

BUNKERSPOT

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OPENING UP THE ARCTIC SEA ROUTES



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Point of principle

The recent publication of the 'Poseidon Principles' has highlighted how banks and major investors are now keenly aware that their shipping portfolios must align with current – and future – environmental regulations and public expectations. As **Ian Taylor** finds out, the Principles are part of a broader trend for more environmental traceability and responsibility that is sweeping across the transport sector

Not so long ago, 'green issues' were seen by many as at best a well-meaning irrelevance or more likely an irritating impediment to the serious business of making money. But then, as more and more people became concerned about the planet's dwindling reserves of flora and fauna, companies began to see the PR benefits of weaving a bit of green into their marketing materials. Today, the fair words need to be backed up by firm actions, as almost everyone takes environmental responsibility very seriously indeed, recognising that decarbonisation is an urgent imperative for human survival.

Sustainability and environmental stewardship are now at the heart of every business venture. It's not a question of 'credibility' anymore; it's about credit, and hard cash. If you flout regulations and ignore climate change concerns, you won't get finance. Major banks can't afford to invest in polluters because mistakes could cost billions in fines and lost reputations.

2020 FOCUS... FOR NOW

For the moment, the shipping industry is focusing most of its attention on the International Maritime Organization's (IMO) global sulphur cap, which comes into effect on 1 January 2020. This is understandable, given the proximity of the deadline. But the IMO strategy that calls for a 50% reduction in greenhouse gas (GHG) emissions by 2050 will have a much more profound effect – and decarbonisation will be a much bigger challenge than

the sulphur directive for both the shipping community and their fuel/energy suppliers.

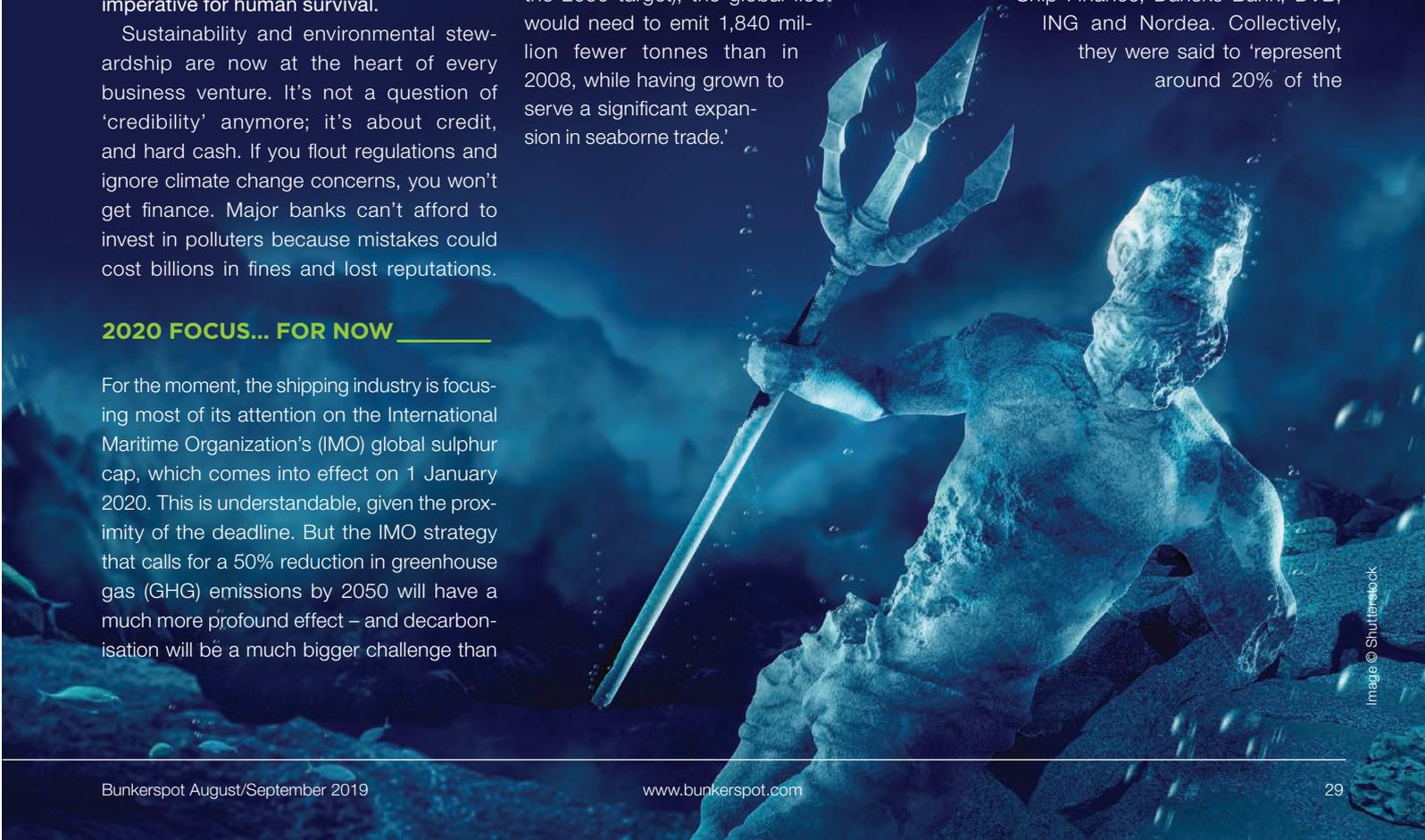
The 2050 50% reduction target uses 2008 as a baseline. According to the IMO's 3rd GHG study, international shipping emitted 921 million tonnes of carbon dioxide (CO₂) in 2008 and it could (if left unchecked) grow by as much as 250% to 2,300 million tonnes by 2050, as the shipping fleet strives to serve a growing global population.

