



Norges
Rederiforbund
Norwegian
Shipowners'
Association



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MARITIME OUTLOOK

24



About the Norwegian Shipowners' Association

The Norwegian Shipowners' Association is the leading employer-, contingency- and interest organisation for Norwegian-linked shipping companies. Our members are the core and driving force of the Norwegian maritime industry. The Norwegian Shipowners' Association's 130 members have 1,300 ships and rigs worldwide and employ about 50,000 seafarers and offshore workers from around 50 different nations. In the Norwegian maritime industry, shipping companies create value for close to NOK 130 billion annually.

2024

MARITIME OUTLOOK



Photo: Fredrik Rosså / Simon Møkster Shipping



Photo: uavpic.com/Hagland

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Foreword

2023 was marked by several serious international events. Russia's brutal attack on Ukraine continues with full force, the Israel-Hamas war is having a profound impact on the world and the situation in the Middle East, and the Houthi attacks on commercial shipping challenge international law and shipping companies' freedom of navigation. It has been another demanding year for Europe and the rest of the world.

The Houthi attacks on commercial shipping mark a crossroads, both for international shipping and the political security environment. They are threats to seafarers on board ships, to world trade and to a rule-based world order. Seafaring women and men must be safe on board. Their safety must not be compromised.

More than 90 percent of world trade is carried by ship. Life-saving medicine, industrial components, necessary food imports, transport of commodities and manufactured goods all depend on freedom of navigation. Norway has the fifth largest fleet in the world by value, and we are a small and open economy. Consequently, it is vital to ensure open trade routes and a rule-based world order, also for Norway.

In an increasingly unstable world, we see how Norwegian shipping companies constitute an important part of the security infrastructure for Norway, Europe and the West. Höegh LNG managed to mobilise their floating LNG terminals to Germany in record time after Putin weaponised gas to prevent European support for Ukraine. When civil war erupted in Sudan and people had to be evacuated quickly, Norwegian-owned ships were there to bring evacuees to safety. When the US needs to transport large quantities of military equipment across the Atlantic, Norwegian shipping transport capacity plays a vital role.

Norwegian shipping companies thus play a crucial part in Norway's overall emergency preparedness. This role illustrates the strength of the shipping companies and the Norwegian maritime industry, a role that would be impossible without stable maritime framework conditions. In this respect, changing governments and the industry have been future-oriented and paved the way for Norway becoming a world leader in maritime technology, innovation and expertise. Thus we can maintain that an effective and active maritime policy is also in Norway's strategic interest.



Norwegian shipowners also play a key role in the transition to a low and zero-emission society. For the first time, we have published emission figures for the fleet of all Norwegian Shipowners' Association members. Norwegian shipping companies' global emissions are significant. More specifically, they make up almost half of Norway's total national emissions. We have one of the most energy-efficient fleets in the world and the highest number of ships that run on alternative fuels. However, we still have a long way to go to reach our climate neutrality goal. In the years ahead, public and private collaboration will be crucial if we are to succeed in accelerating the green transition.

To boost the green shift we need targeted measures and new policy instruments. As of 1 January 2024, shipping is included in the EU Emission Trading System. This means that Norway will receive increased emission trading revenues from the shipping industry to the EU. We believe that Norway should use these revenues for climate transition within shipping to accelerate the green shift and reduce Norway's global emissions.

During changes and upheavals in the world, Norwegian maritime industry has a tradition of finding innovative solutions to the challenges we encounter. As a maritime industry, we will continue to develop technology and solutions that Norway and the rest of the world need. Interaction between the authorities in Norway, Europe and globally will determine if, and how quickly, we can reach our common goals and ambitions.

Summary

As 2023 draws to a close and we enter a new year, there are many uncertainties associated with global politics, international cooperation and security. 2023 was a year of turmoil caused by war and conflict, increased polarisation, a persistently overheated world economy and a rapidly changing political security situation. In 2023, Norwegian shipping companies had to manoeuvre their way through uncharted territories. Despite a more complex and challenging political security situation, Norwegian shipping companies remain determined to reach their climate targets and invest heavily in the climate solutions of tomorrow.

Our climate efforts continue

For the first time, we have published emission figures for the fleet of all Norwegian Shipowners' Association members. Emissions remain high, totalling almost 40 percent of Norway's national emissions. This shows that the maritime industry bears a great responsibility for reducing its emissions, but also that there is immense potential for contributing to the green transition. Norwegian shipowners are already at the forefront of global climate action, investing heavily in climate and environmental technology on board their vessels. Still, we have a long journey ahead. To succeed we need political action and close public-private collaboration. 2024 will be an important year for climate policy. There is an urgent need for effective policy instruments to accelerate the green shift, and we need more tools in our toolbox.

Increased international risk and unpredictability

Just like last year, the year ahead will be defined by a complex conflict environment, turmoil in international politics and a turbulent economy. We have seen an increasingly high global conflict level, and we are heading into uncertain times. An increasing number of shipping companies report being affected by international conflicts, sanctions and a changing threat environment. As we operate all over the world, the shipping industry will continue to be greatly affected by the international security situation and geopolitical developments.

Value-creation takes place along the coast

With a value creation of NOK 211 billion and almost 90,000 people employed, the maritime sector continues to be one of the largest and most important industries in Norway. Most of those employed work along the coast, but there are maritime jobs throughout the country.

In a more turbulent world with an increasing number of climate and environment requirements, predictability and competitive framework conditions will become even more important. Amid tough international competition, the tonnage tax system, the net wage scheme for Norwegian seafarers and an attractive Norwegian shipping register is the foundation for the entire maritime cluster. Furthermore, policy instruments are required to accelerate green solutions, so that the Norwegian maritime industry can continue to be a pioneer in the development and introduction of innovative technology and green solutions.

Competence and recruitment in the maritime industry

The need for competence and recruitment in the maritime industry remains high. The shipping companies believe that operational experience from sea will be the most important factor for their activities in the years ahead. At the same time, this will be the most difficult competence to obtain. To attract the brightest minds, shipping companies have launched campaigns and recruitment arenas such as Maritim Karriere (Maritime Career) and Maritime Trainee and raised awareness of recruitment and training. However, the need for further education and ongoing training in the maritime industry remains high.

Growth in 2023

Global growth in sea transport in 2023 was mainly driven by growth in the demand for crude oil, product tank and gas. Overall revenues for shipping companies organised in the Norwegian Shipowners' Association increased by over 10 percent in 2023.

The offshore service companies saw the largest growth due to a high activity level on the Norwegian shelf. This was driven by growth in the European demand for oil and gas combined with an increase in demand for shipping services to install offshore wind power across the world. The high activity level on the shelf was also reflected in the offshore drilling segment, which saw a positive growth in total turnover after many years of negative growth. Both the deep sea and the

short sea segment saw a more modest growth in 2023, of 6 and 3 percent, respectively. Moderate growth is expected in 2024. The passenger shipping companies also saw a stable turnover growth, a development which is similar to a normal year.

Plans for construction of new ships

Norwegian shipping companies will contract many ships and rigs in the years ahead. The increasing activity level has resulted in shipping companies now considering contracting 191 ships and rigs over the next five years.

The growth in contracting plans has been greatest in the offshore service and deep sea segments. The offshore service companies have greatly stepped up their contracting plans in recent years, and a substantial proportion of these ships are intended for the offshore wind industry. The deep sea shipping companies are also considering building a number of ships in the coming years, and many of them will be ready for climate-neutral solutions.

Even fewer ships in lay-up

Member companies in the Norwegian Shipowners' Association report low lay-up figures for ships and rigs. Activity in the shipping industry is high, as is demand for tonnage. As of January 2024, the shipping companies reported a total of 12 ships and rigs in lay-up. The forecast is a further reduction in the number of ships in lay-up next year. All the ships and rigs in lay-up are in the offshore segment.



**Havila Pollux and Havila
Polaris side by side.**
Photo: Martin Giskegjerde
in Oclin/Havila Kystruten

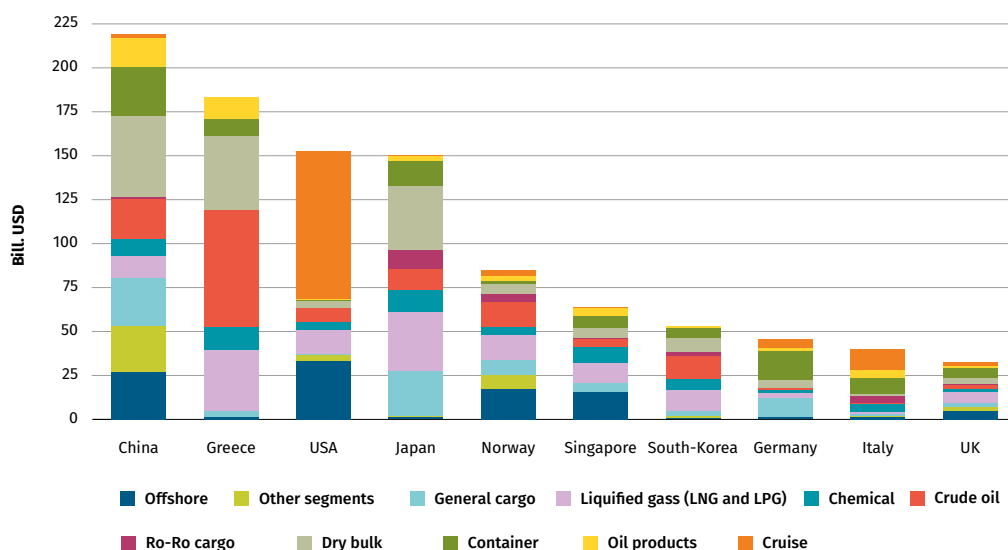


Norway is the fifth largest among the world's shipping nations, ranked by value

The value of the total world fleet, including cruise ships, was estimated at approximately USD 1,500 billion at the beginning of 2024, of which the ten largest shipping nations hold 70 percent. Norway occupies fifth place among these nations. China, Greece, the USA and Japan are by far the four largest nations, followed by Norway, Singapore, South Korea and Germany. The USA has moved up

in the ranking, overtaking both Japan and Norway, due to the high value of its large cruise ship fleet. If we exclude the cruise fleet, Norway retains its ranking as the world's fourth-largest shipping nation. In the Norwegian fleet, the offshore and gas carrier segments have the highest market value.

World's ten largest shipping nations ranked by fleet value 2024

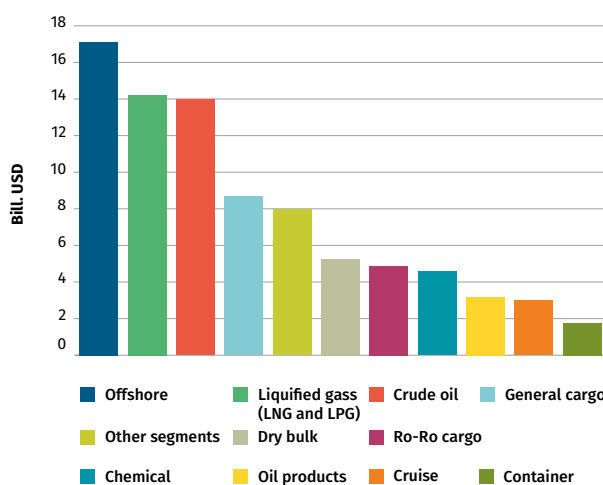


Source: Menon Economics

The shipbuilding industry is still characterised by high prices due to inflation and full order books at Asian shipyards. Throughout 2023, we saw persistently high rates in the petroleum segments, including offshore, combined with a decrease in bulk, container and general cargo rates. The decrease can be interpreted as a normalisation following a period of high rates due to the pandemic, supply chain challenges and war. However, it is important to note that these results do not capture any potential consequences of the current situation in the Red Sea.

Until 2022, data from IHS Markit has been used to calculate the size and composition of individual countries' shipping fleets, while price data has mainly been taken from Clarksons Platou. As of 2022, data for calculating the composition and size of the fleets has been derived from Clarksons World Fleet Register.

The market value of the Norwegian shipping fleet by segment 2024



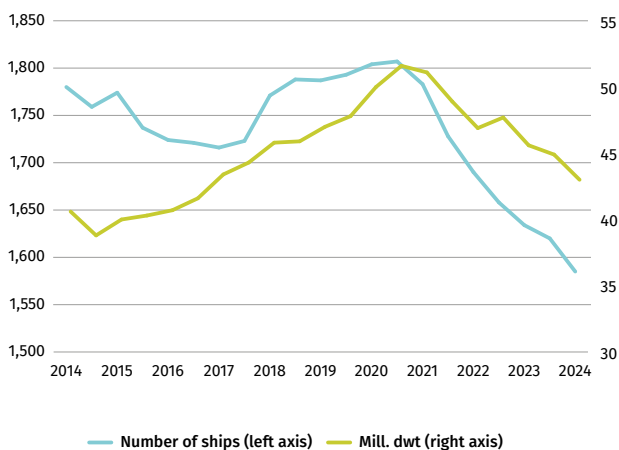
Source: Menon Economics

The Norwegian-controlled foreign-going fleet

The Norwegian-controlled foreign-going fleet has during 2023 been reduced both in tonnage and number of ships. Shipowners have sold more than 120 ships, while vessel acquisition shows that 70 ships have been purchased or delivered as newbuilds. As of January 2024, the fleet numbers a total of 1,585 ships with a total tonnage of 43 million deadweight tonnes. At the same time last year, the

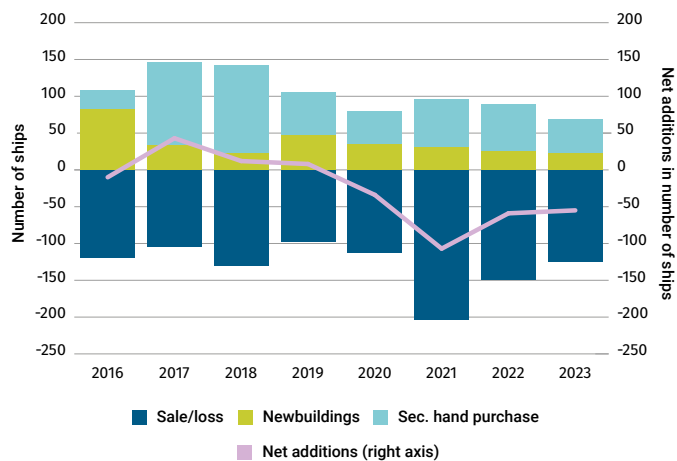
fleet comprised 1,634 ships of a total 45.6 million deadweight tonnes. The largest decline is found in the offshore service segment, compared with 2021 when the downward trend started. There are now 100 ships fewer in this segment than three years ago. There has also been a reduction in all other segments, and the only growth has been in the passenger ship segment.

