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CASE STUDY

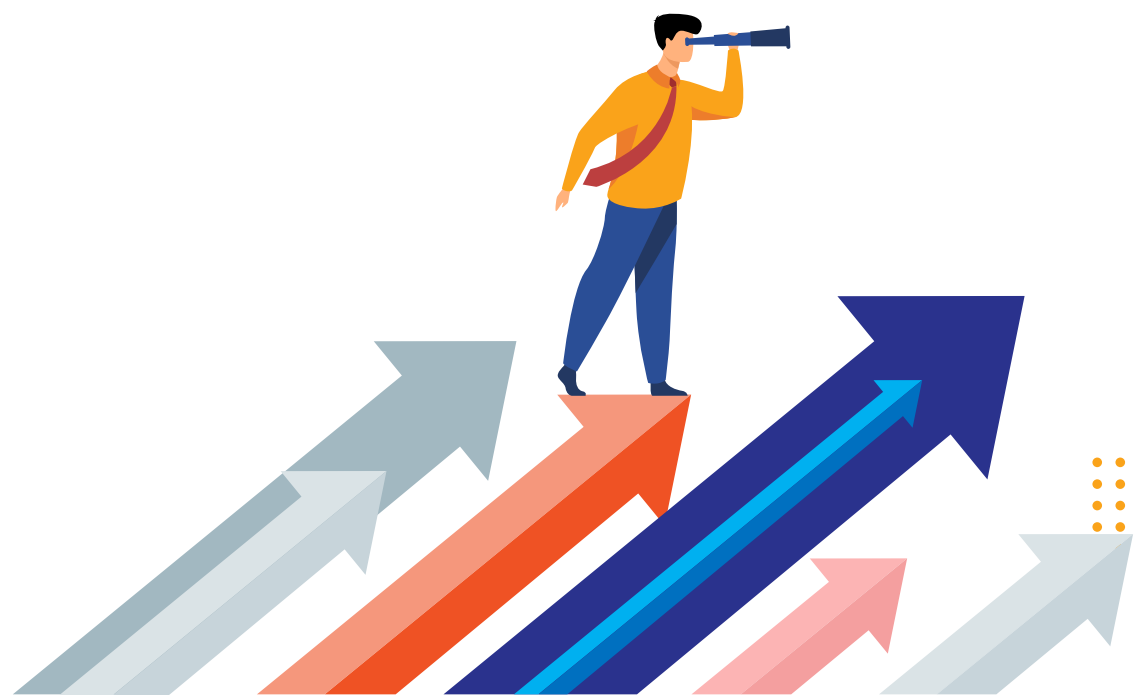
Understanding Decarbonization in Various Offshore Industries

Client	An Offshore Drilling Company
Industry	Industrials
Solution	Market Landscape
Region	Global

OBJECTIVE AND SCOPE

The client wanted to take strategic decisions around their decarbonization efforts and sought Benori's support for:

- Understanding initiatives taken by offshore industries and their implications for the Ocean Economy
- Focus was on major offshore segments including shipping, oil and gas, service vessels, fishing, and offshore renewables



APPROACH

We conducted secondary research from resources including International Energy Agency and International Maritime Organization, company websites, and news articles. We studied the regulations, goals, and initiatives by different countries, and collated data on carbon emissions, trends, drivers, and challenges in each segment. We also created case studies of top players in each segment to understand their goals, initiatives, technologies, partnerships, and investments made.

