

Leadership Insights

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The view from upstream

The Oil and Gas Climate Initiative's Bjorn Otto Sverdrup shares his views on current solutions to support shipping's ambitious green goals, including collective action on emission reductions and carbon capture



Oil and gas majors target transport emissions

The Oil and Gas Climate Initiative (OGCI) brings together 12 leading oil and gas operators to target net-zero emissions in their own operations. Now it has turned its sights downstream, with a lead role in the <u>REMARCOABLE</u> (Realizing Maritime Carbon Capture to demonstrate the Ability to Lower Emissions) Project. Bjorn Otto Sverdrup, chairman of OGCI's executive committee, tells *Leadership Insights* why shipping emissions are a crucial piece of the puzzle.

Can you tell us about some of your initiatives to reduce emissions across industrial sectors?

A This year we see two major areas for collective action: eliminating methane emissions from oil and gas operations, and using carbon capture technologies to enable large-scale emissions management for hard-to-abate sectors such as heavy industry, shipping and cement production.

O To what extent do you believe that climate measures in the fossil fuel industry can contribute to the net-zero transition?

A Global oil and gas operations account for a substantial portion of annual greenhouse gas emissions and the industry must decarbonise if the world is to reach net-zero. That's why OGCI members have agreed an ambition to reach net-zero operations.

In key areas of the energy transition, from methane emissions reduction and carbon capture, utilisation and storage (CCUS) to hydrogen and low-carbon fuels, OGCI's members are demonstrating they have the will, the expertise, the scale and the scope to drive solutions forward.

How important is shipping to overall efforts to reduce greenhouse gas emissions from oil and gas production?

A Shipping is particularly important because of the critical role the sector plays in the global economy. Our members have a direct connection with shipping through the oil and chemical tankers that they use to distribute products around the world. And the carbon intensity of these ships needs to be addressed if our member companies are to achieve their own ambitions to reduce their Scope 1 and 2 emissions.

That's why OGCI is facilitating the development of new technologies to decarbonise shipping with onboard carbon capture as part of the <u>REMARCCA-</u> <u>BLE Project</u>. We're doing this alongside our work to support the development of low-carbon fuels, such as biofuels, ammonia and hydrogen, for shipping and other hard-to-abate transport sectors. Why do you think carbon capture is a feasible solution for decarbonising shipping? What experience have OGCI or its members had with land-based carbon capture, utilisation and storage (CCUS)?

A Carbon capture has long been a priority for OGCl and our members. OGCl's member companies already have significant experience applying CCUS technology to stationary applications and the fundamental science doesn't change when applying it to mobile sources like shipping.

Our member companies are currently involved in developing over <u>30 large-scale CCUS hubs</u> around the world, providing an option for industries in the hub to capture and store their CO₂ emissions. For example, OGCI member companies Equinor, Shell and Total are involved in the <u>Northern Lights</u> CCUS project, which is due to start operations next year.

These 30 projects have the potential to remove around 300 million tonnes of CO_2 annually by 2030, equivalent to 80 coal power plants or taking 64 million cars off the road.

We have also worked extensively on CCUS. We have collaborated closely with partners to identify and qualify CO_2 storage sites and possible clusters of industrial CO_2 sources around the world, while actively engaging with potential hub operators, industrial emitters, and policymakers to share the practical lessons learned in developing these first-of-a kind CCUS hubs.

While the unique conditions of the marine environment present some engineering challenges and the logistics of storing and offloading the CO₂ will not be easy, these are not show-stoppers. Like stationary carbon capture, it is a matter of economics and this is where we are seeking to understand both the opportunities and challenges that lie ahead.

What can you tell us at this stage about the specific CCUS solution that will be deployed on the Stena Bulk vessel?

The team is currently working through the system design phase, but the project is targeting at least 30% absolute CO_2 capture on an annual basis, or approximately 1,000 kilograms an hour of capture. It will use non-proprietary equipment and processes so that results can be shared broadly and publicly to maximise learning and encourage further technology development.

The project, led by a steering committee consisting of OGCI, GCMD and Stena Bulk, is proceeding well. In March, ABS gave its approval in principle to use a carbon capture system onboard an oil tanker. That was a critical step forward for the project, which could help accelerate the commercial deployment of shipboard carbon capture technology within the next five years.

Do you see carbon capture as more feasible than using alternative fuels such as methanol, ammonia or synthetic/bio-LNG for decarbonising oil and gas shipping?

A It is clear that we will need multiple technologies if we are to decarbonise the marine industry at the scale and speed necessary to meet both the IMO's 2050 targets and the goals of the Paris Agreement.

