify and to set a financial value
- We have presented an analysis of most significant risk with a potential financial impact related to climate risk following the assessment.



- 1 Climate Transitional Risk
Ref. Climate risk assessment, ie technological compliance, market, risk that emerge from the transition to ie low carbon society. Includes decarbonization
- 2 Climate Direct Risk
Ref. Climate risk assessment, ie direct and acute climate risk and effects of more frequent extreme weather events
- 3 Climate and Nature Litigation Risk
Litigation risk related to people and organizations seeking to hold companies to account for their impact, and negative contribution
- 4 Cross border Climate Risk
Direct nature and climate risk somewhere else that will impact supply chains and migration
- 5 Climate and Nature Reputation Risk
Ref. Climate risk assessment. Risk of not following ambitious goals, losing momentum as leader, greenwashing, unfavourable events like spills
- 6 Nature-Related Direct Risk
Risks related to dependence on nature. Physical risks arise when natural systems are compromised, due to the impact of climatic/geological events.
- 7 Nature-Related Transitional Risk
Risks that result from a misalignment between strategy and management and the changing regulatory, policy or societal landscape for nature
- 8 Nature-Related Systematic Risk
Risk that a critical natural system no longer functions e. g. tipping points are reached and the natural ecosystem collapses

*Use of TCFD is recommended from several stakeholders, ie EU Commission "Guidelines on nonfinancial reporting: Supplement on reporting climate related information, June 2019 . In Norway the initial recommendation was given in NOU 2018:17, Klimarisiko og Norsk økonomi

Climate risk for Odfjell

	Risk area	Inherent Risk	Mitigating actions
Transition	Policy & legal	<ul style="list-style-type: none"> Carbon pricing will increase cost to us as shipowner and operator – We risk not passing 100% on to customers New and increased reporting obligations (le Scope-3, Taxonomy, CSRD, TNFD/Nature) will require more data, capacity, cost and competence to report IMO Regulation to reduce emissions through CII-rating and EEXI will drive cost and reduce capacity/speed EU and other regulation will increase cost, and hamper operations i.e. age restrictions, emissions and waste Requirements to report own scope-3 will require life-cycle assessments of assets 	<ul style="list-style-type: none"> Ensure tax as pass through cost to charterer through clauses in CoA/Contracts Update fleet transition plan/Fleet strategy to ensure compliance with CII trajectory Ref CII/EEXI mitigation plan from SM, no speed change needed due to previous actions taken Initiated work to improve own Scope-3 data and report Inhouse competence and focus to prepare for and manage reporting We have initiated a program to track Scope-3 and life cycle emissions of ships
	Technology	<ul style="list-style-type: none"> Risk of lower residual value or stranded assets with existing technology/age/Performance Unsuccessful investment in new technologies Increased cost of new technology Too early/Too late decisions on propulsion technology 	<ul style="list-style-type: none"> Odfjell's future Tanker concept program Fuel flex Strategy Monitor and understand new technology
	Market	<ul style="list-style-type: none"> Changing end user behaviour to other products (i.e. reduce use of plastics) Customers demand more reporting and access to data – we could lose flexibility Focus on products related to climate change/deforestation, i.e. palm oil Customers tighten expectations to i.e. CII rating and/or age 	<ul style="list-style-type: none"> Market analysis to understand development and changes Educate customer/brokers
Physical	Acute	<ul style="list-style-type: none"> Extreme weather events like heatwaves and freeze will affect infrastructure, health & safety and operations Storms and flooding cause harm to people, infrastructure and operations/shutdowns Weather events cause damages to port infrastructure and Terminals Vessel incidents at sea 	<ul style="list-style-type: none"> Use climate scenarios to build resilience short and long term Update local climate risk assessments and plans for terminals Climate change included in project modelling for Terminals Regulations on working in hot weather in place Weather routing to avoid adverse weather
	Cronic	<ul style="list-style-type: none"> Changing weather patterns and rising mean temperature and sea levels Rising sea level gives problems for Terminals, i.e. cost of protection, regulation, and requirements in capex projects Adaptation to storms and sea-level rise at Terminals increase cost 	<ul style="list-style-type: none"> Use climate scenarios to build resilience short and long term