Development in the Norwegian-controlled foreign-going fleet 2014-2024



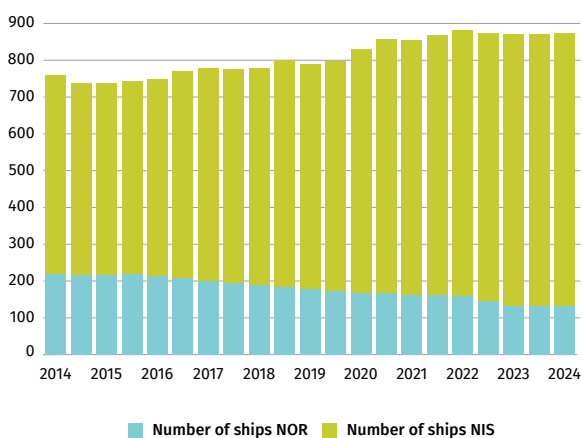
Source: Norwegian Shipowners' Association

Additions/removal by number of ships in the Norwegian-controlled foreign-going fleet - development 2016-2023



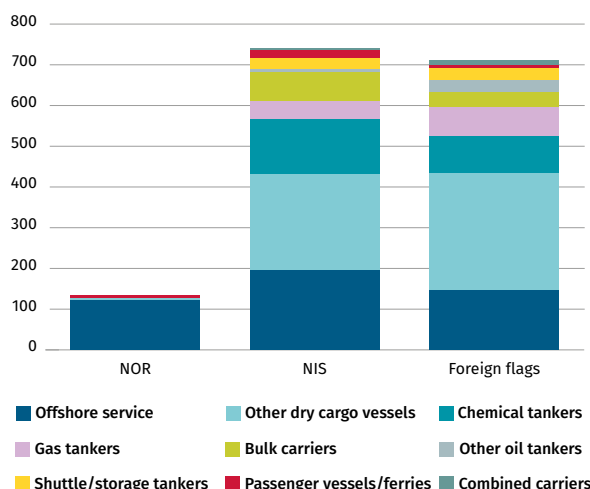
Source: Norwegian Shipowners' Association

Development in the Norwegian-controlled foreign-going fleet - NIS and NOR-registered vessels 2014-2024



Source: Norwegian Shipowners' Association

Number of ships in the Norwegian-controlled foreign-going fleet by flag and ship type as of 1 January 2024



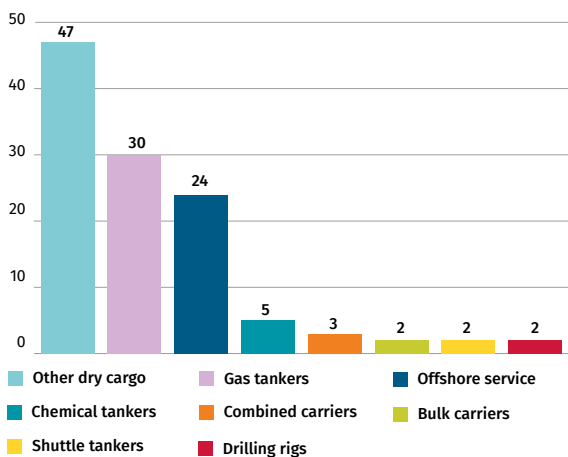
Source: Norwegian Shipowners' Association

The Norwegian flag is still attractive

The Norwegian International Ship Register (NIS) comprises 740 ships as of 1 January 2024. This is at the same level as one year ago. The same applies to the Norwegian Ordinary Ship Register (NOR), which has the same number of ships as one year ago. The Norwegian flag is attractive for shipowners in the foreign-going fleet, with steady growth over the last few years. More shipowners choose the Norwegian flag for their vessels and flag home, while more newbuilds are being delivered to the Norwegian ship register. When asked in this year's member survey whether they would consider flagging ships home this year, members of the Norwegian Shipowners' Association answer that the potential is around 35 ships, the same answer as last year.

The composition of the Norwegian-controlled foreign-going fleet shows that the dry cargo segment is the largest segment of the fleet measured in number of ships. Ro-ro car carriers make up a substantial proportion of this segment. The offshore service segment is the second largest, followed by the chemical tanker segment.

On order for the Norwegian-controlled foreign-going fleet by ship type as of 1 January 2024



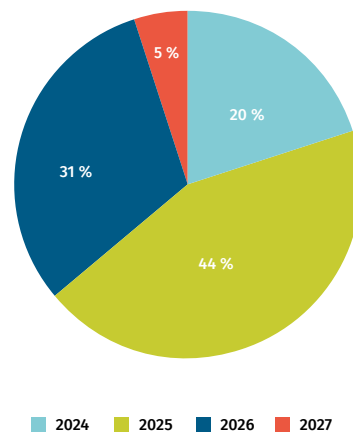
Source: Norwegian Shipowners' Association

Growth in the Norwegian-controlled order book

The foreign-going shipowners' order book now consists of 113 ships and two drilling rigs. This is an increase of almost 40 percent compared with the same time last year. The value of the order book is more than NOK 110 billion, or USD 10 billion. The countries where most newbuilding work is carried out are China and South Korea, and this is also where most investments take place. Only seven ships are being built in Norway. Over 40 percent of vessels in the order book are dry cargo vessels, of which a large share is made up by ro-ro car carriers, but there is also a large share of tonnage, that will be included in the short sea segment. In addition, 30 gas carriers (LNG) are under construction, as well as more than 20 ships that will be deployed in the offshore wind market.

The estimated timeframe for delivery of the ships in the order book is from the current year until the end of 2027.

Ships on order for the Norwegian-controlled foreign-going fleet by delivery year as of 1 January 2024



Source: Norwegian Shipowners' Association



Photo: Utkilen AS

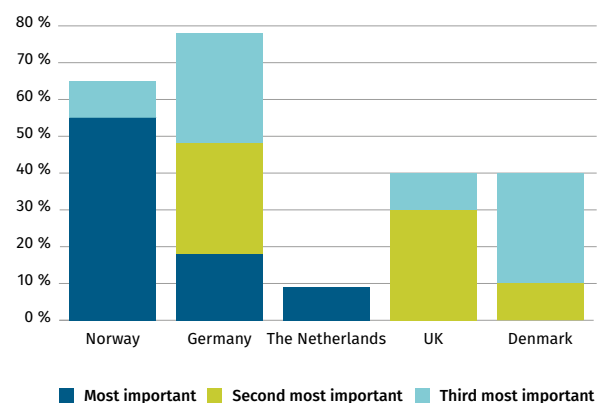
Short sea

Shipowners in the short sea segment, also called coastal shipping, transport all types of goods and passengers. They operate between Norwegian and European ports, and between ports in Europe. A large part of transport within Europe is carried by ship, and this means that short sea shipping plays a crucial role for the transport needs of business and the competitiveness of Norwegian industry. The Norwegian Shipowners' Association's members in short sea shipping control around 120 ships. The industry contributes to efficient logistic and transport solutions. Several shipowners in this segment are positioning themselves for the green shift, with ships on order. Common to them all is that these new vessels will be delivered with environmentally friendly solutions that will reduce greenhouse gas emissions.

For shipowners operating in short sea shipping, Norway and Germany are highlighted as countries of particular interest. More than 50 percent of shipowners rank Norway as by far the most important country, down 10 percent from last

year. Almost 20 percent say that Germany is most important and around 10 percent say the Netherlands. Along with the UK and Denmark, these countries have over several years remained stable as the most important nations for short sea shipping, in addition to Norway.

Countries of particular interest for short sea shipowners in 2024



Source: BDO AS/Norwegian Shipowners' Association



Photo: Wallenius Wilhelmsen

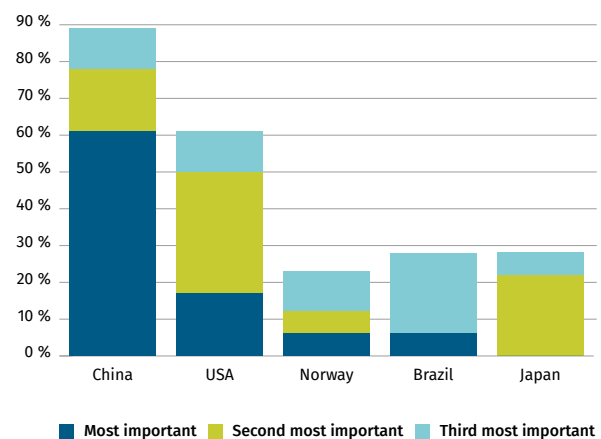
Deep sea

The deep sea fleet consists of several segments where Norwegian shipowners are world leaders and hold solid market shares. Among these are segments such as auto freight, LNG, shuttle tankers and chemical tankers. These ships sail over large distances and between continents. The Norwegian Shipowners' Association's members in the deep sea segment control more than 600 ships calling at ports around the world on a daily basis. The companies have a number of offices abroad, giving Norwegian shipowners a strong presence on all continents.

Deep sea shipping companies highlight China as the largest country of particular interest. More than 60 percent of shipowners in this segment rank China as most important. This is an increase from last year. Following China are the USA, Norway, Brazil and Japan. Sixty percent of the deep sea shipping

companies cite the USA as one of the three most important countries.

Countries of particular interest for deep sea shipowners in 2024



Source: BDO AS/Norwegian Shipowners' Association

Offshore service and drilling companies

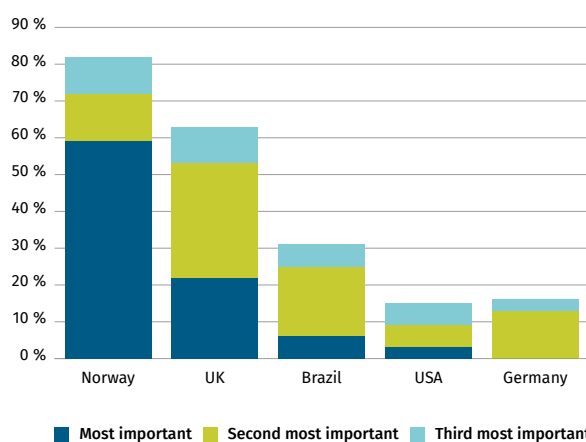
The Norwegian offshore fleet has a high proportion of vessels for transporting supplies and equipment to and from offshore installations. Offshore service companies are also well represented in the offshore wind market, where Norwegian shipowners have a clear advantage with their existing expertise. Several shipping companies are already providing services for offshore wind farms, and investments in tonnage for this market are constantly increasing. The North Sea, and especially the Norwegian continental shelf, is the most important market for the Norwegian offshore industry. It is a very important arena for securing the offshore companies a basis for international competitiveness. In addition, there is a strong presence on the continental shelves of other countries. Members of the Norwegian Shipowners' Association control around 50 mobile offshore units and a large offshore fleet consisting of more than 400 vessels.

Countries of particular interest for offshore service and drilling companies

For offshore service and drilling companies, Norway, the UK and Brazil maintain their positions as countries of particular interest. More than 60 percent of shipowners in offshore service cite Norway as

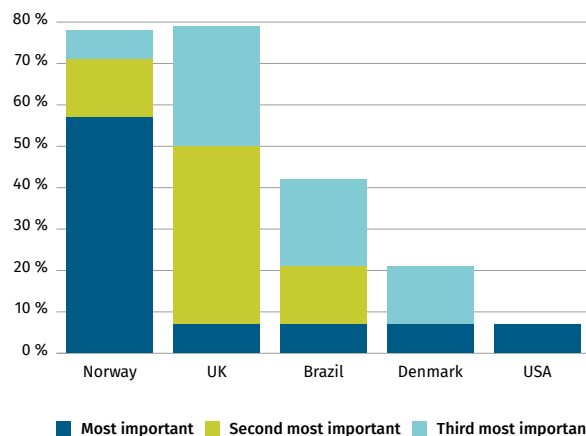
the most important country. The same is stated by almost 60 percent of offshore drilling companies. This clearly shows the importance of the North Sea and the Norwegian shelf for these companies. The UK and Brazil rank next, in that order, for both offshore service and offshore drilling companies.

Countries of particular interest for offshore shipping companies in 2024



Source: BDO AS/Norwegian Shipowners' Association

Countries of particular interest for offshore drilling companies in 2024



Source: BDO AS/Norwegian Shipowners' Association

Countries of particular interest for all shipowners together

If we look at all shipowner segments as one and isolate all responses to “most important country of particular interest,” 45 percent say that Norway is most important. This is followed by China and the UK with 16 and 11 percent, respectively. Seven percent cite the USA and 5 percent Brazil as the most important country.



Photo: William Thorseth/ Island Offshore Management

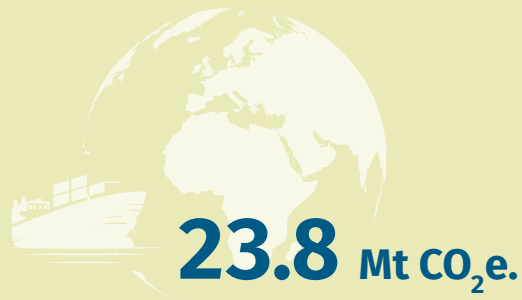


**Edda Breeze at the Port
of Oslo.**
Photo: Bård Gudim

02



Emissions from the Norwegian Shipowners' Association's member fleet

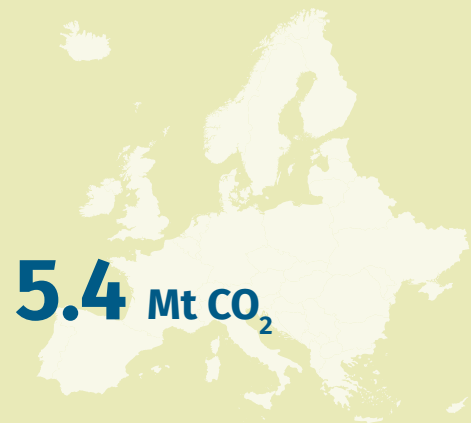


The Norwegian Shipowners' Association's member fleet emitted 23.8 million tonnes of CO₂e in 2023.¹

- This constitutes **3 percent** of emissions from international shipping globally.

The Norwegian Shipowners' Association's member fleet is responsible for emissions of 5.4 million tonnes of CO₂ in the EU MRV.²

- From 2024, **25 percent** of the Norwegian Shipowners' Association's member's emissions will be covered by the EU ETS and will generate significant allowance funds.
- The proportion will increase with the inclusion of more ship types.



The Norwegian Shipowners' Association's member fleet is responsible for emissions of 1.2 million tonnes of CO₂ in Norway.³

- As a share of emissions from domestic shipping and fishing, the member fleet accounts for **25 percent** – a responsibility that must be taken seriously.
- At the same time, the figures show that more than **80 percent** of emissions from Norwegian shipping are outside Norway.
- In total, emissions from the Norwegian foreign fleet correspond to just under **50 percent** of Norway's national emissions⁴ (or five times those from domestic shipping).

FOOT NOTES

- 1 Emission figures provided by DNV, based on AIS data and DNV's MASTER model, January 2024
- 2 The figures in the EU emission database for ships THETIS-MRV cover sailings in, and in and out of, the EEA
- 3 Barometer for green restructuring of shipping, produced by DNV for the Ministry of Climate and Environment
- 4 SSB, 48.9 million tonnes CO₂e in 2022



The publication is a specific follow-up to the Norwegian Shipowners' Association's Climate Strategy, which was adopted in 2020, and has been a priority issue in the board's work, writes the Norwegian Shipowners' Association's board.

Why do we publish our emissions?

This year, for the first time and as the first shipowners' association, we are publishing emissions data on the combined fleet of Norwegian Shipowners' Association members.

By reporting our emissions, we want to encourage greater transparency around the transition needs of shipping, and to be open about our progress, year-by-year, going forward.

We also want to launch a necessary debate about what size and scope new measures and policy instruments need to have, in order for us to reach the targets set for our sector.

The figures show a mixed picture.

We see significant improvements in energy efficiency per vessel. Norwegian shipowners have a large share of the world fleet running on alternative fuels. Shipping remains the most energy efficient mode of transport.

And at the same time – total emissions are high, and must be reduced to zero. Our 2050-commitment stands firm.

NSA members will contribute to reducing emissions in Norwegian waters.

But the largest emissions take place outside of Norway. We believe Norway will benefit from taking a more active role in the transition of international shipping – as a flag state, climate champion and green technology exporter.

The key to accelerating the transition is to get specific about our industry emissions, where the emissions are located, what each ship segment need, and how we can adapt our efforts to reduce our climate footprint together.

This work starts with transparency.