Improved efficiency, propulsion aids, biofuels and alternative fuels such as ammonia and methanol all have critical roles to play alongside shipboard carbon capture. And a portfolio of competitively viable technologies needs to be available for the range of vessels, voyage profiles and unique circumstances.

Ultimately, it will be up to the individual shipowner to determine what works best for them.

OGCI is supporting the oil and gas sector in efforts to reduce methane emissions from oil and gas production – do you have plans to explore how to reduce methane emissions from gas shipping?

A OGCI members recognise that <u>eliminating</u> <u>methane emissions</u> from the upstream oil and gas industry is one of the best short-term opportunities for contributing to climate change mitigation and for advancing the goals of the Paris Agreement, and it is a top priority for us.

Our members are working to eliminate methane emissions from their own operations and across the industry and, we support the implementation of regulations to reduce methane emissions from existing and <u>new sources</u>.

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News

UN seeks clarity on consequences for climate action delays

The International Court of Justice (ICJ) will publish advice on the climate obligations of states and the legal consequences for those failing to meet their responsibilities, following a request from the UN General Assembly. The advice, which will be issued after written submissions from the UN and its Member States due in January 2024, could be used by individuals and organisations to hold governments to account in courts across the world.

While the UN Framework on Climate

Change imposes obligations on states, notably through the 2015 Paris Agreement, these instruments do not include a means of enforcement. In particular, the ICJ has been asked to advise on the consequences for states if their failure to act harms the climate and environment for small island developing states, peoples and individuals.

The move follows <u>a similar request</u> made by the Commission of Small Island States on Climate Change and International Law to the International Tribunal for the Law of the Sea (ITLOS) in December 2022. That request seeks advice on states' obligaThe plaintiffs argued that the award breached domestic and international climate commitments and that the environmental impact assessment did not consider climate impacts

tions to protect the marine environment, and consequences for failing to protect countries, peoples and individuals from the impacts of environmental damage.

According to the ICJ, advisory opinions have no binding force but carry "great legal weight and moral authority", contributing to the clarification and development of international law.

Among the cases that could be supported by international advisory opinions is a 2022 action in Argentina, *Greenpeace Argentina et al. v Argentina et al.*, claiming that an oil exploration license was granted without due consideration of climate commitments. The plaintiffs argued that the award breached domestic and international climate commitments and that the environmental impact assessment did not consider climate impacts.

An injunction on exploration activity was initially granted but was overturned by the Court of Appeal. The plaintiffs have stated their intention to appeal that decision in the Supreme Court, and could rely on ICJ or ITLOS advice to bolster their arguments if they are issued in time.

There are likely to be several other cases that could be supported by advice from international authorities. Columbia Law School's <u>Climate Case Chart</u> database highlights a dramatic increase in climate litigation against governments over the recent years, from eight cases in 2012 to <u>85 cases in 2021 (excluding cases against</u> the US government).

ICS Barometer gauges industry opinion on key issues

Risk and confidence have consistently fluctuated among maritime leaders over the past few years, particularly as new challenges emerge. To gain a better understanding of industry sentiment, the International Chamber of Shipping surveyed more than 130 global maritime leaders to assess pressure points impacting shipping and confidence levels in mitigating the challenges arising from them.

The ICS Maritime Barometer Report

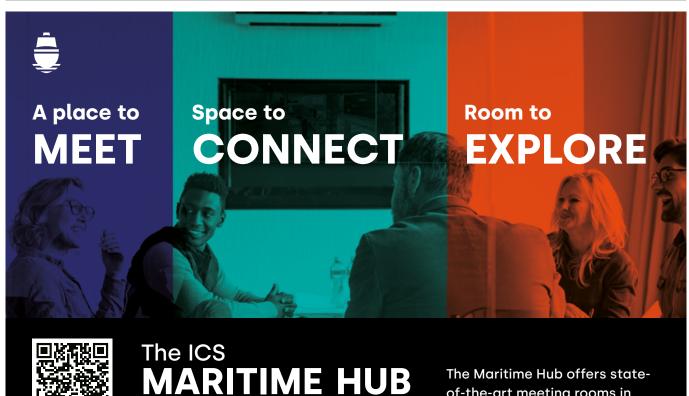
2022-2023 notably highlighted the growing risk of unilateral or fragmented regulation, emphasising the need for national and regional regulators to pursue a longterm strategy to align with maritime's global regulatory framework. Attention was also drawn to the alternative fuels market, where certain respondents anticipate nuclear power to be viable within the next decade. Welcoming the publication, Guy Platten, the Secretary General of ICS, said "The maritime sector is the heartbeat of the global economy. At a time of rapid change, it is imperative that we find fresh ways to actively engage our community and assess perception of industry progress on decarbonisation and risk mitigation. The ICS Barometer presents a snapshot of industry sentiment that, if used by the shipping community, can advance collaboration and present a united voice to regulators, national governments, and global stakeholders."