Climate risk for Odfjell

	Risk area	Inherent Risk	Mitigating actions
Cross boarder climate risk	Migration	<ul style="list-style-type: none"> • Access and price of food and water for many people – increased inflation • Migration cause challenges on international security and local conflicts • Increased refugees and migrants in sea lanes we operate or ports we call 	<ul style="list-style-type: none"> • Analysis and awareness to be able to react when required • Corporate Risk assessments are updated • Internal procedure regarding if meeting refugees at sea • Local risk assessments for ports/exposed areas
	Supply Chain	<ul style="list-style-type: none"> • Supply chains dependent of countries more exposed to climate risk • Risk of not be able to get relevant supplies or spare part • Disturbance in delivery • Increased cost 	<ul style="list-style-type: none"> • Flexible supply chain • Spread risk, and not be dependent on one supplier exposed to acute climate risk • Screen suppliers of their risk
Litigation Risk	Litigation risk	<ul style="list-style-type: none"> • Risk Odfjell may face legal action or liability for its contribution to climate change, or for failing to adequately address climate-related risks in its operations. <ul style="list-style-type: none"> • Liability for greenhouse gas emissions • Failure to adapt to climate change • Inadequate disclosure of climate risks • Violations of environmental regulations • Supply chain emissions 	<ul style="list-style-type: none"> • Proactive work to mitigate climate risk • Ensure overview, understanding and compliance to all regulations • Proactive work with stakeholders • Avoid spills an illegal emissions
Reputation	Reputation	<ul style="list-style-type: none"> • Negative cases, i.e. spills, safety issues, accusation of greenwashing • Issues regarding recycling in Asia • Stigmatization of shipping sector • Spills or accidents 	<ul style="list-style-type: none"> • Proactive communication on sustainability • Build reputational capital/Regarded as a leader • A good communication strategy • Compliance with EU Greenwashing regulation • Honest/transparent communication • Build internal engagement

Climate Opportunities for Odfjell

Opportunity Area	Opportunities	How to capture
Resource Efficiency	<ul style="list-style-type: none"> • More efficient fleet than competitors, gives a competitive edge. • Energy efficient/Low emission fleet gives lower cost for customer when CO2 is taxed and Scope3 will be reported. Odfjell can be preferred provider • Efficient handling of waste and material reduce cost, and have a positive effects of circular economy 	<ul style="list-style-type: none"> • Customer portal and sharing customers CO2 use • The opportunity is short/medium term as competitors can invest more in new ships/upgrades • Project to improve our own Scope-3 data
Energy	<ul style="list-style-type: none"> • Energy efficiency at offices and terminals gives reduced cos, reduced emissions and higher ratings • Use of lower-emission sources of energy, and sustainable sourced energy (i.e. on terminals and offices) • Use of supportive policy incentives from governments (ie IRA) 	<ul style="list-style-type: none"> • The daily work of SM Technology department and cooperation with Tankers • Cooperation and lobby in the industry • Business development on Terminals
Technology	<ul style="list-style-type: none"> • Digitalization and high-quality data improves decision making and gives us an advantage • Transparent data on emissions gives better data (ETS and Scope-3) to customers • Future deep-sea zero emission tanker concept as a digital twin for new technology • Test and install energy saving devices to improve efficiency 	<ul style="list-style-type: none"> • The daily work of SM Technology department and cooperation with Tankers • Digitalization initiatives like decarbonization dashboard and customer portal
Products and services	<ul style="list-style-type: none"> • Demonstrate lower product footprint and lower emission cost for customers • Digital platform/Customer portal/Emission data will have value for customers 	<ul style="list-style-type: none"> • Customer portal • Share our analysis, data and capacity • Meet and educate customers
Procurement	<ul style="list-style-type: none"> • Further develop supplier relations through sustainable procurement • Improve ESG ratings i.e. on EcoVadis, CDP and other where we are rated on supplier relations and sustainable procurement • Overview of our own Scope-3 emissions, and support remanufacturing and low eco-footprint products 	<ul style="list-style-type: none"> • Sustainable Procurement development and program for supplier development
Markets	<ul style="list-style-type: none"> • Utilize our position to do sustainable financing, and access to new beneficial financing • Access incentives/financing under green infrastructure subsidies (ie the Inflation Reduction Act) • Utilize our leadership position on sustainability in dialogue with customers, on Terminals and Shipping 	<ul style="list-style-type: none"> • Customer dialogue • Business development and relevant green projects.
Resilience	<ul style="list-style-type: none"> • Continue building reputational capital • Continue our fuel-flex approach and monitor closely what and where the industry is moving • Build knowledge and capacity from technical to environmental • Understand regulation and drivers 	<ul style="list-style-type: none"> • Communication strategy • Profiling Odfjell through participation presentations, market activities, within the industry, media and community