READ OUR CLIMATE STRATEGY

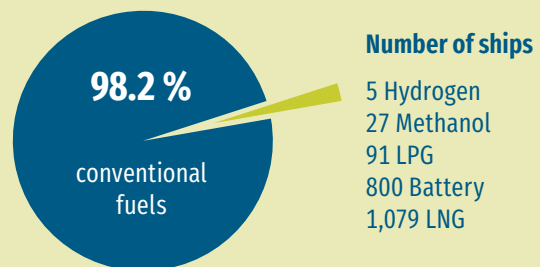
A catalyst for the green transition

The Norwegian Shipowners' Association has adopted specific targets to become a catalyst for the green transition in the world fleet. Norwegian Shipowners' Association members will cut greenhouse gas emissions by 50 percent per unit by 2030, compared with 2008 emissions. As of 2030, only zero-emission vessels will be ordered, and the aim is that the fleet will be climate-neutral by 2050.



Since 2008, the Norwegian Shipowners' Association's cargo carrying member fleet has reduced its annual efficiency ratio (AER) by **25.5 percent**.¹

APPROXIMATELY 2 PERCENT OF THE WORLD FLEET USES ALTERNATIVE FUELS²



Fifteen percent of vessels in the Norwegian Shipowners' Association fleet use alternative fuels.³

- **Nine percent** of the around 2,000 ships that use alternative fuels are owned by the association's members.



The shipping companies plan to contract almost 200 ships and rigs over the next five years. Close to **nine out of ten** shipping companies report that they will build ships with technology that is ready for climate-neutral solutions.⁴



shipping companies believe they will be climate neutral by 2050.⁵



of the shipping companies have invested in climate and environmental technology on board.⁶

FOOT NOTES

- 1, 3 Analysis provided by DNV, 2024.
- 2 DNV Energy Transition Outlook 2023, Maritime Forecast to 2050
- 4, 5, 6 Norwegian Shipowners' Association's member survey 2024



Emission reporting for the offshore segment can be read in the Konkraft status report.



Helene Tofte,
Executive Director of International Cooperation and Climate

COMMENTS FROM THE NORWEGIAN SHIPOWNERS' ASSOCIATION

The “Paris Agreement” of shipping

Norwegian shipping continually strives to reduce emissions, and Norwegian shipowners have demonstrated an ability to both innovate and adapt. According to this year’s member survey, 9 out of 10 shipping companies state that they have invested in on-board climate and environmental technology.

At the same time, for Norwegian shipping to uphold its position as an international leader, we need new policy instruments to boost the green shift. Specifically, we want the shipping industry’s contributions to the EU Emissions Trading System to be directed towards the industry and its emission-reducing measures. EU member countries will have an obligation to spend ETS revenues on climate action. If Norway has lower ambitions, we risk losing our competitive edge.

2023 was a historic year. New climate targets were agreed on following tough negotiations in the UN’s International Maritime Organization (IMO). In what was dubbed “the Paris Agreement” for shipping, the IMO adopted clear targets for achieving climate neutrality by 2050. However, the new climate targets will have a negligible effect if the IMO fails to agree on specific regulations that will pave the way for climate neutrality by 2050. 2024 will be a key year for this work.

In the EU, 2024 is also an important year for climate action in the shipping industry. On 1 January 2024 shipping was included in the EU Emissions Trading System, introducing, for the first time, an international price on greenhouse gas emissions from shipping. We believe that it is essential for the IMO to follow suit and establish a global price mechanism for greenhouse gas emissions from our industry. We will actively seek international support for this in 2024.

MEASURES TO STRENGTHEN THE GREEN TRANSITION IN THE MARITIME INDUSTRY:

- Increased auction revenues from the EU ETS should be used to establish a fund that can finance CO₂-reducing measures in the maritime industry.
- Policy instruments must be expanded with a new mechanism that contributes to the scaling and roll-out of climate and environmental technology.
- Contracts for difference must be introduced to ensure increased production and use of emission-free fuel.



Sebjørn Dahl, COO and
CEO of Höegh Autoliners
Technical Operations AS.
Photo: Håvard Solerød

“We underestimated the snowball effect of the green shift”

In primary school, Sebjørn Dahl drew so many ships that his teacher asked him to draw something else. Today, he is helping to get Höegh Autoliners’s first zero-emission vessel off the drawing board.

Text: Håvard Solerød

The RoRo shipping company Höegh Autoliners was a hot topic during the 2023 COP28 climate summit in Dubai. Five years ago, the idea of global ocean-going, zero-emission vessels was considered almost utopian. Höegh Autoliners broke through that barrier with a new generation of car carriers that were given the name Aurora class vessels.

“What did you have for breakfast?”

In the autumn of 2020, Sebjørn Dahl got an idea for a new concept for Höegh Autoliners’ car carrier fleet.

“I remember that day really well. When I presented CEO Andreas Enger with my idea for a newbuild, he

replied: ‘What did you have for breakfast today?’ The setting was the pandemic, lockdown and an incredibly challenging market. Every day was a struggle for economic survival. New investments were not on anyone’s agenda,” says Dahl, COO and CEO of Höegh Autoliners Technical Operations AS.

His thought in 2020 was that there will be a time after the pandemic. At that time, the average age of their fleet was 16 years. In that respect, the time was right for innovation and fleet renewal. To secure financing, the CEO initiated a public listing. Nine months later, Höegh Autoliners presented its design, including its zero-emission vision, and the company was listed on the Oslo stock exchange. The vision was appealing. Financing for the first newbuild was secured.

Detail drawings of the first new car carrier, with the capacity to carry 9,100 cars, are about to materialise at the shipyard in China. The maiden voyage is scheduled for August 2024. In the meantime, staff keep circling a model of the vessel at the offices in Skøyen, Oslo. The deck on the model is largely covered by an array of solar panels.

“The vessel has 1,500 square metres of solar panels. There is a lot of sunshine on our routes. When sailing in fair weather, the solar panels will reduce electricity generation from generators by 30–35 percent,” says Dahl.

Finances take priority

About 15 years back, the company started to look into emissions from their vessels. Höegh Autoliners currently has a fleet of 34 car carriers, and since 2008, the company has reduced fleet emissions by 40 percent.

“The price of fuel rose sharply 15 years ago. As a result, there was a strong focus on reducing fuel consumption. The environmental benefit was fine, but that was not our main motive in the beginning. It was company finances,” says Dahl.

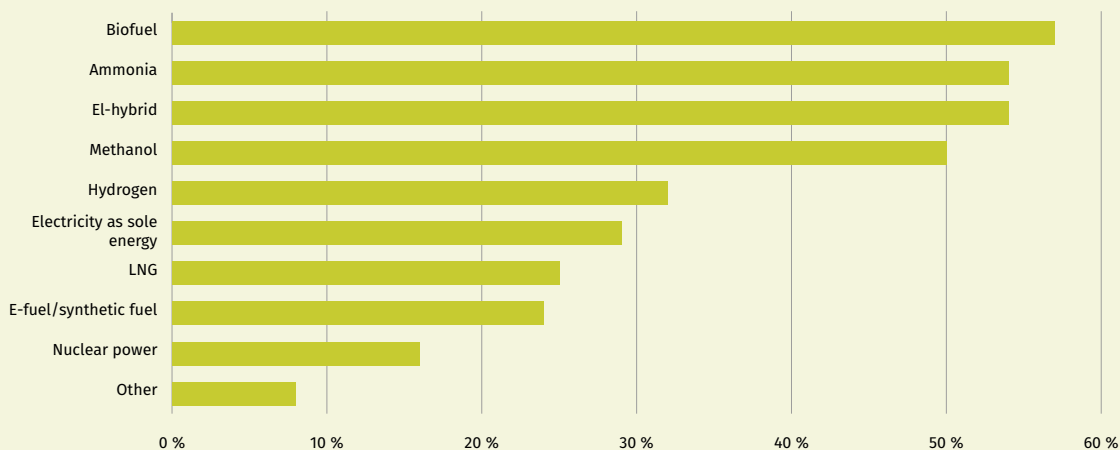
The environmental focus has gradually grown stronger. When the shipping company switched to LSFO in 2020, it was in response to the Norwegian government’s increased focus on emissions to air. Car manufacturers have assumed a leadership role in the green shift. That has had a rub-off effect on charterers. Reducing or removing emissions from large vessels in intercontinental traffic is profitable.

Ammonia as fuel

Right next door to Höegh’s offices at Skøyen are the headquarters of the ammonia manufacturer Yara.

“The proximity to Yara was not decisive for using ammonia as fuel for our new generation of car carriers. However, we have developed a close collaboration. Yara has been producing ammonia for a century. Not only is Yara a supplier of green ammonia, but they also have a lot to offer in terms of safety,” says Dahl.

Fuel types and energy carriers the shipping companies are considering to achieve emission targets by 2050



Source: BDO AS/Norwegian Shipowners' Association

“The potential we saw with ammonia has moved forward at a tremendous speed.”

When Höegh Autoliners decided to use ammonia as fuel for their vessels, there were no available ammonia engines or bunkering facilities. After collaboration with the German engine manufacturer MAN, the engine is now in place.

“Our biggest mistake in the innovation phase was timing. Everything happened quicker than we thought. We underestimated the snowball effect of the green shift. The potential we saw with ammonia has moved forward at a tremendous speed,” says Dahl.

While the project was developed, the auto freight market has reached historic highs. Older car carriers have more than doubled in value. High earnings have made it possible to order a total of 12 Aurora class vessels. The total investment will be NOK 14 billion.

Emission-free operation or not ...

With the current prices it will cost more to use ammonia as a maritime fuel than fossil fuels. The new car carriers from Höegh will have dual-fuel

technology. It will be up to the customer to decide what fuel to use. The authorities’ willingness to subsidise emission-free fuel will play a role, as will the customer’s desire to flaunt emission-free transport.

“It would be a great shame if the carbon-free technology remained unused. I believe that it is essential for Norway as a nation to strengthen its focus and think big on climate. It’s very well to think about ferries in Western Norway and cruise ships in the Geiranger fjord, but it’s equally important to consider the framework conditions for maritime players such as ourselves, who sail across the world’s oceans bearing the Norwegian flag. Society has a responsibility to ensure that a Norwegian ship that sails the Indian Ocean is innovative, cutting-edge and clean. That will benefit the environment,” says Dahl, who has decades of experience from the shipping industry.

Launching of the Höegh Aurora.
Photo: Höegh Autoliners





Øivind W. Aanensen (left) and Paal W. Aanensen, joint CEOs of Hagland Shipping.
Photo: Håvard Solerød

IN HAUGESUND:

Energy efficiency that makes a difference

At Hagland Shipping bows and sterns are currently being painted green to show the company's commitment to energy efficiency and newbuilds.

Text: Håvard Solerød

"Hagland Captain, which was retrofitted in 2021, was our first vessel with a green bow. Since then, we have added three newbuilds to our fleet, all bearing the same colours," says Øivind W. Aanensen, joint CEO of Hagland Shipping.

Hagland Shipping was established in 1983. Today, their fleet consists of 13 dry-cargo vessels, of which five are chartered.

Typical cargoes include stone, gravel, timber and pulpwood. The company engages in loading and unloading operations along the Norwegian coast and in European countries, including the Baltic.

"Occasionally, we go west to Iceland, but we rarely go south of the English Channel," says Aanensen.

Safety and new energy

No matter where they go, energy efficiency is on the agenda.

"Our ships are competing to see who has the best operating and testing performance. It's great fun," says Aanensen.

Fuel for offshore ships is paid for by the oil companies, whereas shipping companies such as Hagland have to cover their own fuel expenses.

Energy efficiency is profitable. At the same time, operations must have integrated redundancy. The maritime crew must be certain that they will always have engine power, even if some system parts were to fail.

“Our crew appreciates that we prioritise their safety. They know we will not put new equipment on board that might compromise their safety. For instance, it is not easy to ensure that the transition to hydrogen is performed safely,” says Aanensen.

Battery hybrids

Hagland Shipping’s first step towards its zero-emissions vision has been to introduce energy efficiency measures.

“In our segment, the best available option was energy optimisation through battery hybrid solutions. First, we retrofitted the Hagland Captain, a vessel built in 2012. Today, 50 percent of the fleet we own consists of battery hybrids,” says Øivind.

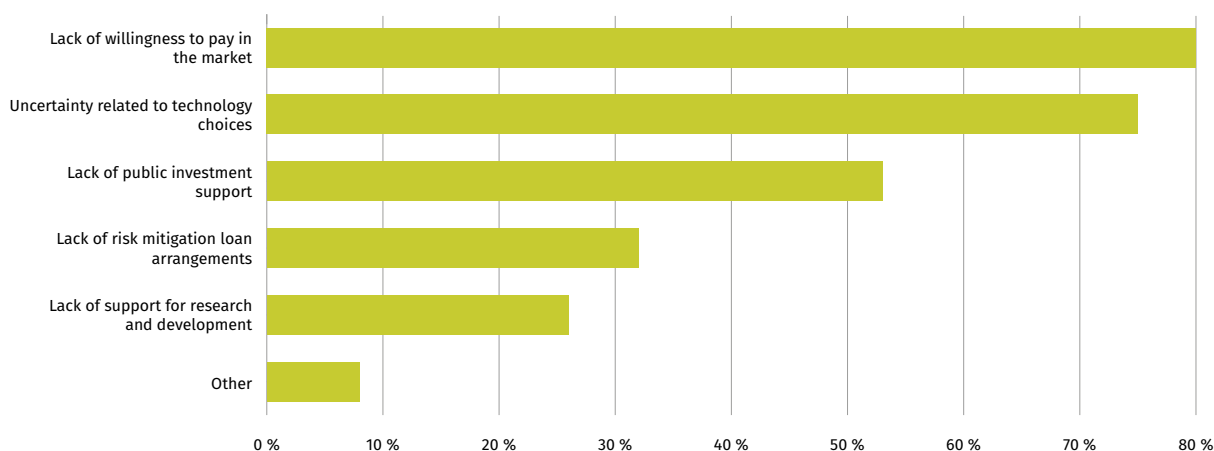
Their battery hybrid systems emerged as a response to their question: “What would provide the highest emission reduction per NOK invested?”

“Our current energy consumption is roughly 30 percent lower than that of a standard vessel built in 2012. We also managed to significantly reduce our annual consumption at harbour. We are approaching a 45–50 percent emission reduction through energy optimisation and conversion from diesel to electricity, as well as further development of onshore charging facilities,” says Aanensen.

The Green Shipping Programme for fleet renewal, launched by the Norwegian authorities to replace old ships from the 1960s and 70s, was discontinued at the end of 2023. Enova funding for conversion to battery hybrid systems has become unpredictable.

“Initially, we received 50 percent funding for energy efficiency measures for two of our vessels. For our third vessel, we received 40 percent. We currently

Shipping companies’ assessment of the central barriers to investment in climate and environmental technology



Source: BDO AS/Norwegian Shipowners’ Association



Photo: uavpic.com/Hagland

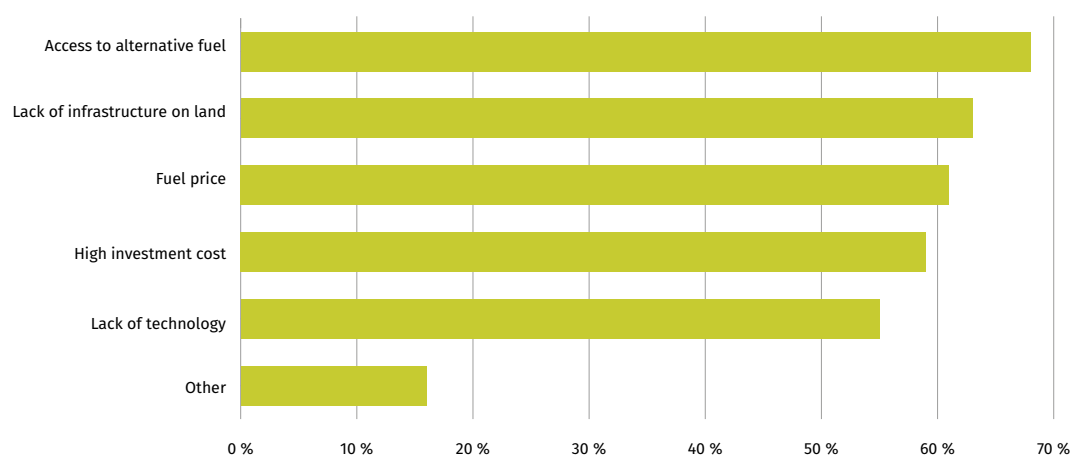
“In our segment, the best available option was energy optimisation through battery hybrid solutions.”

have no active applications, but we see that our competitors have received no funding at all for work contracted later on. That’s worrying for our future efforts,” says Aanensen.