Gurinder Singh, Director of Global Sustainability at ABS, recently put this into context: 'This means, to reduce CO₂ output to 460 million tonnes (and achieve the 2050 target), the global fleet would need to emit 1,840 million fewer tonnes than in 2008, while having grown to serve a significant expansion in seaborne trade.'

POSEIDON PRINCIPLES

Recognising the scale and importance of the long-term challenge, a group of major shipping banks and industry players announced on 18 June that they had created a new global framework – called the Poseidon Principles – which can be used for 'assessing and disclosing the climate alignment of financial institutions' shipping portfolios'.

Banks signed up with the Poseidon Principles for the launch included Citi, Societe Generale, DNB, ABN Amro, Amsterdam Trade Bank, Credit Agricole CIB, Danish Ship Finance, Danske Bank, DVB, ING and Nordea. Collectively, they were said to 'represent around 20% of the



global ship finance portfolio'. The key maritime industry players onboard included A.P. Møller Mærsk, Cargill, Euronav, Lloyd's Register and Watson Farley & Williams. The Global Maritime Forum, Rocky Mountain Institute and University College London Energy Institute also supported the initiative.

Commenting on the launch, Michael Parker, Global Industry Head of Shipping & Logistics at Citi and Chair of the Poseidon Principles Drafting Committee, said: 'As banks, we recognise that our role in the shipping industry enables us to promote responsible environmental stewardship throughout the global maritime value chain. The Poseidon Principles will not only serve our institutions to improve decision making at a strategic level but will also shape a better future for the shipping industry and our society.'

Speaking to *Bunkerspot* in early July, Parker says that the Poseidon Principles grew out of work undertaken by the Global Maritime Forum and also the Financial Stability Board's (FSB) Task Force on Climate-related Financial Disclosures (TCFD). Set up in 2015, the TCFD aimed to 'develop a set of voluntary, consistent disclosure recommendations for use by companies in providing information to investors, lenders and insurance underwriters about their climate-related financial risks'.