Consideration of climate risk and financial impact

- Odfjell considers transition to a low carbon economy and the potential impact of climate change in our financial reporting based on the climate risk assessment.
- The International Maritime Organization (IMO) initial strategy envisages a reduction in carbon intensity by at least 40% by 2030, pursuing efforts towards 70% by 2050, compared to 2008 baseline. While the 40% reduction target is on a ship-by-ship basis, the 2050 strategy is not fully crystallized. It is expected that the IMO present a revised strategy at the MEPC-80 meeting in June 2023. Odfjell's climate targets goes beyond the IMO target.
- The Carbon Intensity Indicator (CII) is a rating system for ships which is a mandatory measure that came into effect at the beginning of 2023. The CII rating is on a scale from A-E where D rating over three years or an E rating for one single year requires a corrective action plan to bring the performance to C or above rating. In 2025 IMO will conduct a review to adjust or correct CII to ensure they hit their 70% reduction target.
- The Group has worked consistently over several years with propulsion efficiency measures and other initiatives to improve the fuel efficiency for the vessels. **As a result, internal analysis indicates that all our owned vessels are in compliance with the carbon Intensity Indicator (CII), achieving a C-rating or better in 2023.** To achieve the same ratings in 2030, the analysis shows that for some vessels we will either have to increase the fuel efficiency further by investing in additional energy-saving devices or alternatively adjust the speed for these vessels. As the CII is an operational index, it is dependant on how the ships are operated in addition to their technical performance. Odfjell has included a KPI in the incentive system for all shore-based employees, to incentivise operations to ensures C-rating, and lower emissions.
- The shipping industry will become incrementally subject to the EU Emission Trading System (ETS) in 2024 which will require the Group to purchase EU carbon-offset credits (EU Allowances, EUAs). As a consequence, the Group's voyage expenses will increase and could impact the profitability and cash flows unless offset by an increase in revenue. In addition to the Group's strategy to operate a fuel-efficient fleet, **Odfjell will seek to implement clauses in freight contracts ensuring recovery for the added voyage expenses.** The ETS will be implemented with 40% in 2024. Estimated numbers indicate an additional cost in the range of 6-8 MUSD to purchase offsets, that will be passed on customers*.
- The future impact from climate change may encompass an increase in extreme weather resulting in re-routing, increased risk of port and infrastructure damages causing disruption to regular operations for both the Group and its customers, lower productivity and increased operational costs. These sources of uncertainties are primarily related to our vessels including right-of-use assets impacting the:
 - Residual value of vessels
 - Useful life of vessels
 - Cash inflows from continuing use of the Group's vessels when assessing the recoverable amount.

* Based on a price of emission allowances of EUR 90 per metric ton carbon dioxide, USD 6 million in increased voyage expenses are estimated for 2024 increasing to USD 16 million in 2026.

Consideration of climate risk and financial impact

Risk of stranded assets - depreciation and residual value of ships

Most significant climate risk is related to transitional risk, and hence value of assets and risk of stranded assets. Stranded assets can be defined as assets that has reduced or no value before estimated life time due to changes in the existing landscape where the assets operates. An impairment test can determine whether an asset is stranded. We have assessed this risk and possible financial impact of climate transitional risk, and how the climate risk can possibly affect value and possible impairments.

Ships are recognized at historical cost less accumulated depreciation and any impairment charges. The cost of the ships includes the contract price, expenses related to site team and pre-delivery borrowings incurred. The cost less residual value is depreciated on a straight-line basis over the ships estimated useful life. The cost of the ships is divided into separate components for depreciation purposes.

Residual value is estimated based upon the latest available steel-price/stainless steel price and the lightweight of the ships. Stainless steel part of the lightweight of the ships is separately assessed and valued as part of the total residual value. Residual values are updated once a year. Estimated useful life of the ships is 25-30 years. Estimated cost of dry-docking is depreciated over an estimated period of 5 years for ships not older than 15 years. If actual useful life of the ships differs from estimated useful life an impairment loss could occur. If residual value is incorrect, the future depreciation would be affected, either as a reduction if residual value is understated or as an increase in deprecation if residual value is overstated. For vessels where the Group's intended use is shorter than its economic life, the estimated sales price less cost of disposal is used as residual value.

Odfjell has analysis and plans that will ensure the fleet will attain a minimum CII C-rating for their remaining life, and therefore no mandatory capital expenditure related to compliance with new legislation is included in our assessments. **Based on the impairment assessment conducted at the end of 2022, no impairment was recognized***. We will develop programs and projects to further improve energy efficiency, to meet possible new or tighter regulations.

Estimation of useful life of vessels

The useful life of the Group's owned vessels is the expected economic life of the vessels. Economic life is the period over which it is economic profitable to use the vessel. Wear and tear, technical and commercial obsolescence and environmental requirements are factors affecting the assessment of the useful life. Over the last years, fuel efficiency initiatives have improved the fuel efficiency and also made the vessels more competitive than the industry at large.

Internal assessments show that owned vessels will, over their remaining useful life, be compliant with current IMO requirement of carbon emission reductions. Investments due to new environmental requirements, if any, and periodic dry-dockings are conducted to comply with requirements from various stakeholders. Odfjell Group has applied 25-30 years as estimated useful life of its owned vessels consistently over the years. If useful life is shortened, the annual depreciation will increase and value in use calculated when testing assets for impairment would be reduced. Based on these assessments and the information we have today, we asse that **climate risk will not directly impact the useful life of vessels in the Odfjell fleet.**

Determination of the lease term for right of use assets

Management include an assessment of CII rating and potential for all owned and leased assets, to ensure compliance with IMO CII ratings and speed in accordance with contracts in the lease period.

* See impairment assessment in note 13 in the annual report.