They find that funding for the green shift tends to be directed towards zero-emission projects or highly innovative solutions.

“We can invest another NOK 25 million and reduce emissions by 50 percent, whereas building costs alone for a zero-emissions vessel may total another NOK 210 million. So, by investing the same amount, we will reduce total emissions by four, before the increased costs of hydrogen or ammonia fuel. How much green ammonia and hydrogen will cost is currently uncertain, but it will definitely be expensive,” says Aanensen.

The largest barriers for using alternative fuels



Source: BDO AS/Norwegian Shipowners' Association



**The British aircraft carrier
HMS Queen Elizabeth on her
way to Oslo.**

Photo: Philip Linder/
Norwegian Armed Forces



Half the world's population to go to the polls

More than 70 elections will take place in 2024.

Text: Håvard Solerød

“The results of the elections will impact Norway and Europe. One of the world’s most anticipated events this year is the results of the 2024 elections,” says Ine Eriksen Søreide, Chair of the Storting’s Committee on Foreign Affairs and Defence.

Russia will hold presidential elections in March. In India, with its 1.4 billion people, voters will cast their ballots in April and May. European Parliament Elections will take place in June, whereas US presidential elections are scheduled for November.

“The outcome of the US elections and the composition of the European Parliament will affect Norwegian interests in different ways, regardless of who the winners are,” says Eriksen Søreide.

Polarisation and surprises

Eriksen Søreide and her colleagues are preparing for surprises.

“During electoral campaigns and ahead of elections, our embassies are working round the clock to place Norwegian authorities in the best possible position to understand political trends. Cooperation with the Norwegian Shipowners’ Association is important because they have contacts in countries where Norway has no embassies or other representation,” says Eriksen Søreide.

Knowledge about election winners as well as losers is important for Norway.

“The work ahead of elections is necessary to be able to predict how the election results will affect the bilateral relationship or collaboration in an organisation,” she says.

According to analysts, one current trend is increasing polarisation

“Polarisation is not a new phenomenon in the US. The political landscape in the US has been highly polarised for many years, and Democrats and Republicans have been increasingly unable to forge political compromises. Then, Donald Trump utilised polarisation in a way that had never been seen before. Many people believed polarisation would abate after the election of Joe Biden, but this has not been the case at all. I don’t think that was likely anyway, as the US has been polarised for such a long time. For instance, during the pandemic it became a political statement to wear a face mask and get vaccinated, or not. Everything took on a political dimension,” says Eriksen Søreide.

How is Norway preparing for the outcome of the US election?

“Norway has always managed to maintain good relations with both sides of the political spectrum in the US, through collaboration and contact with the current administration as well as direct political contacts and meetings in Congress. Norway also has close ties to think tanks. Here, you can meet administration candidates on both sides. In the



Ine Eriksen Søreide, Chair of the Storting's Foreign Affairs and Defence Committee, about geopolitics and the year 2024. Photo: Håvard Solerød

US, about 4,000 bureaucratic positions change hands when new administrations are elected," says Eriksen Søreide.

The northern regions, wars and climate

When asked what trends Eriksen Søreide foresees in the 2024 political landscape, she points to developments in the northern regions.

"The outcome of the US elections and the composition of the European Parliament will affect Norwegian interests in different ways, regardless of who the winners are."

"Strategically, the northern regions are becoming increasingly important to Russia. The country's army has suffered heavy losses during the war with Ukraine, whereas its air and naval forces are mainly intact. Russia's air and naval forces, as well as its nuclear forces, operate out of its main base and operation areas on the Kola peninsula," says Eriksen Søreide.

Another perspective in the northern regions is Finland's and Sweden's accession to NATO.

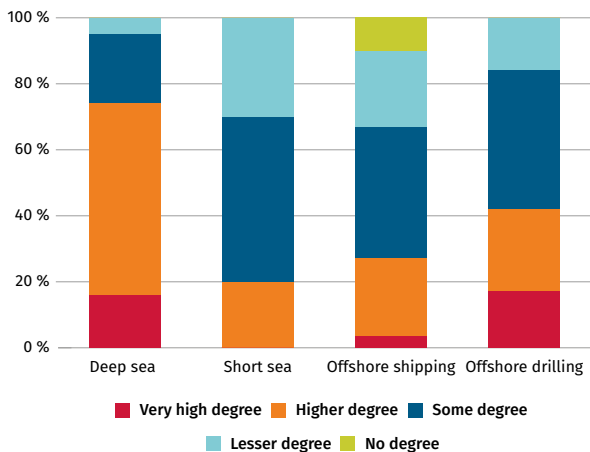
"It means that Norway will become the most important reception area for allied reinforcements, not just for Norway, but also for Finland, Sweden and the Baltic States. Much of the reinforcements will arrive in Norway by sea. The northern regions and the North Atlantic Ocean have always been of strategic importance to Russia as a potential cut-off area for allied reinforcements to Europe. This has not become less important for the military doctrine of Russia," says Eriksen Søreide.

Ice cover is receding in the northern areas, enlarging the sea areas.

"Climate change opens new shipping routes, both for military and commercial activities. Many are eager to engage in commercial traffic activities in the northern maritime zone, but, for now, insurance costs are too high, and infrastructure is insufficient," says Eriksen Søreide.

She does not foresee major changes from status quo in 2024 as regards commercial shipping routes

The impact on the shipping segments of increased tensions between the US and China



Source: BDO AS/Norwegian Shipowners' Association

in the north. The ice melting will alter Norway's military mode of operation.

“At the same time, more major players will engage in the Arctic. Relations between Russia and China are of particular interest to us. China has declared itself a ‘near-Arctic state’ and claims interests in the northern region. So far, Russia has managed to keep China at arm’s length, but this is becoming increasingly difficult for Russia. The balance of power between China and Russia has changed significantly as a result of Russia’s brutal war in Ukraine. I believe that China will establish a stronger presence in the northern regions. This will also affect us, not necessarily in a military sense, but through increased presence in the region. This will change the geopolitical landscape significantly. In my opinion, a key priority for 2024 and beyond should be to keep an eye on activities in the northern regions, particularly maritime activities,” says Eriksen Søreide.

New developments create greater multipolarity

“There are many emerging economies and populous states that now take up more space on the global arena than they did only a few years ago. Against this backdrop, it is important to note that Russia and China in particular, have an agenda where they seek to gain support from many of these countries for their efforts to change the international order. This will pose major challenges for a country such as Norway, and for most other countries. It could, for instance, change some aspects of international law,

which is especially important to Norway. Without the law of the sea Norway would be in a completely different situation from today. We depend on global rules for inter-state relations,” says Eriksen Søreide.

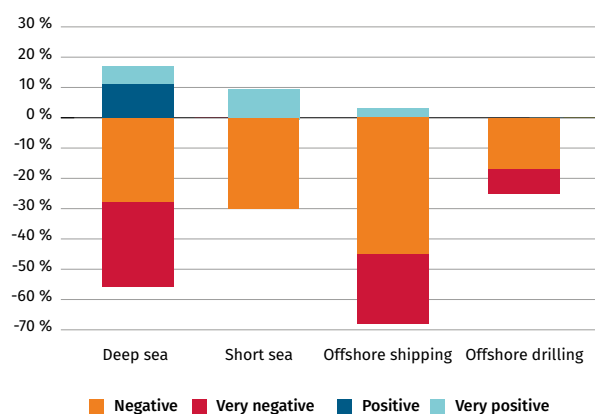
In early 2024, around ten Norwegian shipowners reroute their vessels around Africa, instead of using the Suez Canal. Others do not operate in the Black Sea and surrounding areas. There are tensions in the South China Sea. Is an unstable and unpredictable geopolitical situation something Norway can plan for?

“Unrest and unpredictability have become the new norm. We must be prepared for more extensive and rapid changes than we have seen so far. This entails that we must invest more in the alliances and unions we are a part of – and have close ties with – to maintain our foreign policy momentum,” says Eriksen Søreide.

She finds the situation in the Red Sea unacceptable.

“As a major shipping nation, it is very much in Norway’s interest that this situation ends. We must do whatever we can to ensure free and safe passage at sea. Norway provides staff officers for the “Prosperity Guardian” operation in the Red Sea. The Norwegian government should also consider further contributions,” she says.

The impact of global protectionism on shipping segments



Source: BDO AS/Norwegian Shipowners' Association

The new reforms will accelerate the climate agenda

2025 is the year when we must start seeing results from our climate policy measures if we are to achieve our climate goals for 2030 and 2050. This may give rise to new initiatives in 2024 for a more profitable green transition.

Text: Håvard Solerød

“One of European Commission President Ursula von der Leyen’s flagship projects has been the green reform programme, European Green Deal. We are really keen to watch the finishing stages of this Commission’s period in the run-up to the European Parliament elections. It will be particularly interesting to see what initiatives the Commission thinks should be implemented to boost the green reform processes,” says Maria Varteressian, State Secretary, Norwegian Ministry of Foreign Affairs.

A new updated climate target?

A status report for European climate policy was published in 2023. It assessed the progress made towards the goals of the global Paris Agreement.

“The report did not contain any major surprises. It set out to assess whether the world is on the right track for achieving the climate goals. The report concluded that the work on policy measures that will reduce emissions quickly enough, is progressing too slowly. This is also the case for Europe, which demonstrates how difficult it is to implement effective measures,” says Varteressian.

However, she does emphasise that the green transition has resulted in some effective measures, including in shipping.

“It will be interesting to see what initiatives the Commission thinks should be implemented to boost the green reform processes.”

“From a Norwegian perspective, the reform processes have been successful. The EU has been a key facilitator and initiator for the global environment and climate policy agenda. The already successful Emissions Trading System (ETS) has gained new momentum and scope. It has become increasingly expensive to emit greenhouse gases, and policy instruments have been introduced to make it easier to prevent emissions. At the same time, the EU has conducted a thorough and comprehensive assessment to ensure that the transition is fair for people, countries, business and industry,” says Varteressian.



Maria Varteressian, State Secretary for Minister of Foreign Affairs Espen Barth Eide. Photo: Håvard Solerød

Through her work on climate and environmental issues, she has learned that interaction and coordination are key.

“The EU’s Green Deal is characterised by a parallel and harmonised approach. All value chains must be coordinated wherever necessary if we are to deliver on the 1.5-degree ambition and climate neutrality target by 2050.”

Varteressian points to some positive developments that give us hope for the work in 2024.

“The depth, scope and ambition that have been introduced and implemented in all policy areas of the European Green Deal, are truly impressive. The Green Deal has initiated a race to the top where the green transition has become embedded in the growth strategy of modern economies. This is also the case for green transition in the shipping industry,” says Varteressian.

In terms of climate ambitions, the race to the top was a result of reforms that ensure that green initiatives are financially sustainable.

“Russia’s war of aggression against Ukraine caused an immediate need to replace Russian gas in the European energy mix.”

“Organisations introduce low-emission initiatives because it is the morally correct thing to do, but also because it is profitable for further green growth and in line with a zero-emissions future. The EU and its policy developments, with the European Green Deal at its core, have been a driving force in this respect,” says Varteressian.

Climate policy and the transition to renewables are components of geopolitics

One area of uncertainty is how climate policy will evolve as part of the geopolitical game.

“Russia’s war of aggression against Ukraine caused an immediate need to replace Russian gas in the European energy mix. Norway stepped up and

increased production and deliveries as much as possible. At the same time, the EU implemented a number of long-term measures focusing on a speedy transition away from fossil energy. One example is RePowerEU, which aimed to accelerate the transition of the European energy sector,” says Varteressian.

She also points to the US Inflation Reduction Act.

“This is in fact a giant climate package. It provides a more proactive approach to the whole global transition,” says Varteressian.

“Shipping is the most global of all industries. It is at the forefront of the green shift.”

Shipping at the forefront

After years of focusing on emission allowances and green corridors in the shipping traffic, Varteressian has noticed that the industry has taken a more proactive role in the green shift.

“Shipping is the most global of all industries. It is at the forefront of the green shift.”

She hears talk about multi-fuel engines, hydrogen, ammonia, batteries and a number of other drivers.

“The industry is breaking down technological barriers and paving the way,” says Varteressian.

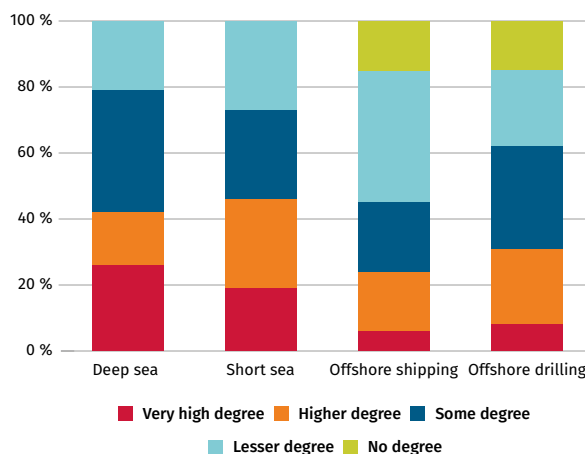
Environmental policy – the glue of geopolitics

One example is the Norwegian shipping company Høegh Autoliners, which came into the limelight during the 2023 COP28 climate summit in Dubai. These shipowners have a new generation of car carriers in the pipeline, which means they will be able to offer carbon-free freight services as of 2027. Dubai was an immense success for the shipping company. They were in direct contact with decision-makers, aiming to influence framework conditions to make the green alternative attractive for their customers.

The climate summit in Dubai attracted more heads of state and chief executive officers than ever.

“Climate summits have also become venues for raising a number of other issues. I think attendance was at a higher level in Dubai than at the UN General Assembly top week in New York. This shows that environmental diplomacy has indeed become pivotal for geopolitical action,” says Maria Varteressian.

The impact on the shipping segments of the war in Ukraine



Source: BDO AS/Norwegian Shipowners' Association



Audun Halvorsen,
Executive Director for Security and Contingency Planning

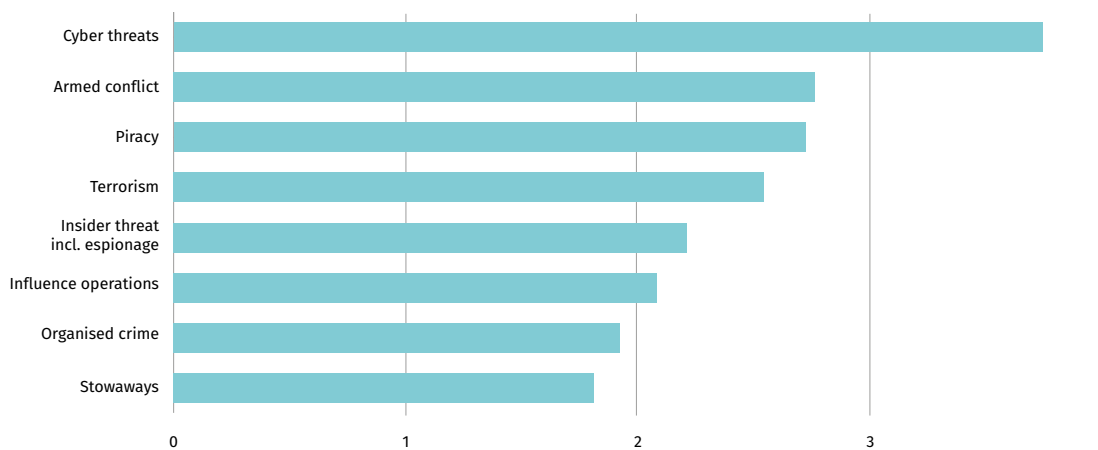
COMMENTS FROM THE NORWEGIAN SHIPOWNERS' ASSOCIATION

Increased risk and unpredictability

The shipping industry is affected by increasing security tensions and a more complex conflict environment. As we operate all over the world, the shipping industry is greatly affected by the international security situation and geopolitical developments.