POSITIVE INFLUENCE

In the shipping world, Parker explains, the capital markets do not play such a big role as they do in some industries. This means that the banks are the 'primary lenders' for shipping, which gives them considerable influence over the shape of the future world fleet. The Poseidon Principles signatories, adds Parker, want to use this influence to support the objectives of the IMO – which effectively operates as the global regulator of shipping – and to answer society's call for action on climate change.

The signatories aim to achieve the goals by following the association's four guiding principles: assessment of climate alignment; accountability; enforcement; and transparency.

In order to deliver on the first principle, the signatories will measure the carbon intensity and assess the climate alignment of their shipping portfolios on an annual basis.

To meet the accountability principle, they will 'use only data types, sources, standards and service providers established by the IMO' when calculating their shipping portfolios' climate alignment.

The enforcement principle calls for standardised covenant clauses to be 'made



Michael Parker,
Poseidon Principles

'We are not disclosing information on individual vessels or loans. We are just disclosing information on each bank's portfolio alignment'

contractual in new business activities'. This is important because it will establish a level playing field where there is 'an equal burden on all signatories'. A standardised covenant clause that 'covers the more specific information needed' has been developed; and this should benefit shipowners because, according to the Secretariat, it will mean that they 'do not have to negotiate similar language with every lender'. 'For this reason,' the Poseidon Principles' launch literature states, 'it is recommended that the covenant clause be included in new loan agreements, but it is not compulsory for signatories.'

The transparency principle requires signatories to report the overall climate alignment of their shipping portfolios to the Poseidon Principles Secretariat 'no later than 30 November' on an annual basis.

The banks will calculate the results for their portfolios using the emissions information that the IMO requires every shipowner to provide, and to which the banks are entitled under their loan agreements.

'We are not disclosing information on individual vessels or loans,' says Parker, 'we are just disclosing information on each bank's portfolio alignment.'

As Parker explains, the aim is to show investors, regulatory authorities and society at large that the shipping industry and the financial institutions which support it are taking measurable steps to combat climate change.

The Poseidon Principles are not confined to shipping's fuels. They also look at other factors which have a bearing on GHG emissions and environmental impact. Parker believes the Poseidon Principles offer a framework which can evolve to meet future needs, such as environmental regulations for ship recycling.

'When the Hong Kong Convention is ratified,' says Parker, 'we would probably expect to add that to the Poseidon Principles.' On 16 July, a few days after our conversation with Parker, the IMO announced that Germany had become the latest country to accede to the Hong Kong Convention. This took the number of states contracted to the Hong Kong Convention to 13, representing 29.42% of the world merchant shipping tonnage. According to the IMO website, the convention will enter into force '24 months after ratification by 15 States, representing 40 % of world merchant shipping by gross tonnage, combined maximum annual ship recycling volume not less than 3% of their combined tonnage'.

STEP FORWARD

The launch of the Poseidon Principles has been hailed as a major step forward by players across the maritime industry. It was also applauded by many environmental action groups, although they generally added the proviso that it needed to be the first of many more steps in the future.

Marie Cabbia Hubatova, Research Analyst with the Environmental Defense Fund, believes that the banks and financial investors can play a major role in reducing ships' emissions.

'This action needs to be taken as soon as possible, but the IMO is moving very slowly,' says Cabbia Hubatova. 'The Poseidon Principles sends a clear message from financial institutions to the industry that the future of shipping is emission-free. The shipping industry has a great potential to become a leader in clean energy transformation and bring development opportunities around the world, especially for countries who are early

adopters. The role of financial institutions in the transition will be very important, especially given the current lack of policy support.'

Cabbia Hubatova also offers a proposal on how future progress could be accelerated. 'The target to reduce emissions by at least 50% set by the IMO last year is a good start, but it needs to take more ambitious action to align with the Paris Agreement. The most urgent need is for the IMO to deliver a comprehensive policy that could create a predictable environment for the industry and give a clear signal to investors,' Cabbia Hubatova argues.