With respondents from the United Kingdom recording the highest participation from a single country – the ICS Barometer Report also features a special focus on key regional findings, to reflect the subtle differences voiced by respondents in each region.

Sarah Treseder, CEO of the UK Chamber of Shipping said "Mechanisms like the ICS Barometer Report are vital to understanding maritime's state-of-play and I'm delighted the UK had the highest response rate. The survey was a timely opportunity for UK-based stakeholders to share their views, including their concerns about the need for immediate progress on infrastructure in relation to future fuel availability.

"I recommend the survey to others and hope the report's findings and trend analysis are a topic of conversation across the shipping community and elsewhere."

The ICS Barometer 2022 is freely available on the ICS website.





reservations@ics-shipping.org +44 20 7090 1460 The Maritime Hub offers stateof-the-art meeting rooms in the heart of the City of London. Unique spaces to meet, engage and collaborate – tailored to your requirements.

Cross-industry demand for ESG impacts shipping

An increased call for Environmental, Social and Governance (ESG) reporting has led to more shipping partnerships and a greater drive for data verification and standardisation.

As cargo owners are under more pressure from investors, stakeholders and customers to decarbonise their supply chains, there is a greater demand on shipping to provide ESG reporting.

This is illustrated by <u>S&P Global data</u>, spanning 2018-2022, which shows that out of a record-high 1,026 investor activist campaigns launched across a range of industries in 2022, ESG components accounted for 81% of these. This is the highest percentage in the last five years.

As ESG becomes essential to shipping, there is a greater requirement for data trust. DNV business development leader Carl Erik Høy-Petersen said in a feature on DNV's website that this means "verification of the most important ESG KPIs is becoming increasingly important".

He gave an example: "We see that more cargo owners and charterers require third-party verification, e.g. of voyage emissions for their cargo as this goes into their greenhouse gas reporting on Scope 3 emissions." Law firm Watson Farley & Williams' *The Sustainability Imperative – Part 2* report, released in March, shows that ESG joint ventures are on the rise among ship owners. For the first report in 2021, two-thirds of those questioned said they would like to form partnerships and now, 56% are in an ESG-linked tie-up.

Shipowner and technology provider partnerships are "usually a strategic play in part driven by a wish to share technological risk and first mover risk", the authors said.

On growing shipowner and private equity (PE) partnerships, they said: "There is a rise in PE players that have mandates to fund ESG related projects. This includes infrastructure funds that are increasingly including shipping assets."

ESG reporting is expected to move from focusing more on the 'Environmental' to 'Social' and 'Governance' aspects as well. "We would expect to see in the coming years a larger focus, especially in areas of crew welfare and promotion of diversity in operating staff and crew," the report authors said.

In an example of how sectors other than shipping are making ESG reporting a key focus, Accenture has established its '360° Value Reporting Experience', bringing all of its ESG metrics, progress and performance into a hub. The information and technology services and consulting company said this involved "transforming" its approach to reporting by focusing on the information needs of stakeholders and providing clear and transparent disclosure across ESG frameworks.

The hub was created by establishing a governance model and a steering committee to execute on its reporting strategy. It also created a dedicated ESG team. Additional frameworks for ESG reporting were added: the Sustainability Accounting Standards Board; the Task Force on Climate-related Financial Disclosures; and the World Economic Forum International Business Council metrics.

Accenture highlighted the benefits: "The launch of this digital reporting hub achieved clear, consistent messaging around all our reporting, heightened the user experience and streamlined the creation and sharing of key data across all <u>our reporting</u>."



News

Regulation driving harbour craft fuel changes



Specific regulation is driving the adoption of alternative-fuel harbour craft in some regions – for example, Singapore has banned new fossil fuel harbour craft from 2030, mandating full biofuel or net zero fuel compatibility by the deadline. Singapore's 2030 deadline is its own step towards meeting the commonplace goal across the maritime industry of net-zero operations by 2050.

The regulatory incentive has also been heard by tug designers, builders, operators, and engine manufacturers. Svitzer has cut thousands of tonnes of CO_2 from its operations by reducing tug speeds before and after assisting vessels, and by the use of biofuels in its UK tugs. Such operational changes and recent work with an engine manufacture to explore methanol dual-fuel retrofits for the fleet are in pursuit of ambitious targets of a 50% cut in carbon intensity from operations by 2030 and carbon neutral operations by 2040.