TCFD report - Disclosure of Climate Risk

Governance

Disclose the organization's governance around climate related risks and opportunities.

a) Describe the board's oversight of climate-related risks and opportunities.

- The corporate risk assessment (including climate-related risks) is presented and discussed at all Board meetings.
- The board do an annual review of Climate Risk Assessment
- Management reports status and progress on ESG at all Board meetings.
- The Chief Sustainability Officer also reports to the Board's Audit Committee and presents ESG update and risk in the Board.
- The global and geopolitical long-term risk is always a part of the Board's risk discussions and strategy agenda.
- The risks and opportunities are fundamental for setting Odfjell's ambitious climate targets and are integral to our strategy.
- The board also do separate training sessions and updates related to sustainability, climate risk and opportunities

b) Describe management's role in assessing and managing climate-related risks and opportunities.

- Management discusses current risk assessment, including climate risk, bi-weekly.
- Management adopts transition risk as an integrated part of strategic planning, fleet development and capex plans. Climate-related transition risk is one of the key drivers for the fleet transition plan.
- The physical risk, with a focus on weather and rising sea levels, is particularly relevant for route planning and how we design, operate, and draw up contingency plans for our terminals.
- Odfjell Management has appointed a Chief Sustainability Officer as a part of Executive Management, who owns the risk process, including ESG risk.
- Management has established a new R&D department in the organization to drive the decarbonization work and fleet transition towards zero-carbon
- Odfjell has a dedicated cross-department task group focusing on decarbonization of our managed fleet.
- Management and shore organization have a Carbon Intensity KPI included as a part of the Short-term Incentive program (STIP)
- Management has carbon intensity KPI as a part of the Long-Term Incentive Program (LTIP)

TCFD report - Disclosure of Climate Risk

Strategy

Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.

a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term

- Climate risk and opportunities are presented earlier in this this document. Most essential risks are related to
 - transitional risk and regulatory risk that can affect value and lifetime of vessels
 - Increased cost related to cost of carbon
 - direct risk related more extreme weather events at our terminals
- We regard short term risk as low. Long term risk is very challenging to predict, but we believe the business model is resilient to the scenarios identified.
- Risks identified will increase in the longer term, as climate change increases and further regulations can come.
- Odfjell has invested in becoming a leader in sustainability, with a modern fleet with low emissions in our industry segment. Odfjell's fleet is one of the world's most energy-efficient chemical tanker fleets, that will represent lower cost for customers when price on carbon is introduced. This position will be an opportunity for Odfjell both in short and long term
- We link ambitious climate targets with financing, attracting new capital, and improving capital cost. Being a leader in ESG is viewed positively by stakeholders.

b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.

- Odfjell use the climate risk and opportunities assessment to provide input to strategic planning, and assessment of long-term financial impact. An example is plans and actions to ensure compliance to environmental regulation and own climate targets.
- Odfjell, will transform the fleet to zero or low emissions in accordance with our climate target – that drives strategy and financial planning.
- There are great uncertainty related to access to green energy/green fuel, regulation, market-based measures and technology for future chemical tankers. The work to prepare the future fleet is of high priority for Odfjell.
- Odfjell will prepare for fleet transition to invest in zero capable technology to achieve our climate targets. Fleet renewal is an inherent part of long-term financial planning.

c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario

- Odfjell is resilient to the risk of a 2-degree climate change scenario in the short-term with the information we have today regarding value and regulation.
- We monitor the transitional risk continuously, to ensure we maintain the value of our assets in their lifetime in all scenarios
- The long-term effects of more severe weather and rising sea-levels are assessed in investment processes and how we operate and manage our terminals.

TCFD report - Disclosure of Climate Risk

Risk Management

Disclose how the organization identifies, assesses, and manages climate-related risks.

a) Describe the organization's processes for identifying and assessing climate-related risks.

- Climate and Nature risk is an integrated part of the Corporate Risk Assessment. This is updated based on new knowledge and scenarios and continuously updated as a part of the corporate risk process. A full risk review of climate and nature risk is performed annually.
- Climate and Nature risk is reported in 8 sub-categories in the risk assessment.
- We use scientific data and reports (like IPCC) to prepare scenarios
- Efficiency and emission reduction are material for Odfjell. GHG emissions are central to our business. We have made ambitious plans to reduce emissions, mitigating the climate risk of capex, taxation, non-compliance, and negative attractiveness of the sector.
- The Risk assessment process is owned by Chief Sustainability Officer

b) Describe the organization's processes for managing climate-related risks.

- Climate risk is a part of the integrated enterprise risk assessment.
- Climate change mitigation and adaptation is integrated into our business.
- Odfjell has created an executive role (CSO) to focus on sustainability, including climate risk.
- Climate risk assessment is a tool in the risk management process.
- Emission reduction is a KPI in the short-term incentive plan for management and management and the organization.
- We have established a separate task group that focus on 2030 climate compliance for our fleet
- We have developed digital system for tracking and simulation on decarbonization status, cost and initiatives

c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.