The impact of security threats on shipping companies' operations

Scale from 1 to 5 where 1 = Insignificant and 5 = Highly significant

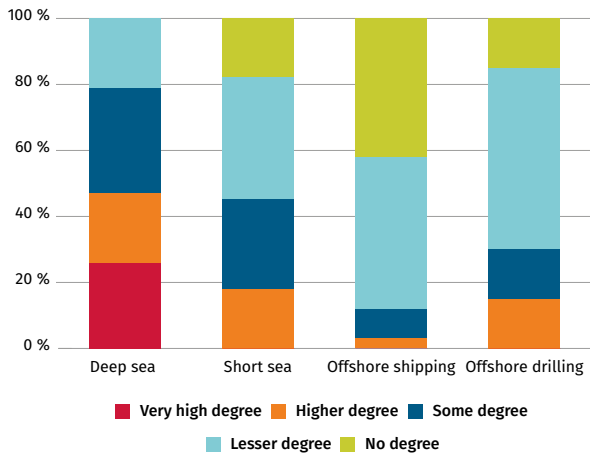


Source: BDO AS/Norwegian Shipowners' Association

The Security and Contingency Planning department of the Norwegian Shipowners' Association is keeping a close eye on the international security situation, in dialogue with the industry, Norwegian authorities and international partners. We provide

information and analyses on conflict trends and security challenges to ensure that our members and the rest of the Norwegian merchant fleet are well prepared for conducting their own risk assessments and to facilitate unrestricted and

The impact on the shipping segments of the conflict in the Middle East



Source: BDO AS/Norwegian Shipowners' Association

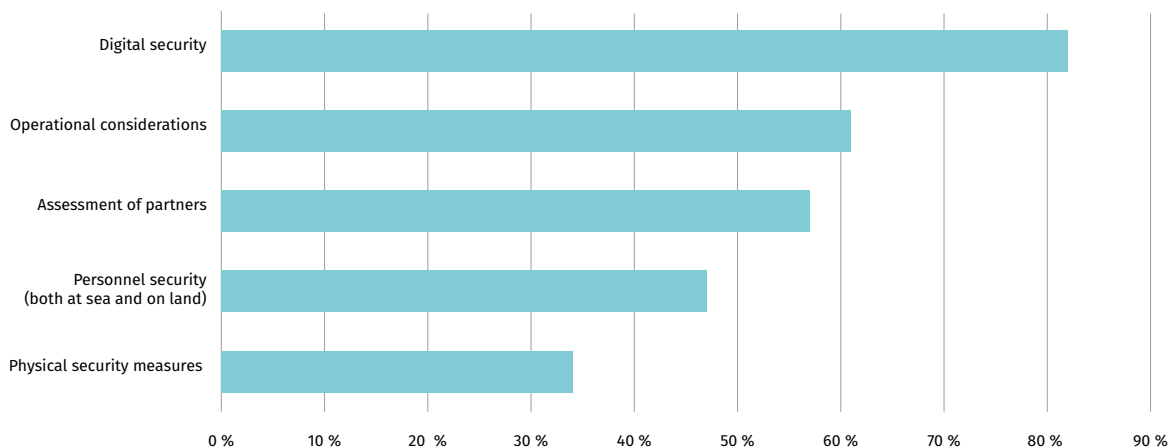
safe operations. This is particularly important in situations and on sea routes that have a higher risk of exposure to acts of war, piracy and terrorism.

Security and contingency planning is becoming increasingly important in a world rife with conflict and uncertainty. This is something all industry sectors must take seriously, and across the global value chain. At the same time, we will increasingly face new types of threats such as cyber-attacks, hybrid threats, disinformation campaigns, economic warfare, etc. This requires better

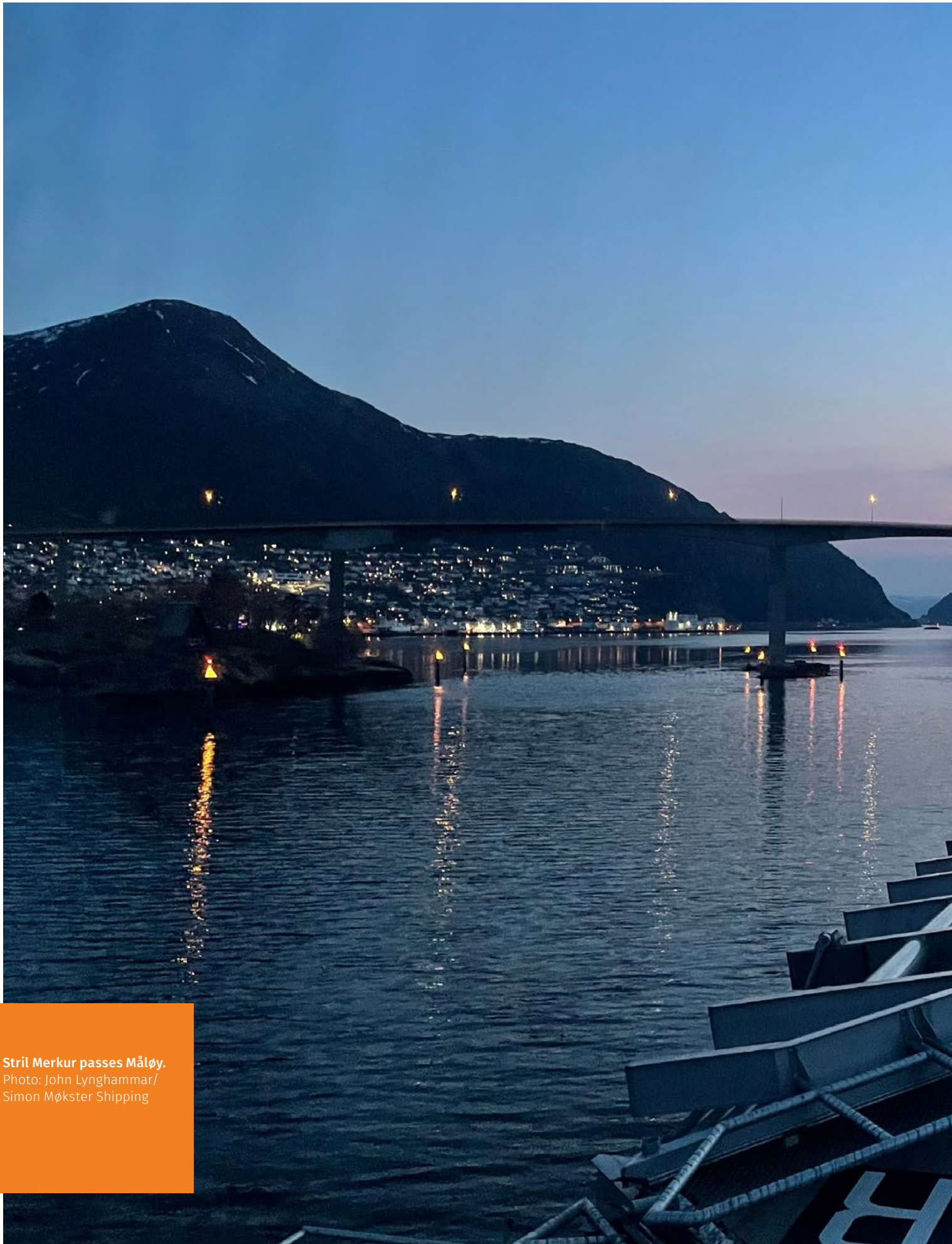
information-sharing and collaboration between the various industry actors and across sectors. This will be particularly important for a complex and global industry such as the shipping industry.

The establishment of the Norwegian Shipping Security and Resilience Centre, in partnership with DNK and NORMA Cyber in 2023, was a major step for strengthening the industry's focus on contingency and maritime security and equipping us for an increasingly unstable and unpredictable world.

Areas where the shipping companies have implemented security measures based on threat assessments



Source: BDO AS/Norwegian Shipowners' Association



Stril Merkur passes Måløy.
Photo: John Lynghammar/
Simon Møkster Shipping

04



Going for their third world record

Eidesvik Offshore is situated in an island bay near Haugesund. This is where the company launched their industrial adventure with a few fishing boats. Now they are going for their third world record in green technology for offshore vessels.

Text: Håvard Solerød

An electric ferry docks silently in the bay of Langevåg. Langevåg is a village in the municipality of Bømlo and home to around 800 people. Near the ferry landing at the end of the bay, you will find the headquarters of the cornerstone company Eidesvik Shipping with its 500 employees.

“We are working towards setting our third green shift world record with our supply vessel Viking Energy as part of the EU project ShipFC. Our goal

is to be the first shipping company in the world to install fuel cells running on ammonia. You can be very international working in Langevåg,” says Marie Launes, VP Sustainability.

“We are working towards setting our third green shift world record with our supply vessel Viking Energy.”



Gitte Gard Talmo, who started as a secretary, is now CEO of Eidesvik Offshore. Photo: Håvard Solerød

The first world record on board Viking Energy dates back to 2003.

“The vessel was equipped with a dual-fuel engine capable of running on both LNG (liquefied natural gas) and MGO (marine gas oil). We achieved our second world record when the vessel became the world’s first with DNV’s battery hybrid solution,” says Gitte Gard Talmo.

The fleet of Eidesvik Shipping consists of 13 offshore vessels. Eight of them are supply vessels for oil rigs, whereas five are subsea/construction vessels. One third of the company’s order book



Photo: Håvard Solerød

consists of offshore wind assignments, which have been a new area of priority since 2016.

Eidesvik's offshore vessels are among the most technically advanced in the world with a global range. They were designed for harsh conditions in the Norwegian Sea and North Sea and for assisting with complex operations such as construction and maintenance of subsea installations on the seabed. There is no margin for error.

"You cannot risk losing manoeuvrability when the vessel is below the platform deck with supplies. Back-up is essential during all phases of the operation," says Talmo.

The computer screen in COO Arve Nilsen's office shows that today the vessels are most exposed in Europe.

Spear points and axes

Langevåg was an industrial centre in Norway long before the foundation of Eidesvik Shipping. From 8000–5000 BC, Langevåg was the first industrial work site in the country. Around 1,000 tonnes of greenstone were extracted from nearby

Hespriholmen and turned into spear points and axes in Langevåg.

The slogan of the island municipality is: "The saga island where creativity is in the soul of the people." Eidesvik Shipping has turned into a spearhead of the green shift. Why here exactly?

"When I started working here, I was told that the fishermen who founded the shipping company back in the 1960s, were extremely keen to keep fuel consumption as low as possible. Fuel was by far their largest expenditure. Saving energy was a philosophy and approach that accompanied Eidesvik into the offshore age from the beginning of the 1970s," says Launes.

"Someone has to put their neck on the line. It has not been without risk, but we have succeeded. Today, 86 percent of our fleet is battery-hybrid."

The quest for innovation and search for energy-efficient solutions and technology has been a source of both costs and gains over the years. A recurring topic these days is how it pays to be a leader in the green shift.

“The framework conditions are more unpredictable now than when we were focusing on dual-fuel and battery technology. The conditions change more frequently, and it is difficult to know whether you will receive funding for your projects,” says Launes.

The green commitment is in the company’s DNA

“Someone has to put their neck on the line. It has not been without risk, but we have succeeded. Today, 86 percent of our fleet is battery-hybrid. This creates ripple effects. For example, some oil companies have battery operation as a minimum requirement for awarding long-term vessel contracts on the Norwegian shelf. That’s good for the battery manufacturers,” says Talmo.

Suppliers of battery technology and other equipment have had their hands full meeting the shipping company’s ambitions over the last 20 years. For shipyards, it has been challenging to design and develop specialised ships.

“During the development phase, close relationships were forged with cluster cooperation between maritime players. They are not all regional, but many of them are located on the coast of Western Norway,” says Talmo.

A crucible of expertise

“We are not quite like the more conventional shipping companies. Because it’s such a large part of what we do, we have our own inhouse technology and development department. The department ensures that we always have ongoing technology projects. We are working along two pathways with hardware, combustion engines, fuel cells and technical aspects on the one hand and energy carriers on the other,” says Gitte.

The ideas do not necessarily originate in the technology development department. Talmo says a typical working day consists of continuous interdisciplinary interaction.

“Here you’ll step into a multi-disciplinary centre of expertise. We have in-house staff with experience from navigation, mechanical and civil engineering, vessel design, communication, finance, markets and contract work. The various departments can be expanded or reduced as times change. We’re a cool team. If you want to work in an interdisciplinary and international environment with a wide range of challenges, the answer is: shipping, shipping, shipping,” says Talmo.

She thinks not enough is being done at promoting a career in the shipping industry.



Lars Vestbøstad, Technical Development Manager and Marie Launes, VP Sustainability. Photo: Håvard Solerød



Photo: Eidesvik Offshore

“The green shift has brought on a competition for the brightest minds. We’re at a crucial stage of the green transformation. It’s essential to offer attractive career incentives for the seafarers of tomorrow, to encourage people to come and work for us. Visionary politicians who facilitate the necessary framework conditions are important for a cutting-edge shipping industry.”

The 2015 oil and gas crisis led to some tough rounds of layoffs and refinancing.

“During the worst order drought, I was working in the marketing department, trying to secure new contracts. It was really hard, but I learned a lot,” says Talmo.

“It’s futile to sell something that nobody wants. We must find solutions together with our customers, promote creative technological solutions and smart contract models. I believe our long-term focus on the environment and differentiation is the reason we are still here and thriving.”

Finally, the market is on the rise again. All our vessels are contracted. Vessels are in short supply. The shipping company is discussing measures to keep older staff on longer by offering them fewer working days offshore.

“Prior to the oil and gas crisis, the Eidesvik family owned 59.86 percent of the company. They emerged from the crisis with the same ownership share. We have long-term, prudent owners. We are lucky to be able to carry on a legacy of strong credibility and tradition.”

“During the development phase, close relationships were forged with cluster cooperation between maritime players. They are not all local, but many of them are located on the coast of Western Norway.”





Toril Charlotte Kobbeltvedt,
Executive Director for Policy and Analysis

COMMENTS FROM THE NORWEGIAN SHIPOWNERS' ASSOCIATION

Framework conditions for the green shift

In Norway, the maritime industry employs close to 90,000 employees and generates value of more than NOK 200 billion annually. This makes it one of the largest industries in the country. Norway is also a green technology catalyst in the international maritime industry. Favourable framework conditions, such as the tonnage tax system, are vital for Norway to maintain its prominent position in the industry. Shipping is a global industry with extensive international competition. Consequently, the position of the Norwegian shipping industry depends on the conditions that apply to the Norwegian-owned fleet.

Key economic indicators for the maritime industry

	2021	2022	2023 (est.)
 Employment	89,300	87,300	88,600
 Value added	163 NOK bn.	199 NOK bn.	211 NOK bn.
 Revenue	467 NOK bn.	575 NOK bn.	608 NOK bn.