As of early May 2022, DNV's Alternative Fuels Insight (AFI) platform listed 24 LNG tugs on the water and 18 on order, one methanol tug in operation, one hydrogen

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tug in operation, and a total of 19 tugs in operation and on order using batteries in pure electric and hybrid applications.

The sole hydrogen-fuel tug on the list is Hydrotug 1. The first-of-its-kind vessel was designed by CMB's hydrogen and ammonia technology company CMB.TECH and deployed to the Port of Antwerp-Bruges.

Alexander Saverys, CEO of CMB told ICS that the company's investment in hydrogen technology was spurred by tightening global sulphur regulations around 15 years ago. For CMB, the emissions savings did not justify the cost for LNG technology and the limits of batteries left hydrogen and ammonia as their future fuels.

"The Port of Antwerp has supported us in the Hydrotug project by giving us a commercial contract that has allowed the development and the construction. This then allowed us to fine-tune regulations in collaboration with local authorities. We believe more of these initiatives are needed to fast track the deployment of zero-emission harbour craft," said Saverys.

Wider adoption of hydrogen and ammonia is currently limited by the price of hydrogen and availability of the molecules, said Saverys: "The technology is not a barrier. Fuel cells and hydrogen combustion engines are available."

For hydrogen, as with other future fuels, harbour craft have the potential to nurture small-scale supply chains and infrastructure for fuels in ports, which could be upscaled as demand and operational experience increase.

Information sharing on battery safety

What can ship operators learn from their airborne counterparts as they address evident safety issues around the transport of lithium-ion batteries?

While politicians focus on energy security and trade implications, safety should be shipping's prime concern over growing global demand for lithium – more specifically the lithium-ion batteries that power everything from smartphones to satellites. <u>US imports from China doubled</u> in 2022 and global demand is set to increase by <u>over 30% annually</u> from 2022 to 2030, a trajectory that mirrors the rapidly spreading and hard-to-extinguish 'thermal runaway' fires that can be associated with these batteries.

Lithium-ion battery fires or explosions can occur when the units are defective, damaged, overheated, overcharged or come into contact with reactive substances (such as nitric acid, as could have happened on the <u>X-Press Pear</u>/ lost in Colombo in 2021). Such fires can burn with twice the energy of petrol fires.

Ship operators seemingly have little control over some risk factors. They can check packaging and manufacturers' certifications, but may lack the capability to identify issues, particularly when batteries are wrongly declared (listed as 'computer parts' in a container that caught fire before loading in the US in late 2021). Dangerous situations have been overlooked even when properly documented (including partial battery disconnection when transporting electric vehicles), suggesting that increased training, regulation and perhaps new fire detection and suppressant technologies will be needed to make carrying batteries safe.

Supplementing global cross-industry safety regulations and carriage requirements around lithium-ion batteries, some maritime-specific initiatives are emerging. Guidance on <u>carrying batteries in con-</u> <u>tainers</u> was published by a coalition of insurers and cargo handlers in March. The document identifies several main challenges for safe handling across the supply



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chain, including the proper classification of batteries, understanding battery test summary documentation, declaration of cargo (including shipper and packing declarations), container inspection regimes and implementing effective 'know your customer' schemes.

Technology development is another area of focus. Safetytech Accelerator, a multi-industry start-up incubator established by Lloyd's Register, launched the <u>Cargo</u> <u>Fire & Loss Innovation Initiative</u> in February. With participation (and prospective funding) from Evergreen Line, HMM, Maersk, Offen Group, ONE (Ocean Network Express) and Seaspan, the initiative is seeking advanced technology solutions to reduce the occurrence and impact of cargo fires, with a particular interest in challenges caused by "the increasing carriage of lithium-ion batteries either in containers or within electric vehicles on car-carriers".

Regulatory reinforcement

While voluntary guidelines and technology advances may help, regulation is the ultimate safety net. The carriage of batteries by sea is regulated under the International Maritime Organization's (IMO) International Maritime Dangerous Goods (IMDG) Code, in which the different types of lithium-ion batteries are listed as Class 9 hazardous materials. However, P&I club Gard notes that this classification, the lowest in the IMDG Code, may underrepresent the risks that the batteries present. Further, special provisions in the code can encourage shippers to mis-categorise batteries, applying less onerous carriage requirements to batteries that carry greater risk.

The IMDG Code is reviewed regularly, but much deeper changes would be needed for shipping to match aviation's battery safety regime. For example, International Air Transport Association (IATA) regulations forbid the carriage of waste batteries, which have been cited as a potential



source in several cargo fires, as well as mandating the charge level of batteries in air freight.