- Climate risks are included in the risk assessment and are an integral part of the corporate risk assessment.
- Climate risk assessment are vital input to other departments, like finance, procurement, chartering/operations, technical, digitalization etc who includes climate in their work.
- Our work to reduce emissions and our environmental footprint is never-ending. We seek climate-neutral solutions to contribute to climate targets, investigating new avenues at every opportunity.
- Climate and Nature risk is reported in 8 sub-categories in the risk assessment. (Transitional , direct, cross border, litigation, reputation, systemic)
- Actions to mitigate climate risk/reduce emissions (AER Performance) are included as a KPI for the organizations Incentive system

TCFD report - Disclosure of Climate Risk

Metrics and targets

Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.

a) Disclose the metrics used by the organization to assess climate related risks and opportunities in line with its strategy and risk management process.

- In the ESG report of the Annual Report, we provide metrics for emissions in line with the SASB metrics and the metrics in the ESG reporting framework developed for the Norwegian Shipowners' Association.
- Primary metrics for CO2 emissions are metric tons in accordance with SASB TR-MT-110a1. These numbers are used in the calculations of Energy Efficiency Indicator (EEOI) and Annual Efficiency Ratio (AER) as used by IMO.
- Odfjell discloses AER in all quarterly reports
- We also report and disclose IAW CDP reporting

b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.

- GHG emissions are disclosed in the ESG report in our annual report
- We see an increased attention from stakeholders, as our scope-1 will be stakeholders' scope-3

c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.

- Odfjell has in 2020 set four climate targets as described in the chapter on sustainability in the annual report, and also presented earlier in this document
- Odfjell has also sett targets to implement technology on energy saving and emission reduction for our fleet

Nature related risk assessment

- Nature risk assessments are a new and emerging approach to evaluating risks associated with biodiversity loss and ecosystem degradation. With the increasing awareness of the interconnectedness of the natural world, it has become clear that human activities have a significant impact on the environment and the services it provides.
- The Task Force on Nature-related Financial Disclosures (TNFD) has released draft guidelines for conducting nature risk assessments, which aim to provide a framework for businesses and organizations to assess their potential impact on nature and biodiversity. However, it is important to note that the guidelines are still in their early stages and are only available in draft form.
- The specific financial impact of nature risks cannot be easily calculated. Despite these challenges, nature risk assessments are an important tool for identifying and mitigating risks associated with biodiversity loss and ecosystem degradation, ultimately contributing to more sustainable practices and a healthier planet.
- That is why Odfjell has prepared an initial Nature Risk assessment in line with the TNFD Guidelines v 0.3*. The nature risk assessment identifies inherent risk for shipping, and a potential financial impact for shipping. We have not conducted specific studies on the financial impact for Odfjell, but identified inherent financial impact for our industry segment.
- As this assessment is in an early stage, are not all KPIs and metrics set. We have not identified specific scenarios for the assessments.
- The TNFD defines a scenario as a story that describes a plausible future. It identifies some significant events, the main actors and their motivations, and how the world functions in this plausible future. Since the TNFD defines nature to include the atmosphere, and therefore the climate system, and is building on existing TCFD-aligned market practice and macro-prudential use of climate scenarios, the TNFD aims to work towards an approach to scenario analysis that fully integrates considerations of climate and nature.
- Nature-related opportunities are included in the TNFD framework alongside nature-related risks. The TNFD draft disclosure recommendations encourage preparers to describe the nature-related opportunities they have identified over the short, medium and long term, as well as the metrics and targets used to assess future performance in pursuing those opportunities. This approach aligns with that of the TCFD. This is also the assessment from Odfjell, but some of the opportunities can be business sensitive and not disclosed.

* The release date for v0.4 of the beta framework has been set for 28 March 2023. This release will provide updated disclosure recommendations and various pieces of additional guidance to help market participants on their journeys to assess, manage and disclose their nature-related risks, opportunities, impacts and dependencies

Nature related risk for Shipping and Odfjell

	Risk area	Inherent Risk	Possible financial impact	Mitigating actions
Transition	Policy & legal	<ul style="list-style-type: none"> Changes to existing regulation/new regulation aimed at achieving nature-positive outcomes and targets Tighter (emerging) legislation (e.g. trade restrictions or taxes) on activities, products and/or services that impact nature, and rights, permits and allocations on natural resources designated to alleviate pressure on nature or impacts on local communities Enhanced reporting obligations 	<ul style="list-style-type: none"> Increased costs of operations and inputs Increased costs of personnel and monitoring of activities required for reporting Increased fines and penalties Increased capital costs or production losses due to permit denials or delays 	<ul style="list-style-type: none"> Proactive approach to regulation to understand effect and consequences Conduct operations in a sustainable and responsible way to reduce emissions and avoid pollution
	Technology	<ul style="list-style-type: none"> Transition to more efficient and cleaner technologies (i.e. with lower impacts on nature) Lack of access to data or access to poor quality data that hamper nature-related assessments New monitoring technologies used by regulators 	<ul style="list-style-type: none"> Increased expenditure for research & development of new and alternative technologies Lack of access to technology developed by competitors resulting in higher operational costs 	<ul style="list-style-type: none"> Monitor relevant technologies Data collection and use of data
	Market	<ul style="list-style-type: none"> Shifting customer values or preferences to products with lower impacts on nature ie palm oil or products related to plastic Reduced demand for products and services- supply disruption 	<ul style="list-style-type: none"> Changes in markets Loss of market access Increased raw material costs 	<ul style="list-style-type: none"> Market risks are mostly relevant for charterer/product owners.