'One such policy is carbon pricing to encourage the adoption of zero emission technologies and penalise the use of fossil fuels. The funds collected from emitters could finance the deployment of clean technologies in shipping. If designed properly, such a mechanism would ensure countries that currently don't have the funds to invest in zero emissions infrastructure for shipping are not left behind.'

Cabbia Hubatova adds that a comparable scheme – the NOx Fund – has been introduced in Norway to direct investment into projects that reduce NOx emissions.

VIRTUOUS CHAIN REACTION

Essentially, much of the action on combating climate change is being driven by a virtuous chain reaction. The scientific community has amassed the evidence to convince a growing proportion of the general public that urgent action is required. They in turn use their power as investors, depositors, consumers and voters to bring influence to bear on financial institutions, global brands and governments. These players then pass on the message to the shipping industry and other transport providers.

The message coming down to the shipping industry is that the ships of the future will have to run more efficiently on cleaner fuels that produce far fewer emissions. And it is at this point that the onus shifts to the bunker industry, which will have to deliver those future fuels.

As Parker points out, the Poseidon Principles do not have a *direct* impact on bunker suppliers – but as shipping companies look to decarbonise their operations they will of course need to work with their technology and energy providers.

BEYOND 2020

As mentioned earlier, IMO 2020 is almost upon us, so bunker suppliers are feverishly gearing up to meet shipping's growing demand for low sulphur fuel oil (LSFO), marine



Marie Cabbia Hubatova,
Environmental Defense Fund

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distillates and liquefied natural gas (LNG) – while also keeping some high sulphur fuel oil (HSFO) on the shelves for shipowners who are taking the scrubber route.

But when next year's sulphur cap surge settles down, the attention will switch to developing fuels and propulsion technologies which can bring the significant GHG reductions that the IMO – and the public – are demanding.

High sulphur fuel oil (HSFO) – which has been the bunker industry's mainstay product for decades – is a fuel whose best-selling days are in the past, even though scrubbers may have extended its lifespan as a niche fuel. Indeed, heavy fuel in general – whether high or low in sulphur – will become far less common and may even

disappear completely in some regions. We have already seen a ban on HFO in the Antarctic and it is possible (but not certain) that we may see a similar edict for the Arctic.

While LNG may not be the ideal long-term solution, it is 'cleaner' than the fossil fuels traditionally used by ships. The emission of sulphur oxides (SOx), nitrogen oxides (NOx) and particulate matter (PM) is close to zero on ships running on LNG. There will still be GHG emissions from LNG-fuelled ships – but a study commissioned by the SEA\LNG industry coalition in April 2019 indicated that they are lower than conventional marine fuels when measured over the entire Well-to-Wake (WtW) lifecycle. Consequently, LNG is generally seen as a good 'transition' fuel that can, in the words of SEA\LNG Chairman Peter Keller, 'provide a potential pathway to a zero-emissions shipping industry'.

LEADING WITH LNG

There has been a noticeable increase in the number of shipping companies launching or commissioning LNG-fuelled vessels. It is a trend that is becoming apparent across all shipping sectors, but the take-up has been particularly strong in the ferry sector. This is mainly because the operational nature of the ferry industry lends itself to LNG bunkering. The ferries are not tramping across the world; they are running regular routes on a strict timetable, so the shipping company can build up a strong relationship with their local LNG supplier and the infrastructure can grow in tandem with the LNG-fuelled fleet.

But there is also another reason why ferry companies may be particularly receptive to the idea of using LNG and other green technologies. Unlike container ships or tankers, ferries don't just carry boxes and liquids: they carry people. Ferry companies have to be keenly aware of the general public's views on the environment because the public are actually onboard their ships, monitoring their performance at first hand. Furthermore, ferries are not calling at industrial cargo terminals, ring-fenced by security – out of sight and out of mind. They are embedded in local communities, sometimes sailing right into the heart of cities and towns.