METHODOLOGY

Secondary Research

Primary Research

Data Modelling

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Impact

The detailed insights helped the end-client in:

- Gaining a deeper understanding of carbon emissions at different stages of the value chain
- Leveraging competitive intelligence to understand the top technologies, initiatives, goals, and investments for decarbonization to shape their sustainability strategy

Sample Output

Major Decarbonization Initiatives

Major Initiatives

Sectors	Key Players	Decarbonisation Initiatives
Offshore Oil and Gas	equinor, bp	• Establishing new floating wind farms for providing power to offshore oil and gas platforms in The North Sea • Use of blue hydrogen produced by reforming of natural gas or gasification of coal, with CO2 captured and stored (CCS)
Offshore Renewables	Vestas, Ørsted	• Reduction in absolute carbon emission without carbon offsetting by 2030 • 45-50% reduction in scope 3 emissions by 2030-2032 • Use of AI and advanced technologies for underwater inspection and monitoring
Shipping	msc, CMA CGM	• Collaboration with other shipping companies by forming partnerships or associations, to share technology and associated costs • Developing vessels that run on LNG, methane, and hydrogen • Improving digital means to track and monitor carbon emissions as well as the use of AI, blockchain, and software's for smarter solutions
Offshore Service Vessels	Eidesvik, SOLSTAD OFFSHORE, SIMON MOKSTER SHIPPING	• Low-emission upgrades which include hybrid power technologies and fueling infrastructure • Hydrogen and ammonia-based fuels are in consideration as an alternative fuels to reduce the carbon emission
Offshore Fishing	LERØY, Grieg Seafood	• They are obtaining power from land, solar cells and hybrid Solutions and electric shore power is being used to reduce the emissions • They are trying to reduce the emission from their process and to meet the net zero emission targets by year 2050 • Wind turbines and solar panels are used in fishing farms(In Rogaland by Grieg seafood)

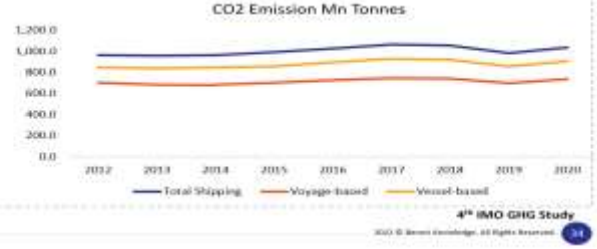
Global Carbon Emissions in Shipping

Global Carbon Emissions

- IMO and its associated bodies regulate the shipping industry as well as the implementation of decarbonisation framework. IMO recently released 4th GHG Study report, which includes recent shipping carbon emissions trend
- The global **GHG emissions** — including carbon dioxide (CO2), nitrous oxide (N2O), and methane (CH4), expressed in CO2e — of the **total shipping** have increased from xx to xx Mn tonnes, during 2012-2018 (xx% increase)
- Carbon intensity has improved between 2012 and 2018 for international shipping when compared to 2008 standards, by about xx% (Voyage-based allocation EEOI) and xx% better (Vessel-based allocation EEOI)

Global CO2 Emissions (IMO)

- Three different methods have been considered for emissions :
  - Total shipping – all vessel types (heavyweight vessels, mediumweight vessels, lightweight vessels, and boats)
  - Voyage-based international shipping – only voyages between ports of different countries are considered
  - Vessel-based international shipping – based on total vessels type and size, to either domestic or international
- Global shipping CO2 emissions represented xx Mn tonnes in 2018, xx Mn tonnes in 2019, also xx Mn tonnes in 2020 and were responsible for around xx% of global emissions
- Emissions are projected to increase from about xx% of 2008 emissions in 2018 to xx% of 2008 emissions by 2050 for a range of plausible long-term economic and energy scenarios



4th IMO GHG Study

Source: [illegible]

About us:

Benori is a trusted partner for knowledge solutions across the globe, serving clients from a wide range of industries including Professional Services, Financial Services, Consumer & Retail, Technology & Internet, Industrials & Manufacturing, and more. Our customized solutions strengthen the insights value chain of our clients, empowering them with key insights needed to drive intelligent decision-making and accelerate growth.

Headquartered in India, Benori is uniquely positioned to deliver multilingual research needs of global clients, powered by its digital agility, deep research capabilities and a highly experienced leadership team. Adopting a 360-degree approach, our team employs a combination of diverse methodologies including primary research, secondary research and data modeling, and offers detailed foresight on market trends, competitive shifts, regulatory changes and technological advancements.

Powering Growth Through Knowledge

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