Categories from TNFD Framework v0.3

Sources: CDSB (2021) [CDSB Framework Application guidance for biodiversity-related disclosures](#),

TCFD (2021) [Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures](#) and TNFD (2021) [Nature in scope](#)

Nature related risk for Shipping and Odfjell

	Risk area	Inherent Risk	Possible financial impact	Mitigating actions
Physical	Acute	<ul style="list-style-type: none"> Degradation of nature and loss of their natural protection can exacerbate severity of damages from extreme weather events such as cyclones, droughts, flooding and storms Species loss and ecosystem degradation due to leaks or accidental discharges (e.g. oil) contaminating air, soil and water bodies from ships or terminals Ships can collide with marine animals such as whales, dolphins, and sea turtles, leading to injury or death of these species Contribute to marine debris such as plastics, ropes, and waste. These can entangle or be ingested by marine animals, leading to injury or death. Marine debris can accumulate in marine habitats and have negative impacts on biodiversity. Noise from shipping activities such as ship engines, propellers, and sonar can have negative impacts on marine biodiversity. It can disrupt the behaviour and communication of marine animals, leading to stress, injury, and even death Oil spills from ships can have devastating impacts on marine biodiversity. Oil can kill or harm marine animals such as fish, birds, and mammals, and can also contaminate habitats and ecosystems, leading to long-term damage Ballast water is taken on by ships to provide stability and balance during voyages. However, it can contain invasive species such as plants, animals, and microbes from one part of the world that can be introduced to a new environment where they can thrive and displace native species. 	<ul style="list-style-type: none"> Increased natural hazard costs, for example, impaired assets due to damages resulting from floods or cyclones, including infrastructure Increased insurance premiums and potential for reduced availability of insurance on assets Increased capital expenditure due to adaptation (e.g. mechanical pollution, terminals, piers protection against floods) Reduced productivity and consequent rethinking of production processes or timing for charterers affecting the market Fines Cost of protective measures and systems onboard and at terminals 	<ul style="list-style-type: none"> Ensure compliance with regulation Ensure we comply with "IMO Guidelines for reduction and underwater noise from commercial shipping to address adverse impact on marine life" Through various internal initiatives Risk based and safe operations
	Chronic	<ul style="list-style-type: none"> Increasing scarcity of key natural inputs Ecosystem degradation due to operations leading to, for example, deforestation having long term climate impact Ocean acidification reducing biodiversity in the ocean Land loss to desertification and soil degradation and consequent loss of soil fertility Species loss and degradation due to soil, water and ocean contamination caused by organisation itself or stakeholders in specific areas 	<ul style="list-style-type: none"> Global and chronic effects 	<ul style="list-style-type: none"> Not identified in the short term Chronic effects are related to long term effects of acute risk

Nature related Opportunities for Shipping and Odfjell

Opportunity Area	Opportunities	Possible financial Impact	How to capture
Resource Efficiency	<ul style="list-style-type: none"> Transition to more efficient services and processes that require fewer natural resources, energy or impacts on nature Increased reuse and recycling of natural resources Reduced waste production 	<ul style="list-style-type: none"> Reduced operation and compliance costs Reduced exposure to raw material and natural resource price volatility Reduced reliance on natural resources and increased resilience to potential shortages 	<ul style="list-style-type: none"> Sustainable procurement and selection of suppliers and sustainable products Flexible related to alternative green fuel
Resilience	<ul style="list-style-type: none"> Diversification of nature-related resources (e.g. use of different plant species) and business activities (e.g. start a new business unit on nature restoration) Participation in programs and adoption of resource efficiency and circularity mechanisms that reduce impacts and dependencies on nature Improve nature-related monitoring and data availability Implement nature-based solutions Develop and improve green infrastructure 	<ul style="list-style-type: none"> Increased business stability Business and supply chain continuity Reduced capital infrastructure costs and costs for damages Improved risk mitigation Increased resilience to natural disasters Improved readiness and response to regulatory changes Increased market valuation through resilience planning 	<ul style="list-style-type: none"> Long term ESG Strategy