Source: Maritimt Forum/Menon Economics

Predictable framework conditions are essential for a green transition in Norwegian shipping and for the establishment of new industries in Norway, such as offshore wind. It is important that these framework conditions are ready before investment decisions are made, and that they do not change in the process. Our members identify access to projects and government support schemes as the key drivers for generating growth in the offshore wind market. On the other

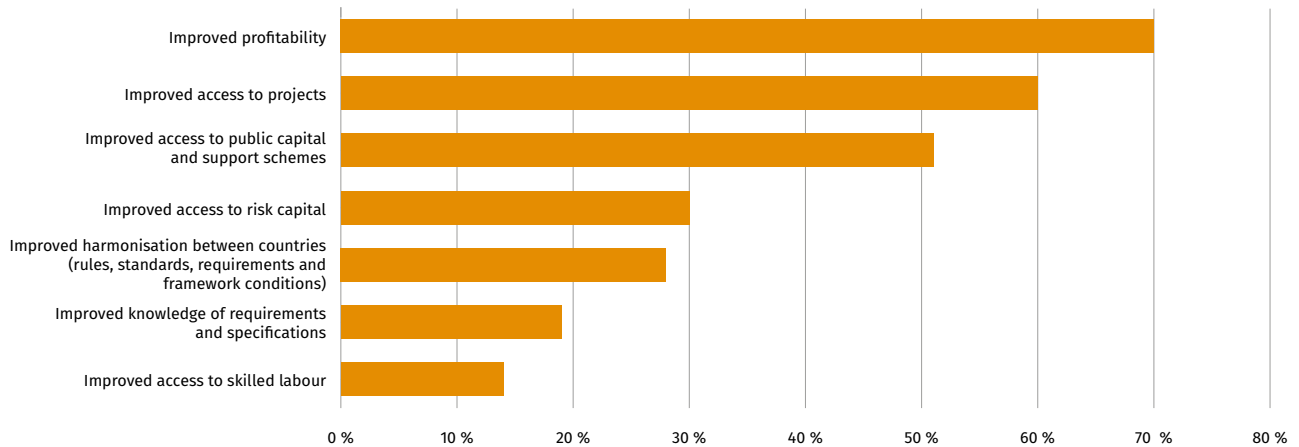
hand, the introduction of the resource rent tax on onshore wind is one example of initiatives that create uncertainty about the conditions for other industries such as offshore wind. This is highly unfortunate. Framework conditions should not be amended in a way that creates uncertainty in an industry.

As regards the green shift, uncertainty relating to the choice of technology is one of the greatest obstacles to climate investments among our members. Framework conditions for the technology must be in place before investment decisions can be made and the technology is deployed on a large scale.

One policy instrument that may be crucial for building a bridge between fossil fuels and alternative solutions, is contracts for differences. Major price differences between fossil fuels and alternative energy carriers, combined with market and infrastructure uncertainty, become an obstacle for investments in new green solutions. There is broad agreement that contracts for differences will be important for ensuring increased production and use of emission-free fuels.

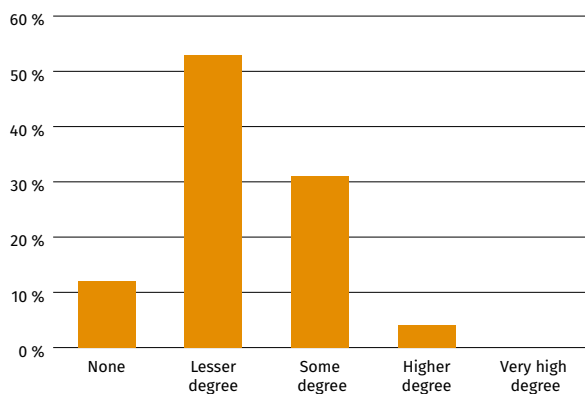
2024 marks a historic year for Norwegian shipping as the industry is included in the EU Emission Trading System (EU ETS). This entails that vessels above 5,000 GT that sail into, out of and between European ports will be required to purchase emission allowances. When the system is fully phased in, these payments will amount to a significant sum, which will be given to Norway as tradable allowances.

Shipping companies' assessment of the most important factors to achieve further growth in the offshore wind market



Source: BDO AS/Norwegian Shipowners' Association

To what degree are policy instruments rigged to scale up the green shift



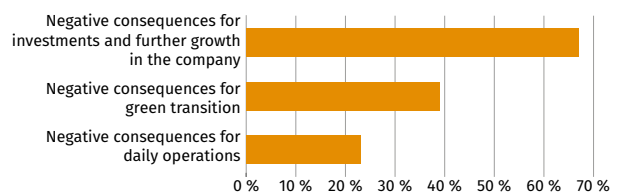
Source: BDO AS/Norwegian Shipowners' Association

Our members agree that the current policy instruments are insufficient to accelerate the green shift. To support investment and upscaling of climate technology, these allowances from the shipping industry should be used to establish a fund that can help pay for carbon-reducing measures in the industry, as well as for contracts for differences for increased production and use of emission-free fuel. We know that other EU countries have an obligation to spend ETS revenues on climate action. If we have lower ambitions in Norway, we risk losing our competitive edge.

For the first time, one out of three shipping companies state that the increase in wealth tax generates negative consequences for green

transition investments. As many as two out of three state that the increase in wealth tax generates negative consequences for investments and further growth in the company. The reason is that half of our members have taken out more in dividends than they otherwise would have done to service the wealth tax. The wealth tax acts as an impediment to the shipping companies' investment ability at a time when it is crucial for them to have the financial strength to step into the green shift.

What are the consequences of a higher wealth tax for your business?



Source: BDO AS/Norwegian Shipowners' Association

With the maritime industry currently at the centre of one of the most revolutionary changes in generations it is crucial that the industry and the authorities pull in the same direction, and that they do it now. With a forward-looking and ambitious maritime enterprise policy, combined with risk-taking and innovative business leaders, few nations will be better equipped to lead the race towards the green transition.



Photo: Wilyn Rodelas/Solstad Offshore

05



“Positive effects of the green shift may be lost without Norwegian expertise”

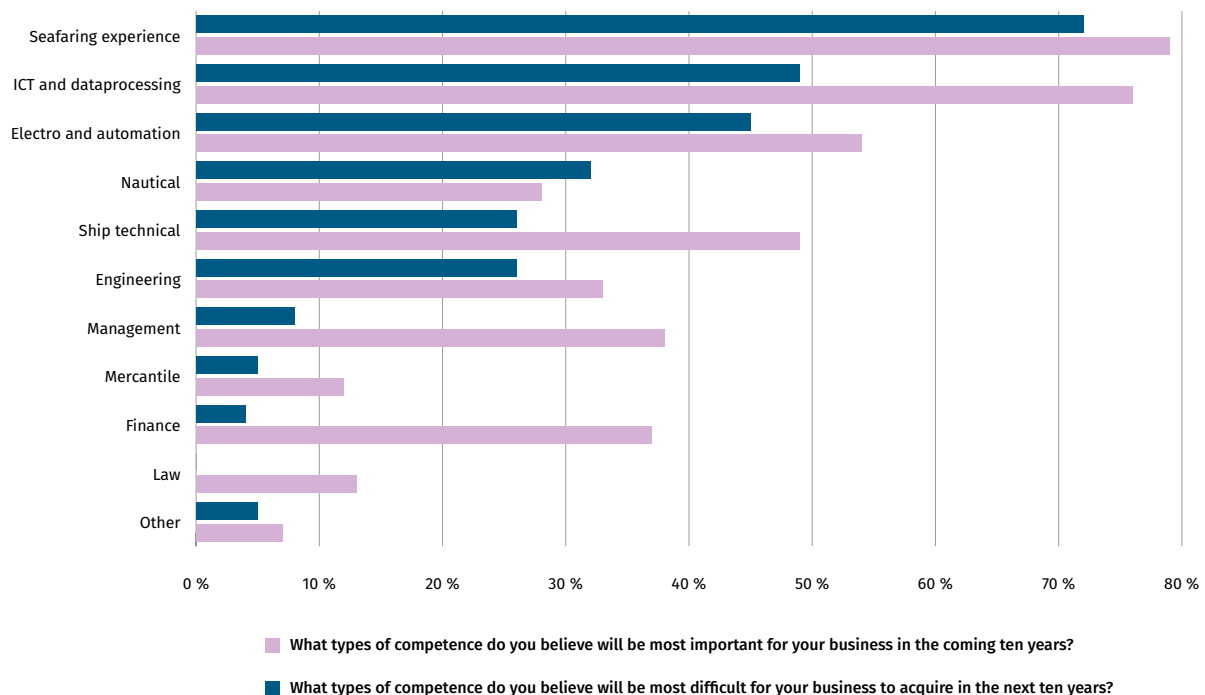
Of all shipping companies, Odfjell has the strongest focus on hiring Norwegian deep-sea seafarers. Chief Executive Officer, Harald Fotland, worries that Norwegian operational expertise is at risk.

Text: Håvard Solerød

“In the Norwegian Shipowners’ Association’s annual member survey, the fear of losing operational expertise scores highest year after year. Loss of this type of expertise will weaken the unique Norwegian maritime cluster. We risk losing out on the positive effects of the green shift through lack of future-oriented employment opportunities. ‘It’s already happening’,” says CEO of Odfjell, Harald Fotland.

The shipping company currently employs a total of 120 Norwegian seafarers. Twenty-four captains take turns at the helm of 12 of the company’s 52 chemical tankers. Each year, they hire 25 Norwegian cadets and apprentices, despite being unable to show that vessels crewed by Norwegian seafarers have higher earnings than ships crewed by other nationalities, and despite the high costs of

Shipping companies’ requirements for skills over the next 10 years



Source: BDO AS/Norwegian Shipowners’ Association



Developer of operational maritime expertise: Harald Fotland, CEO of the Odfjell Group. Photo: Håvard Solerød

Norwegian seafarers. Moreover, many new recruits quit at the end of their training.

“Many of them have romantic ideas of seeing the world. We expect that about half of the new recruits will be tired of deep-sea sailing at the end of their apprenticeship. Instead, they work for the Coast Guard, the Norwegian Maritime Authority, offshore companies, equipment manufacturers, as maritime pilots or in the aquaculture industry.

“Maritime pilots who direct mega vessels along the coast of Norway encounter an international environment on the bridge. They need the right expertise for these types of vessels as well as knowledge of other cultures and international waterways.”

We are supplying the Norwegian maritime industry with extensive maritime operational expertise,” says Fotland, without as much as a frown. “Skills and development of expertise is beneficial for our shipping company, even if some crew members leave our ships.”

“Maritime pilots who direct mega vessels along the coast of Norway encounter an international environment on the bridge. They need the right expertise for these types of vessels, as well as knowledge of other cultures and international waterways. Ferry captains from the Norwegian fjords do not necessarily have the required expertise for this job. The deep-sea expertise that we share is vital for the maritime cluster in Norway,” says Fotland.

From sea water to fresh water

Odfjell’s core business is chemical tankers and terminals. A tanker can transport up to 40 different chemicals at a time. The tanks must be cleaned

every time they are refilled with a new product. If a tank has transported acid, it must be washed before it is filled with vegetable oil for food preparation. The tanks are cleaned with fresh water.

“We use a lot of fresh water. Usually, fresh water is produced on board in what we call boilers. The water evaporates, and the salt is removed,” says Harald.

One day in Bergen, we had a visit from an equipment vendor from Kvinnherad who presented a new type of equipment which pushes sea water through a filter to remove the salt. The process is based on a principle called reverse osmosis which requires minimal energy compared to boilers.

“Evaporation is energy intensive. We wanted to reduce our energy consumption, so we purchased an osmosis system. But according to our crew, the new equipment was inefficient,” says Fotland.

That was almost the end of the story, but there was a plot twist at the end.

“One of our crew members called the manufacturer and told them that the equipment was not good enough. They replied: ‘Can you give us a second chance? We will rectify the shortcomings and try again.’ We said ok, we’ll buy another system. The subsequent feedback from the crew on board the vessel was: ‘This is fantastic, ingenious!’ The equipment had been customised for the engine room and worked really well,” says Fotland.

Since then, Odfjell has ordered around 40 purification systems from Norwater in Kvinnherad.

“This communication would not have taken place if we didn’t have Norwegian crew and headquarters in Norway. Communication between shipping companies and manufacturers at home frequently paves the way for new quality products,” says Fotland.

A hundred-year perspective and the net wage scheme for Norwegian seafarers

The listed family-owned shipping company can trace its roots back to 1914. The present generation is planning for the next, just like the previous generation did.

“The net wage scheme is by far the most important driver for operational expertise development in the maritime cluster.”

“We build ships to own them until they are recycled. We can invest heavily in our vessels because we keep them for 25 to 30 years. Our focus is not on short-term buying and selling. Many of the best shipping companies along the coast are family-run businesses with the same ‘forever’ perspective,” says Fotland.



The first female captain of the deep-sea fleet:
Lise Henriksen of Odfjell. Photo: Marius Fiskum

Generally, all shipping companies with global operations can move to wherever the framework conditions are most favourable. Why does Odfjell choose to have its headquarters in Norway?

“We are blessed with a shipowner who, despite living in Singapore, has a very clear focus on building on Norwegian traditions. He wants us to contribute to the Norwegian maritime cluster. It is important for my colleagues here that the connection to Norway is visible. It provides us with a long-term perspective and prestige, and it’s positive for recruitment. As a large shipping company, we also often become a reference customer in Norway for maritime suppliers. This

means we receive quick assistance if we have any problems with our equipment,” says Fotland.

Last year, the shipping company got its first female captain. The core of Norwegian seafarers continues to be a priority for the company.

“It is our clear ambition to keep our current crew. However, they are not that many, which means our apprentice programme is vulnerable. 2015–2017 were very challenging years as a result of the oil and gas crisis. We reduced the number of office staff in Norway by almost 40 percent. We also had to consider reducing the number of Norwegian seafarers. However, we need to train one or two captains every year. When there is a downturn in the market, it becomes challenging to keep Norwegian crew and provide sufficient training opportunities on board, if the framework conditions are not in place.”

Fotland asserts that a weaker net wage scheme has given rise to insecurity. Odfjell has had their reimbursements cut by 40 percent.

“The scheme is by far the most important driver for operational expertise development in the maritime cluster,” says Fotland.

He points out that three years ago, a maximum ceiling of NOK 220,000 was introduced. This entails that the shipping company receives a maximum reimbursement of NOK 220,000 per employee. The ceiling has had the greatest impact on the positions

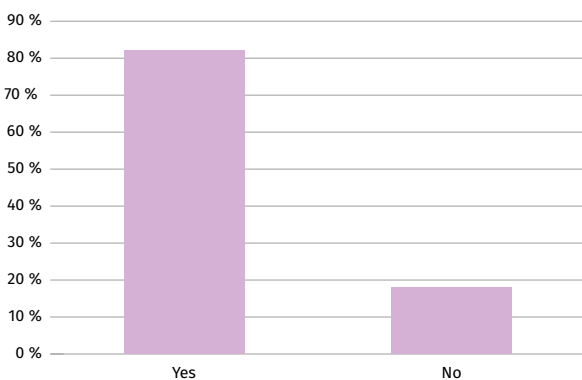
with the highest wages. For lower-paying positions, the difference is insignificant.

“This means that operational expertise development is at risk. Senior Norwegian officers are necessary for a safe and effective learning environment. Higher payroll tax on wages above NOK 850,000 makes the highest wages even more vulnerable,” says Fotland.

Each year, the national budget is a crossroads for the net wage scheme for seafarers.

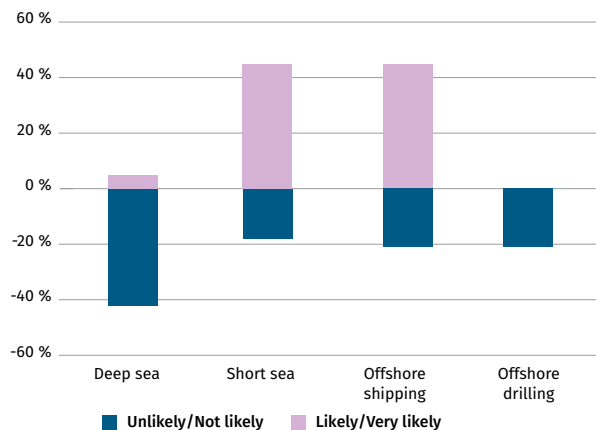
“When meeting with policymakers, our concerns are met with understanding and support. However, on their flight back to the capital, consensus seems to vanish somewhere over the Hardanger Plateau. In practice, not nearly enough is being done,” says Fotland.