As regulation and technology take time to evolve, one intermediate solution could also be borrowed from aviation. In 2021, <u>IATA introduced voluntary certification</u> of operators' lithium-ion battery safety standards, under its Center of Excellence for Independent Validators (CEIV) Lithium Batteries accreditation. Qatar Airways, Turkish Cargo and LATAM Chile are among the airlines to have undertaken the verification, which tests operators' processes and regulatory compliance, resulting in a certification that cargo owners can use as evidence of good practice.

An equivalent voluntary certification for maritime operators would go some way to providing the training framework and capabilities that ship operators need. Supplemented by advances in technology and regulatory developments, it is one option for ensuring safe operations as the global demand for lithium-ion batteries <u>continues to grow</u>.

Guidelines on the Application of the ILO

International Chamber of Shipping

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Maritime Labour Convention

New Edition

Guidelines on the Application of the ILO Maritime Labour Convention

This ICS publication is the comprehensive and definitive guide to the MLC. The revised fourth edition addresses the wide range of MLC provisions including the 2022 updates, which will enter into force in December 2024, covering:

- Appropriately-sized personal protective equipment
- Drinking water quality
- Repatriation of abandoned seafarers
- Repatriation of deceased seafarers
- Medical care
- Social connectivity
- Information on rights concerning compensation
- Recording and reporting of deaths

International Chamber of Shipping

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ICS in Action

A round-up of ICS news and activites over the last month

Countering illicit drugs

The latest edition of Drug Trafficking and Drug Abuse On Board Ships, published by ICS and Witherbys, offers updated guidance on deterring, protecting against and responding to drug trafficking and drug abuse at sea. It explores emerging patterns and trends, including record seizures, new synthetic drugs, the opioid epidemic and the rise of Captagon use. It spotlights attempts to circumvent security measures to inform ship searches and advises on how to deal with a suspected drug overdose.

lain Macneil, CEO of Witherbys, terms the £195 print and digital publication "an essential resource to help shipowners, operators and officers to combat drug trafficking at sea and to recognise the signs of drug use and dependence on board."

Clean Energy Marine Hubs Initiative wins award

The Clean Energy Marine Hubs (CEM Hubs) Initiative has won the GREEN4SEA Initiative Award, for its work to accelerate the production, transport and adoption of low-carbon fuels, by shipping and other end-use sectors, around the world.

The CEM Hubs, which will be formally launched in July 2023, is a unique cross-sectoral public-private partnership that aims to de-risk shipping's green transition. It is co-led by the International Association of Ports and Harbors (IAPH), Clean Energy Ministerial (CEM) and ICS, and is currently supported by five national governments.

Accepting the award on behalf of the partnership, Guy Platten, ICS Secretary General, said that CEM Hubs will "help the shipping sector fulfil its key role ... to transport the new green fuels needed to decarbonise" and compel governments to "focus on supporting import and export transport infrastructure that is essential to making decarbonisation a <u>reality</u>."

Protecting seafarer rights

To reflect substantive changes agreed in 2022, ICS is publishing the fourth edition of its '<u>Guidelines on the Application of the ILO Maritime Labour Convention</u>'.

The £150 publication is the most up-to-date guide to MLC compliance and is aimed particularly at senior managers in shipping companies and crewing agencies, masters and senior officers at sea, and superintendents ashore. Written with accessibility in mind, it is non-jargonistic and colour-coded to denote mandatory and guidance parts of the MLC. For ease of reference, the latest amendments, including medical care, repatriation of abandoned and deceased seafarers, drinking water quality and social connectivity, are also highlighted.

Commenting on the new guidelines, Natalie Shaw, ICS's Director Employment Affairs said, "We are committed to ensuring seafarer welfare and this timely publication facilitates compliance with the latest amendments before they enter into force".

The future's green for seafarers

African and Asian seafarers are well positioned to benefit from the new employment opportunities created by shipping's green transitions – particularly if IMO Member States adopt a net-zero emissions target for shipping by 2050 at the upcoming MEPC in July.

ICS recently participated in panel discussions in Kenya (5 May) and the Philippines (16 May) that showcased the work of the <u>Maritime Just Transition Task Force</u>. These highlighted the socio-economic benefits to be gained by governments that fast tracked the development of training infrastructure for seafarers.

Helio Vicente, ICS's Senior Manager Policy and Employment Affairs, said "Technology must evolve in step with seafarer skills so the shift to a greener future is done as safely and efficiently as possible".

ICS is the principal international trade association for merchant shipowners and operators, representing all sectors and trades and over 80% of the world merchant fleet.

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