Cruise ships are in similar position: again they have a direct relationship with the general public and they are very high-profile so their investors know that any environmental failings could be damaging front-page news. There is the added pressure that cruise ships want the ports at which they call to remain attractive holiday destinations – so a good track record on combating emissions and pollution is a must.

Cruise ships, like ferries, are switching to LNG. Royal Caribbean, for example, has ordered three LNG-fuelled Icon class cruise ships from the Finnish shipyard Meyer Turku which are scheduled for delivery in 2022, 2024 and 2025.

Speaking at the *Maritime Week Gibraltar* conference in June, Carnival Corporation's SVP for Maritime Affairs Tom Strang reiterated the company's commitment to using marine LNG – which he said would not only provide compliance with IMO 2020, but was also 'by far the best fuel today' to help address GHG emissions and targets. And Strang also made the explicit link to brand management: 'It is essential for the cruise industry to use clean and safe fuels; the reputational damage caused by problem or a spill could be devastating. We are selling the environment we are operating in.'

It is not only the shipowners who have to consider their reputation management and environmental impact. The responsibility goes along the chain to their charterers. On 15 July, the mining and energy giant BHP released what it claimed was the world's first bulk carrier tender for LNG-fuelled transport for up to 27 million tonnes of its iron ore. In a statement explaining the move, Rashpal Bhatti, Vice President, Maritime and Supply Chain Excellence, said: 'We recognise we have a stewardship role, working with our customers, suppliers and others to influence emissions reductions across the full life cycle of our products. Through this tender, we are seeking potential partners who share our ambition of lowering emissions to the maritime supply chain.'

LNG may be – as Strang puts it – 'the best fuel today', because it tackles both SOx and NOx and also brings progress on GHGs. But moving forward, the industry will have to go even further on GHGs.

FUELING THE FUTURE

The momentum building from public opinion, tighter regulations and initiatives such as the Poseidon Principles will drive the shipping industry to embrace biofuels, ammonia, hydrogen, fuel cells, solar power, wind-assisted propulsion and electrification. It is still early days, but a number of companies have already experimented with these solutions and the signs are positive.

Norled, for example, has been leading the way in developing car ferries powered by hydrogen and has worked with NCE Maritime CleanTech and Greensight to study the feasibility of developing a complete liquid hydrogen (LH) value channel in Western Norway.

The French cruise ship operator CroisiEurope told *Bunkerspot* in mid-July that its three ships on the Seine – *MS Botticelli*, *MS Seine Princess* and *MS Renoir* – are now running on gas to liquid (GTL) fuel. GTL is 'rapidly biodegradable' and produces significantly lower emissions than diesel oil.

Having collaborated closely with river bunkering company, AS Energy, CroisiEurope said that it is now keen to introduce GTL fuel on its remaining fleet in France and is currently investigating how best to supply its ships on the Loire, the Rhone and the Gironde.

CroisiEurope said that introducing GTL was part of a broader commitment to environmental stewardship. The company's other initiatives include fitting out ships with 'GreenShip' label engines, using shore-side electricity to reduce emissions and equipping all vessels with systems to dispose of waste water in the urban sewerage network and/or water treatment stations. The company has also initiated a partnership with UNESCO in order to promote sustainable development projects for African river ports. This is a good example of a project which may not bring direct financial returns, but can do an immense amount of good for a company's environmental/sustainability profile.

Carnival Corporation's AIDA Cruises, which commissioned the world's first LNG-fuelled cruise ship in December 2018, went even further into the green in July this year by announcing that it will trial the use of fuel cells 'as early as 2021'.

The Germany-based cruise line announced the move in the 2019 edition of its 'AIDA Cares' sustainability report. Tellingly, the

company emphasised that its growing use of LNG, fuel cells and shore power from renewable energy sources was going hand-in-hand with other environmental initiatives such as cutting back on the use of plastic and disposal products and reducing food waste. AIDA's President, Felix Eichhorn, said: 'As Germany's market leader for cruises, we accept the ecological and social challenges that we face both now and in the future, and we are taking responsibility. Today we are already exploring together with our partners the use of fuel cells, batteries or liquefied gas from renewable sources in the cruise industry. We are committed to both the Paris climate targets and those of the International Maritime Organization (IMO). Our long-term goal is clear: emission-neutral cruising.'