Nature related Opportunities for Shipping and Odfjell

Opportunity Area	Opportunities	Possible financial Impact	How to capture
Technology	<ul style="list-style-type: none"> Use of low emissions vessels will have positive impact on biodiversity, as they will reduce air and water pollution and minimize negative impact on marine biodiversity Developing and implementing innovative technologies and practices such as underwater noise reduction technologies, advanced ballast water treatment systems, and autonomous shipping can help to minimize the negative impacts of shipping on biodiversity while maximizing efficiency and safety. 	<ul style="list-style-type: none"> Fuel efficient ships represent less cost 	
Routing	<ul style="list-style-type: none"> Optimizing shipping routes can reduce the distance travelled, which can reduce emissions and the potential for accidents or marine collisions that can negatively impact biodiversity. This can also minimize the disruption of marine habitats and ecosystems 	<ul style="list-style-type: none"> Optimal routing improve efficiency and reduce risk and cost. 	
Reputation	<ul style="list-style-type: none"> Collaborative engagement with stakeholders to tackle nature-related challenges Support marine conservation efforts by Supporting research and conservation programs, participating in beach cleanups, and supporting marine protected areas. This can help to protect and restore marine biodiversity 	<ul style="list-style-type: none"> Improved reputation among stakeholders located in different areas Improved stability of operations and working conditions, and ability to attract and retain employees Improved supply chain engagement Increased influence of government policy 	<ul style="list-style-type: none"> Odfjell is a signatory to UN Sustainable Ocean Principles
Products and services	<ul style="list-style-type: none"> Monitor how the market develops for new green or nature related products develops. Diversify business activities, capturing transport and storage opportunities for new products and green infrastructure 	<ul style="list-style-type: none"> Increased resilience due to business diversification New revenue streams Reduced costs of raw materials and production inputs Better competitive position to reflect shifting consumer preferences 	<ul style="list-style-type: none"> Our long term ESG strategy
Financial Incentives	<ul style="list-style-type: none"> Access to nature-related and/or green funds, bonds, or loans Incentives for suppliers to improve their nature- and ecosystem management 	<ul style="list-style-type: none"> Increased access to funds and loans Access to capital through incentives and subsidies (i.e. IRA) 	<ul style="list-style-type: none"> Continuously develop sustainable finance strategy and opportunities

TNFD - Disclosure of Nature-related risk and opportunities

Governance

Disclose the organization's governance around nature related dependencies, impacts, risk & opportunities.

a) Describe the board's oversight of nature-related dependencies, impacts, opportunities.

- The corporate risk assessment (including nature-related risks from 2022) is presented and discussed at all Board meetings.
- The board do an annual review of Climate and Nature Risk Assessment
- Management reports status and progress on ESG at all Board meetings.
- The Chief Sustainability Officer also reports to the Board's Audit Committee, and presents ESG update and risk in the Board.
- The global and geopolitical long-term risk is always a part of the Board's risk discussions and strategy agenda.
- The risks and opportunities are fundamental for setting Odfjell's long term goals and are integral part of our strategy and action plans.
- The board also do separate training sessions and updates related to sustainability, nature and climate risk and opportunities

b) Describe management's role in assessing and managing climate-related risks, impacts, risks and opportunities.

- Management discusses current risk assessment, including nature risk, bi-weekly.
- Management adopts transition risk as an integrated part of strategic planning, fleet development and capex plans. Nature transition risk is essential to technical actions and installations
- Odfjell Management has appointed a Chief Sustainability Officer as a part of Executive Management, who owns the risk process, including ESG risk.
- Nature risk is included as a separate risk element from 2022
- Management follow the LEAP approach (Locate, Evaluate, Asses, Prepare) methodology

Ref

- TNFD V 0.3 format, The TNFD's revised draft disclosure recommendations, <https://framework.tnfd.global/disclosure-recommendations/>
- NFD Informal Working Group. June 2021. [TNFD Proposed Technical Scope – Recommendations for the TNFD.](#)

TNFD - Disclosure of Nature-related risk and opportunities

Strategy

Disclose the actual and potential impacts of nature-related risks and opportunities on the organisation's businesses, strategy and financial planning, where such information is material.

a) Describe the nature-related dependencies, impacts, risks and opportunities the organisation has identified over the short, medium, and long term

- Nature risk and opportunities are presented earlier in this this document. Most essential risks are related to
 - Transitional risk and regulatory risk that can affect our business model and products we store and ship
 - Acute risk related to spill, pollution
- We regard short term risk as low. Long term risk is very challenging to predict, but we believe the business model is resilient to the scenarios identified.
- Risks identified will increase in the longer term, as climate change increases and further regulations can come.
- Odfjell is not directly dependent on resources with a nature risk
- Odfjell has a high standard for safe and responsible operations to mitigate nature acute risk

b) Describe the impact of nature-related risks and opportunities on the organisation's businesses, strategy and financial planning

- Odfjell use the nature risk and opportunities assessment to provide input to strategic planning, and assessment of long term financial impact.
- Nature related risk might impact our customers and their products, ie organic products, that can secondary affect the market

c) Describe the resilience of the organization's strategy, taking into consideration different scenarios