Would you replace Norwegians with foreign seafarers if the reimbursement/net wage scheme was further weakened in 2024?



Source: BDO AS/Norwegian Shipowners' Association

Likelihood of replacing foreign seafarers with Norwegians if the maximum ceiling for the net wage scheme was removed



Source: BDO AS/Norwegian Shipowners' Association



Karin Gjerløw Høidahl,
Director – Head of Section for Competence Development

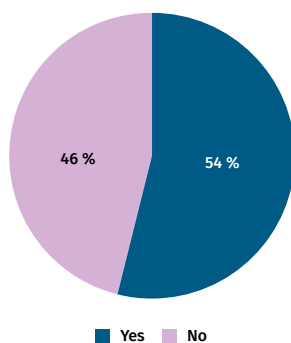
COMMENTS FROM THE NORWEGIAN SHIPOWNERS' ASSOCIATION

Changing competency requirements

The net wage scheme for seafarers is a key framework condition for safeguarding Norwegian maritime competence and expertise. Furthermore, it is an important prerequisite for promoting and setting favourable framework conditions for research and development of innovative technology and education.

Norwegian maritime competence and Norwegian seafarers are essential for the Norwegian maritime cluster, and one of our most important competitive advantages. If Norway is to retain its position as a world-leading maritime nation, we must provide world-leading maritime education and training. Which we don't.

Shipowners' assessment of whether further education and ongoing training opportunities are good enough under the current education system



■ Yes ■ No

Source: BDO AS/Norwegian Shipowners' Association

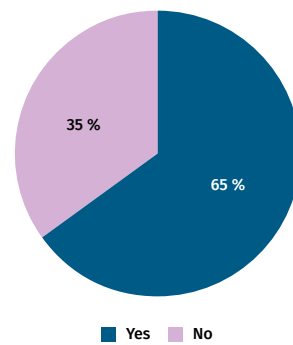
In recent years, significant resources have been allocated to raising the quality of Norwegian maritime education, but we have not reached our target yet. In fact, we are working towards a moving target. New requirements for innovation and technology development are emerging as part of the green shift, as are requirements for the right competence to operate ships with entirely new propulsion systems. This is why it is crucial that educational institutions keep up with developments and work closely with industry players. They must have favourable framework conditions to develop the competence that the industry needs. Moreover, the authorities must design education programmes that meet the industry's needs. The shipping industry is worried by the Norwegian government's decision to discontinue the MARKOM project, which, over the last decade, has been crucial for developing maritime competence. Moving towards the green shift we need a stronger, not a weaker, focus on maritime competence.

A characteristic of a maritime education is that it is highly fragmented, resulting in many relatively small specialist environments. In the shipping industry's experience, educational institutions fail to keep up on technological industry developments. This is because updating school equipment is costly, and because teachers'

competence quickly becomes outdated. With tight competition for funding in the educational sector, it is easy to cut costly programmes with few pupils and students. The shipping industry is seriously worried that this will have a negative effect on Norwegian maritime education, and thus on the industry going forward. Good framework conditions and earmarked funding for maritime education are essential, both to maintain existing educational programmes and to ensure that they develop into the world-leading maritime educational programmes that Norway needs.

In a time when competency requirements are changing rapidly, a strong focus is also required on further education and ongoing training. The Norwegian government must ensure that there are effective schemes and incentives for companies to offer strategic further education and ongoing training for their employees, and to ensure that everyone has an opportunity for lifelong learning.

Shipowners' assessment of the perceived increased need for further education and ongoing training



Source: BDO AS/Norwegian Shipowners' Association

Furthermore, adequate further education and ongoing training must be available. Educational institutions must be enabled to develop and deliver effective further education and training programmes without it affecting their regular educational programme.

64 percent of shipowners state in this year's member survey that they have implemented measures to recruit more women to the business.

Among the measures are targeted recruitment campaigns, increased awareness and training internally.

Share of women in shipowning companies



Source: BDO AS/Norwegian Shipowners' Association

Two generations of engineers: Engineer apprentice Nina Vespestad with her father Chief Engineer Helge Vespestad . Photo: Håvard Solerød



“Perhaps I’ll be the first female chief engineer”

Nina Vespestad (19) is a supply ship engineer apprentice. She has decided to follow in her father’s footsteps.

Text: Håvard Solerød

Chief Engineer Helge Vespestad (53) has sailed for Eidesvik Offshore for 31 years.

“Perhaps I’ll be the first female chief engineer. That would be great, but it’s too early to say,” says Nina Vespestad.

After two years of upper secondary education, Nina started her engineer apprenticeship on board Eidesvik Shipping’s supply ship, Viking Queen. She boarded the ship last autumn, when she was 18 years old.

Growing up she used to visit her father on board when the ship was in harbour between assignments. “I didn’t really plan to become an engineer apprentice. It just happened,” says Nina from her home in Langevåg. It has given father and daughter more to talk about. When at home, they exchange experiences from their work and life on board.

“We can do the job just as well as the boys, but it’s not a job for sissies,” says Nina.

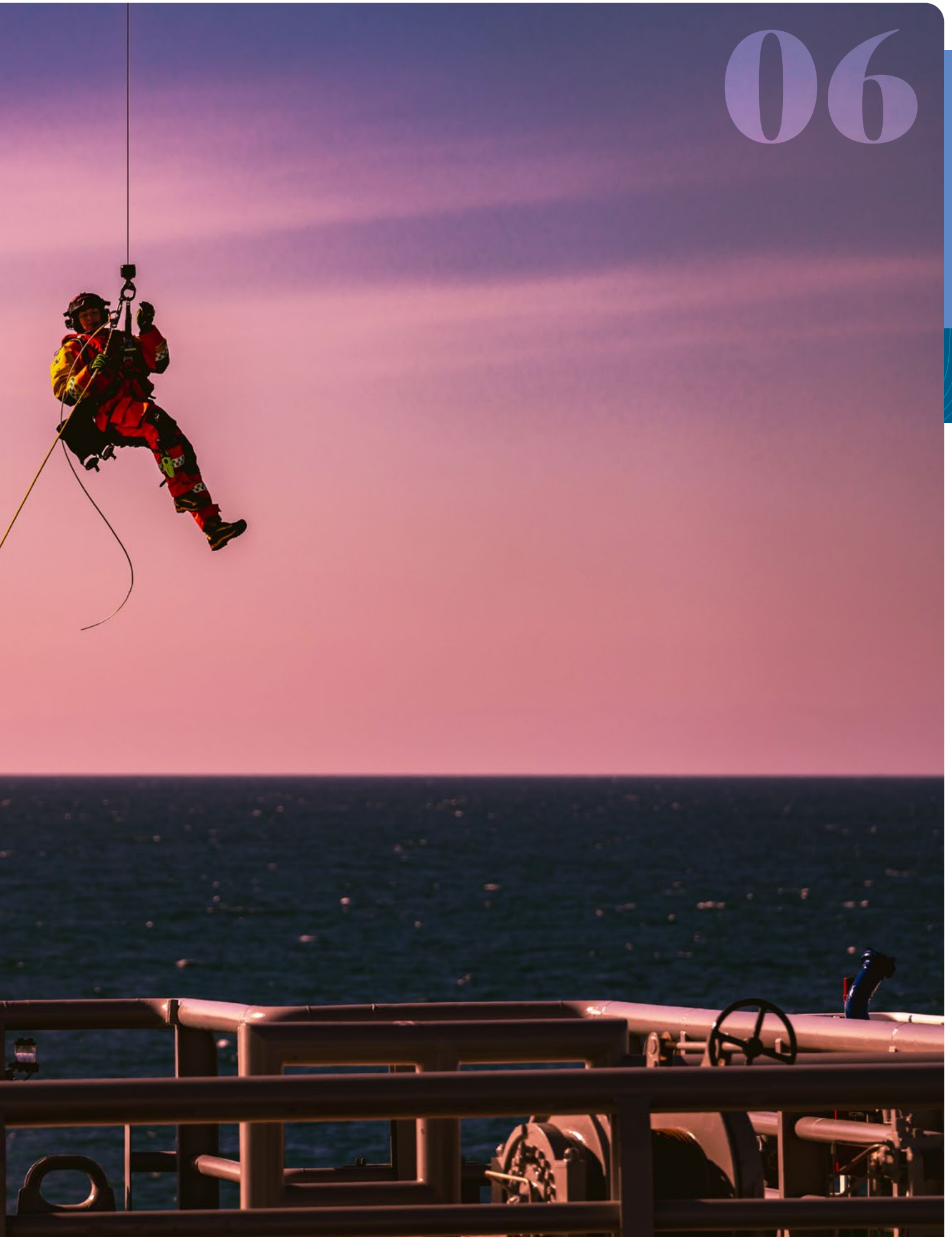
“An engine room is an impressive place. The job is very varied. I’ve always liked fiddling with different machines,” says Helge when asked why he enjoys working in the engine room.

And what does Nina say? Would she recommend it to other girls her age who are considering a career at sea?

“Yes, go for it. It would be good to have more girls on board. We can do the job just as well as the boys, but it’s not a job for sissies,” says Nina.



SAR exercise at Stril Barents. Photo: Lars Martin Hillestad/Simon Møkster Shipping



Maritime Outlook 2024

The world economy

International shipping activity is closely linked to developments in the world economy. The International Monetary Fund (IMF) estimates that the world economy grew by 3.1 percent in 2023 and expects this growth to continue at the same pace in 2024¹. This is significantly lower than the average growth figure from 2000 to 2019, which was 3.8 percent. This can be attributed to high Central Bank interest rates intended to combat inflation, withdrawal of fiscal policy support due to high debt that curbs economic activity, as well as low underlying productivity growth. Most of the growth is expected to take place in emerging economies, particularly in Asia, with the two main drivers being China and India, where expected growth for 2024 is 5.2 and 6.5 percent, respectively.

World trade is expected to grow by 3.3 percent in 2024 and 3.6 percent in 2025. This is lower than the historic average growth rate of 4.9 percent. Intensifying trade disruptions and geoeconomic fragmentation are likely to continue to impact global trade. These forecasts assume that both energy and commodity prices will fall in 2024 and 2025, and that the central banks of the largest economies will reduce interest rates in the years ahead.

¹ IMF (January, 2024): "World Economic Outlook" [World Economic Outlook Update, January 2024: Moderating Inflation and Steady Growth Open Path to Soft Landing \(imf.org\)](https://www.imf.org/en/Publications/WEO/Issues/2024/01/01/wEO-24-01)

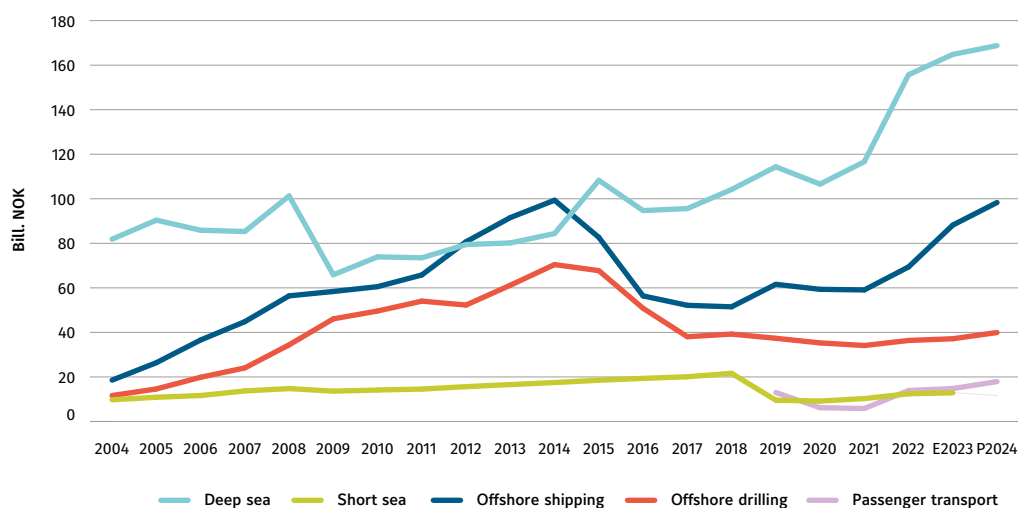
According to the January 2024 Clarksons Research Seaborne Trade Monitor, growth in sea transport increased by approximately 5 percent in 2023. This corresponds to an increase of approximately 3 billion tonne-miles, up to a total of 62.3 billion tonne-miles in 2023. This is significantly higher than the average growth in the last decade, which totalled around 2.5 percent. The growth is mainly driven by growth in crude oil and product tank, as well as gas. Auto freight also increased considerably in 2023, by as much as 15 percent. This growth is expected to slow somewhat in 2024, to a 2.7 percent growth in the number of tonne-miles. This is almost the same as the average for the previous decade, corresponding to a growth of just over 1.6 billion tonne-miles.

Turnover figures

Overall revenues for shipping companies organised in the Norwegian Shipowners' Association increased by over 10 percent in 2023. This is in line with the expectations stated in last year's Maritime Outlook report, which anticipated a growth rate of 10 percent in 2023. The large growth in revenues is mainly due to a significant boost in turnover, 27 percent, among offshore service shipping companies.

Deep sea companies had a total turnover of around NOK 165 billion in 2023, up from 155 billion in 2022. This means the segment saw a growth of 6 percent in 2023, which was significantly lower than the record year of 2022, when growth totalled 33 percent. Despite significantly lower growth, the 2023 results exceed segment expectations in last year's report, which estimated 2023 growth at 3 percent.

Norwegian shipowners' turnover 2004–2024 (including 2023 estimates and 2024 prognosis)



Source: BDO AS/Norwegian Shipowners' Association

Turnover for offshore service companies increased significantly in 2023 due to a high activity level on the Norwegian shelf, which is mainly driven by Europe's need to replace Russian oil and gas. Turnover in this segment increased by 27 percent in 2023, with a total turnover of just over NOK 88 billion. The growth in turnover was in line with the expectations set out in last year's report. Turnover in the offshore service segment has still not reached the level before the oil crisis in 2014. However, the segment expects an increase in turnover of about 11 percent in 2024, which would lead to the segment for the first time approaching a turnover on a par with that of 2014.

Passenger shipping companies also experienced growth in turnover, totalling 6 percent in 2023. This indicates that the turnover has now stabilised at the normal pre-pandemic level. The segment expects a total growth of 21 percent in 2024. Prospects of higher activity are thus positive for the year ahead.

In the short sea segment that transports goods to, from and within Europe, 2023 was more like a normal year, with a turnover growth of just above 3 percent. This is significantly reduced compared with the peak year of 2022, when both turnover and rate level were particularly high due to the upturn of activities in the wake of the pandemic. This segment expects a slight reduction in turnover in 2024, at 8 percent, as activities are expected to return to a more normal level.

Almost without exception, offshore drilling companies have struggled with negative turnover growth since the oil crisis in 2014. This trend turned at the end of 2022, and in 2023 expectations for this segment were exceeded. Last year a segment downturn of 5 percent was expected for 2023, whereas now a growth of 2 percent is estimated for 2023. Growth is expected to increase again by 7 percent in 2024, totalling a turnover of around NOK 40 billion.

Profitability

There are large variations between segments in terms of expectations for operating results in 2024. More than half of the shipping companies expect total profitability to improve in 2024. Only one out of six shipping companies expect reduced profitability.