Canada's BC Ferries has made a big financial commitment in introducing LNG-fuelled ships to its fleet – and it is also working on hybrid solutions which combine LNG and batteries. Most promisingly, the company is looking forward to the day – in the not-too-distant future – when it can launch all-electric ships.

SUPPLIERS' TRANSFORMATION

Responding to these changes, today's bunker fuel suppliers will have to morph into multi-energy providers who can both source fuels and provide expert advice on their environmental impact. Importantly, they will have to know the *full* environmental impact of the various fuel/energy options. In an article posted on the Environmental Defense Fund website, Cabbia Hubatova pointed out that to



Carole Ferguson, CDP

'People who are giving you capital will want to know how your activities and your existing and future fleets are aligned with trying to achieve these targets. Ambitions are good, but not enough: you need a clear, concrete plan'

make a real difference to the environment: 'All alternative fuels will have to be assessed from a lifecycle perspective, to ensure that they really do reduce emissions. Some fuels could cause upstream emissions, for example from land use change and deforestation, and these fuels must be avoided.' Cabbia Hubatova added that the IMO could create systems to do this, and if it wanted a blueprint it could look at the work already being done by the International Civil Aviation Organization (ICAO) in the aviation sector.

Essentially, shipping companies – and the banks who invest in them – will have to consider not only what emissions fuels release when they are used, but also the emissions/pollution they cause when they are produced. Battery-powered ships may be producing zero emissions, but if they are using electricity generated by dirty power plants, we haven't really moved forward.

The focus on life-cycle emissions is encouraging the development of more initiatives such as the 'biorefineries' being developed by companies such as Velocys, which is looking to produce biofuels from 'sustainable' sources such as household waste and 'forest residues'. LNG is a 'cleaner' fuel onboard ship – and ConocoPhillips Australia is looking to improve its life-cycle carbon footprint by investing in

a battery-power system at its Darwin LNG plant which will bring cut the facility's carbon emissions from power generation by 20%.

MOVING FORWARD

Eleven banks signed up to the Poseidon Principles at the launch, but more will follow. It is looking likely that shipowners who are not aligned with the IMO GHG commitment will find it increasingly difficult to secure finance. The days when shipping companies could ignore their environmental responsibilities or pay lip-service in a woolly, non-specific sustainability report are drawing to a close.

Carole Ferguson, Head of Investor Research at CDP – a not-for-profit charity that runs a global disclosure system for investors, companies, cities and states to manage their environmental impacts – emphasises: 'You need to disclose in a meaningful way. In the past, some of these sustainability reports were used as a way of projecting an image. But that is a short-term approach which doesn't really get you very far, because investors are much more savvy than they used to be.'

Ferguson continues: 'You should definitely have very reliable numbers on your emissions – and not just your own emissions, but also any emissions that might lie in the value chain.'

In late June, CDP published a report – entitled *A Sea Change* – which found that many of the world's biggest shipping companies are not investing enough to make sure they will meet the IMO's 2050 targets on GHG. However, CDP did commend Maersk, HMM and Norden as 'the most ambitious in setting long-term targets to reduce carbon emissions'.

'Actually, we were surprised at how good some of these shipping companies are now about setting targets. Not all of them, but the better ones,' Ferguson says.

'But,' she stresses, 'these targets need to be backed up with some clear indication of how they are going to be met.'

Ferguson says that sustainability reports should provide evidence of current and planned investment in innovative technology because 'people who are giving you capital will want to know how your activities and your existing and future fleets are aligned with trying to achieve these targets. Ambitions are good, but not enough: you need a clear, concrete plan.'

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