- Odfjell is resilient to the risks we have identified in the preliminary nature risk assessment in the short-term with the information we have today regarding value and regulation.
- We monitor the transitional risk continuously to estimate what effects it will have on our organization an business
- The long-term effects of biodiversity and ecosystem loss are more a risk to society than a direct risk for Odfjell.

d) Describe the organisation's interactions with low integrity ecosystems, high importance ecosystems or areas of water stress

- Odfjell operates in the major shipping routes around the world. Some of the shipping lanes can be exposed to marine mammals. We focus on following guidelines for underwater noise and impact on marine life
- Odfjell is a signatory and follows the principles of UN Sustainable Ocean Principles

TNFD - Disclosure of Nature-related risk and opportunities

Risk Management

Disclose how the organisation identifies, assesses and manages nature-related dependencies, impacts, risks and opportunities

<p>a) Describe the organisation's processes for identifying and assessing nature-related dependencies, impacts, risks and opportunities..</p>	<ul style="list-style-type: none"> • Nature risk is an integrated part of the Corporate Risk Assessment. This is updated based on new knowledge and scenarios and continuously updated as a part of the corporate risk process. A full risk review of climate and nature risk is performed annually. • Climate and Nature risk is reported in 8 sub-categories in the risk assessment. • Efficiency and emission reduction are material for Odfjell. GHG emissions are central to our business. We have made ambitious plans to reduce emissions, mitigating the climate risk of capex, taxation, non-compliance, and negative attractiveness of the sector. • The Risk assessment process is owned by Chief Sustainability Officer. Odfjell is also a part of the TNFD Reference group
<p>b) Describe the organisation's processes for managing nature-related dependencies, impacts, risks and opportunities.</p>	<ul style="list-style-type: none"> • Nature risk is a part of the integrated enterprise risk assessment from 2022. • Dependencies with regards to suppliers is an integrated part of procurement strategy • Odfjell has created an executive role (CSO) to focus on sustainability, including nature risk.
<p>c) Describe how processes for identifying, assessing, and managing nature-related risks are integrated into the organisation's overall risk management.</p>	<ul style="list-style-type: none"> • Climate risks are included in the risk assessment and are an integral part of the corporate risk assessment. • We focus on nature related impact in our materiality assessment • Nature related risks gives input to procurement strategy, commercial strategy and also our human rights impact assessments.
<p>d) Describe the organisation's approach to locate the sources of inputs used to create value that may generate nature-related dependencies, impacts, risks and opportunities</p>	<ul style="list-style-type: none"> • This process is under development, and in current phase Odfjell focus on develop competence and understanding of nature risk and nature related dependencies risk and opportunities, following the presentation earlier in this report
<p>e) Describe how stakeholders, including rightsholders, are engaged by the organisation in its assessment and response to naturerelated dependencies, impacts, risks and opportunities</p>	<ul style="list-style-type: none"> • We have dialogue with suppliers, customers related to Esg, sustainable sourcing, new opportunities etc. • We have dialogue with investors, banks where we highlight and present ESG risk and opportunities, including nature risk

TNFD - Disclosure of Nature-related risk and opportunities

Metrics and targets

Disclose the metrics and targets used to assess and manage relevant nature-related dependencies, impacts, risks and opportunities where such information is material

<p>a) a) Disclose the metrics used by the organisation to assess material nature-related risks and opportunities in line with its strategy and risk management process</p>	<ul style="list-style-type: none"> • In the ESG report of the Annual Report, we provide metrics for emissions in line with the SASB metrics and the metrics in the ESG reporting framework developed for the Norwegian Shipowners' Association. • We report on Biodiversity, spills, pollution at metrics • We report on actions to impact underwater noise • Odfjell monitors the development of recommended metrics by the TNFD. Disclosure metrics will be available in v 0.4 of the framework
<p>a) b) Disclose the metrics used by the organisation to assess and manage direct, upstream and, if appropriate, downstream dependencies and impacts on nature.</p>	<ul style="list-style-type: none"> • This is under development, but we monitor relevant product we shore and ship, and also develop dependencies as a part of procurement strategy and follow up of suppliers
<p>a) c) Describe the targets used by the organisation to manage nature-related dependencies, impacts, risks and opportunities and performance against targets.</p>	<ul style="list-style-type: none"> • Odfjell has not set nature related targets
<p>a) Describe how targets on nature and climate are aligned and contribute to each other, and any trade-offs</p>	<ul style="list-style-type: none"> • Odfjell has not set nature related targets. We have set climate targets, and ie will climate change mitigation action contribute also to reduced nature risk. We believe there are great alignment between climate and nature risk, and have not identified any material trade-offs.



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Contact

Øistein H Jensen, Chief Sustainability Officer, Oistein.Jensen@odfjell.com

ODFJELL SE | Conrad Mohrs veg 29 | P.O. Box 6101 Postterminalen | 5892 Bergen | Norway
Tel: +47 55 27 00 00 | Email: mail@odfjell.com