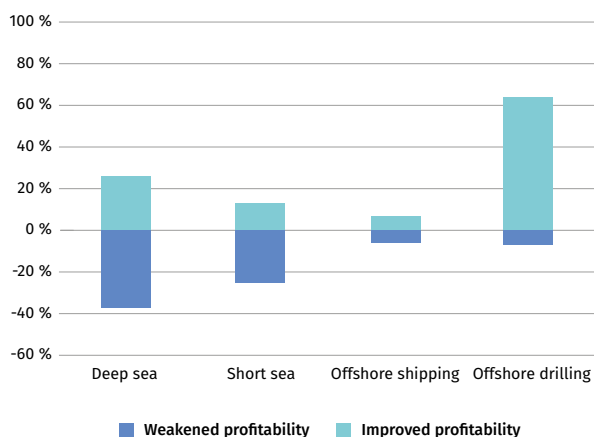
The greatest optimism is to be found in the offshore service segment. Here, four out of five state that they expect a better operating results in 2024 than in 2023. There is a natural correlation between expectations of higher operating results and the fact that activity in the energy sector is expected to remain high throughout the year, with associated high demand for tonnage. Such a development could offer a rate level that would yield good operating margins.

A new development this year is that also offshore drilling companies expect higher profitability in 2024. Two out of three offshore drilling companies expect profitability to improve in the year ahead.

Only 7 percent expect reduced profitability in 2024. This corresponds with the description of the situation in the 2023 report, where offshore drilling companies expect activity to pick up in 2024 and 2025.

Within the deep sea segment, 2022 and 2023 were strong years with very large turnover growth and good operating results. This growth is particularly related to growth in world trade in the wake of the pandemic, as well as increased demand for non-Russian energy in Europe. Growth seems to stabilise somewhat in 2024, and there are now more shipping companies that expect lower profitability than shipping companies that expect improved profitability. However, many shipping companies will still have high profitability, but not at the record-high levels of 2022 and 2023.

Shipowners' expectations for development in 2024 operating results compared with 2023



Source: BDO AS/Norwegian Shipowners' Association

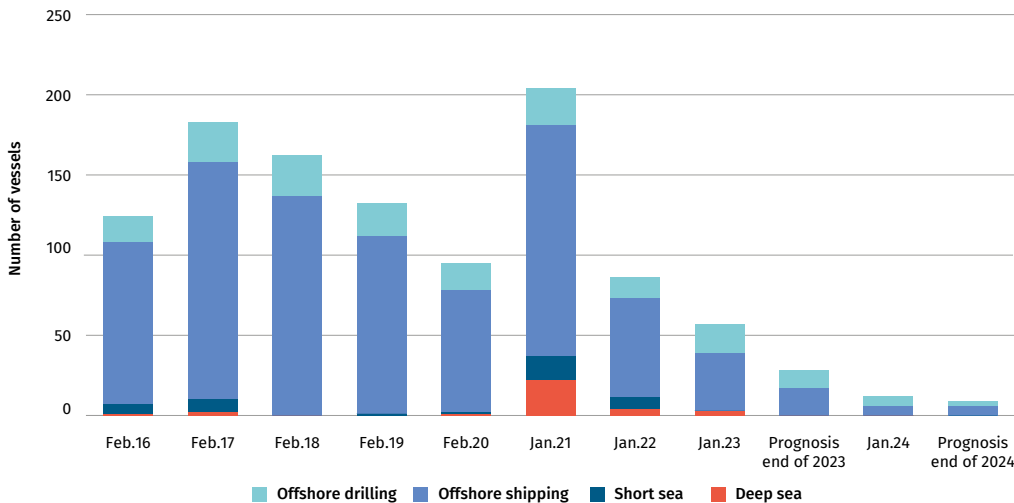
Profitability in the short sea segment also seems to normalise in 2024. Shipping companies that expect weaker profitability are twice as many as shipping companies that expect improved profitability. This is largely due to the fact that 2022 and 2023 were very strong years, with a particularly high activity level and correspondingly high rates. Lower profitability will most likely entail that operating results will stabilise at a normal level for this segment. It does not necessarily mean that the segment will see red numbers in 2024.

The passenger ship segment expects an improved operating result, due to an anticipated upswing in activity.

Access to capital

In 2024, perceived access to capital has strengthened significantly in all segments. It is still the offshore segments that report a challenging situation with regard to access to capital. Both offshore service and drilling companies have struggled with persistently weak operating results since the oil crisis in 2014. Despite about four out of ten shipping companies in both segments reporting challenges regarding to access to capital, the situation has improved significantly since last year, and shipping companies now report the most positive outlook on access to capital since 2015.

Layup figures from 2015 to 2024



Source: BDO AS/Norwegian Shipowners' Association

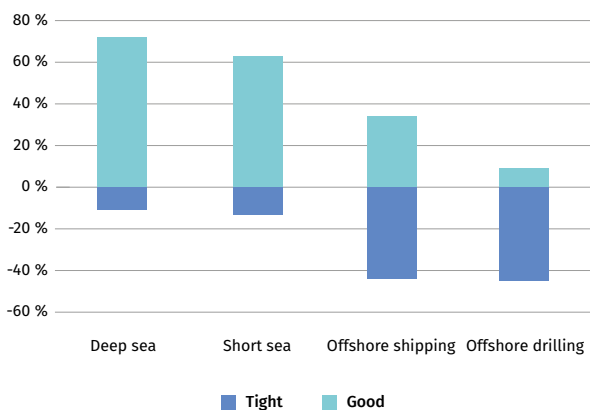
The deep sea and short sea transport segments report good access to capital. As many as seven out of ten shipping companies in the deep-sea segment, and two out of three in the short sea segment, report good access to capital. This is also confirmed by the fact that the most optimistic contracting figures are to be found in these two segments. Good access to capital is crucial for fleet renewal and thus for the green transition in the shipping industry.

Lay-up figures

As of January 2024, there were a total of 12 ships and rigs in lay-up. It is only the offshore segments that have ships in lay-up, with six offshore service vessels and six rigs. The low lay-up figures are considerably better than last year's expectations of 28 ships and rigs in lay-up. Both offshore drilling and service companies report lower lay-up figures than they expected in last year's survey.

The forecast for the end of 2024 is a further reduction in the number of ships and rigs in lay-up. The shipping companies expect that nine ships and rigs will remain in lay-up. The lay-up figures are now so low that it no longer makes sense to talk about the ships and rigs as an unutilised reserve on the supply side. Due to the strong offshore markets, there is reason to assume that it is unlikely that the remaining ships and rigs in lay-up will enter normal operation. This is also reflected in the contracting figures, where a large proportion of the offshore service companies report that they will contract ships over the next five years.

Perceived access to capital January 2024

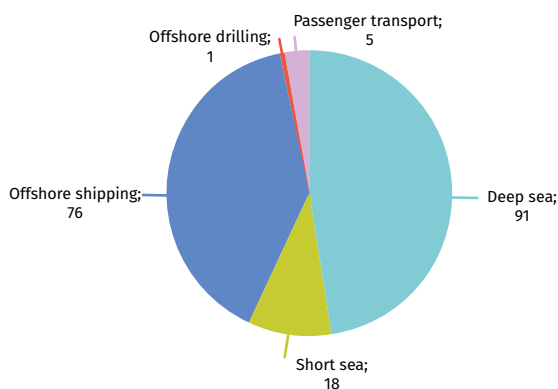


Source: BDO AS/Norwegian Shipowners' Association

Contracting and recycling

The optimistic estimates for turnover, operating results and access to capital have given rise to high contracting expectations for the next five years. Shipping companies are now considering contracting a total of 190 ships over the next five years, predominantly in deep sea and offshore service. The number of ships that reportedly will be contracted over the next five years is somewhat lower in 2024 than in 2023. This may have a number of reasons, but the most prominent one may be the large order book created over the last few years and the fact that there were fewer respondents in this year's survey, thus fewer shipping companies reporting expected contracting figures.

Number of new ships and rigs that shipowners anticipate building in the coming five years



Source: BDO AS/Norwegian Shipowners' Association

There is reason to believe that these plans will generate increased activity across the maritime cluster. Increased shipbuilding in the offshore service segment could also mean a welcome growth in activity at Norwegian shipyards in the coming years.

It is particularly in the offshore service segment that the growth in contracting plans has been greatest over the last two years. Two out of three shipping companies now plan to contract ships. From having plans for 25 ships in 2020, the segment now plans to build 76 ships over the next five years. As many as 44 of them will be vessels intended for operations in the offshore wind industry.

There is also a growth trend in contracting plans among short sea shipping companies. Shipping companies in this segment are now reporting their intention to build 91 ships. Nine out of ten shipping companies in the offshore service and deep-sea segment state that they will equip these ships with technology that is ready for climate-neutral solutions.

In the short sea segment, the number of shipping companies with contracting plans is significantly lower. The number of ships considered for contracting is lower in 2024 than it has been since the Norwegian Shipowners' Association started the survey in 2018. Shipping companies in the short sea segment are now considering building 18 ships in the next five years. There is reason to assume that the decline is partly due the short sea segment's extensive fleet renewal in recent years and that,

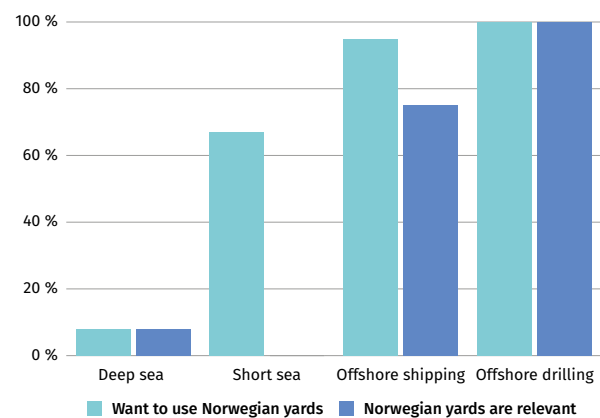
consequently, some of the segment’s plans have already been realised.

The rate of recycling is also consistently low. There are barely any ships that will be recycled and the total figure for all segments is two ships. The low recycling rate in recent years is a clear sign of improved market balance, particularly in the offshore markets.

Use of Norwegian shipyards

Norwegian shipping companies largely want to make use of Norwegian shipyards. This is particularly evident in the offshore and short sea segments. At the same time, there is a gap between the desire to use Norwegian yards and the perceived relevance of Norwegian yards. This is especially applicable within the short sea segment.

Share of shipping companies that want to use Norwegian yards, respectively, and consider Norwegian yards to be relevant when ordering new vessels

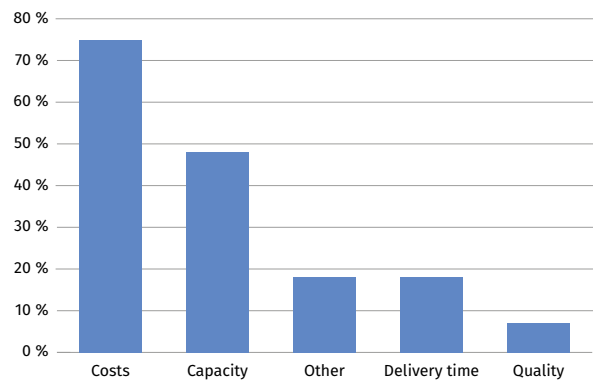


Source: BDO AS/Norwegian Shipowners' Association

The short sea segment has previously surveyed the potential for building ships at Norwegian shipyards but has concluded that Norwegian yards are considerably more expensive than comparable yards both in Europe and Asia. Three out of four shipping companies state that costs are a barrier to using Norwegian shipyards. This is the largest barrier to using Norwegian shipyards.

The second largest barrier to using Norwegian shipyards is capacity. About half of the shipping companies cite capacity challenges as a barrier. To a great extent, this means that yards can not build the type of ships that are in demand, or do not have a sufficiently large dry dock to handle the sizes of ships that sail in deep sea.

Shipping companies' assessment of barriers that prevent the use of Norwegian yards when ordering new vessels



Source: BDO AS/Norwegian Shipowners' Association

Data basis and methodology

Data sources used in this report are specified in the text, tables and figures. Sources and methodology are described below. The Norwegian Shipowners' Association has worked in collaboration with BDO AS on the analysis. All graphics have source citations.

Member survey on the shipping companies' outlook and framework conditions

The Norwegian Shipowners' Association conducted a survey of its members in the period from 3 January to 19 January 2024. Members were sent an electronic questionnaire in which their expectations concerning developments in key economic figures, emerging markets, access to capital and expertise, and political framework conditions were surveyed. 77 of 125 relevant member companies responded to the survey, giving a response rate of 62 percent. The participants in the survey are representative of the members of the Norwegian Shipowners' Association, both in terms of fleet size and ship segment. The material therefore provides a sound basis for generalising from sample to population. Almost without exception, responses were provided by owners and business leaders.

Calculation of shipping companies' turnover growth in 2023 and 2024

BDO AS has access to accounting data for Norwegian shipping companies' turnover in 2022. In the survey, shipping companies were asked to report turnover in 2022, an estimate for turnover in 2023 and expected percentage growth in turnover for 2024. Since BDO AS does not have complete turnover figures for all shipping companies in 2023, these are calculated as follows:

- a) The shipping companies' self-reported turnover in 2022 is compared with information from official sources (including audited turnover and the companies' own annual reports, including consolidated accounts) for the same year. This is to assess whether the self-reported turnover in the survey can be used as a basis for calculating the turnover of the total population of shipping companies in Norway.
- b) Self-reported turnover in 2023 is adjusted for the share of total turnover in each of the four shipping groups included in the data basis.
- c) The forecasts for 2024 are calculated by multiplying the 2023 turnover of each member company by their self-reported growth in 2024. The estimated turnover is then summed up for the four shipping groups. Furthermore, the estimated turnover is adjusted for the share of total turnover in each of the four shipping groups included in the data basis.

Valuation of the global shipping fleet

Menon Economics, on assignment for the Norwegian Shipowners' Association, has estimated the value of the world's merchant fleet from 2001 to the present, divided into 14 ship segments and all the world's countries. As of the current year, the analysis also includes cruise ships. The results are presented at an aggregated level, where the segments are merged into 11 segments. The calculations within each segment are based on newbuilding prices, freight rates, age, number of ships, estimated lifetime, gross tonnage and deadweight tonnage.

Until 2022, data from IHS Markit has been used to calculate the size and composition of individual countries' shipping fleets, while price data has mainly been taken from Clarksons Platou. As of 2022, data for calculating the composition and size of the fleets has been derived from Clarksons World Fleet Register. The biggest difference in the data basis is that Clarksons has a broader coverage of vessels across nations. This means that tonnage data at the ship level varies across the data sources, but at the same time the valuation for recent years provides a more complete picture. To ensure continuity in our calculations with a new data source, we have reorganised Clarksons' segments to match IHS Markit's division. The analyses are based on stronger data than previously, with fewer uncertainties.

Adding the cruise segment brings the total world fleet value up to USD 1,458 billion. The most important change in the ranking of the world's

shipping nations is that the USA now has the third most valuable fleet. This is because the USA has by far the largest cruise ship fleet in the world, both in terms of the number of ships and their size.

The shipbuilding industry is still characterised by high prices due to inflation and full order books at Asian shipyards. Throughout 2023, we saw persistently high rates in the petroleum segments, including offshore, combined with a decrease in bulk, container and general cargo rates. The decrease can be interpreted as a normalisation following a period of high rates due to the pandemic, supply chain challenges and war. However, it is important to note that these results do not capture any potential consequences of the current situation in the Red Sea.

Norwegian-controlled foreign-going fleet – definitions and delimitations

The Norwegian Shipowners' Association maintains its own statistics on the Norwegian-controlled foreign-going fleet. The delimitations for inclusion of ships in the Norwegian-controlled foreign-going fleet are based on the following principles:

- All ships registered in the Norwegian International Ship Register (NIS)
- Ships registered in the Norwegian Ordinary Ship Register (NOR), sailing in foreign trade.
- Ships under foreign flags, owned by Norwegian-controlled shipping companies (with Norwegian ownership of at least 50 percent) and sailing in foreign trade.



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