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# HELLAS maritime

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# HELLAS maritime

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## Greece at the forefront

The Greek shipping cluster has been at the heart of the industry for decades; the basis of its longevity and success has never been clearer.

As the industry descends on Athens for Posidonia this year after an eventful absence, Greece is poised to exhibit the adaptability and market nous that will make its shipping cluster indispensable in tackling the challenges facing the industry and wider society.

Russia's invasion of Ukraine has upended Europe's energy security. Gas transportation has risen to the top of political agendas as European leaders look to limit the strain of higher energy prices on consumers and commercial users.

Social and regulatory pressure to decarbonise and reduce

other emissions further boosts the importance of LNG within our industry, and its no surprise to see the Greeks taking their place at the forefront of the LNG sector.

This issue of Hellas Maritime shows Greece living up to its responsibility as world's largest shipowning nation, playing its role in shaping regulation and steering the industry's conversations. As the IMO and others ramp up efforts to improve diversity within shipping, the Greek cluster has an enviable list of female leaders and role models alongside its host of active advocates for women ashore and at sea.

The maritime industry faces an unprecedented series of difficult challenges over the coming decade, Posidonia 2022 and Hellas Maritime demonstrate a shipping nation prepared to play its part in tackling them all head on.



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Elected in February the first woman president of the Union of Greek Shipowners, Melina Travlou (left), met with Katerina Sakellariopoulou, who in March 2020 became the first woman to be elected Greece's president and briefed Her Excellency on issues concerning the shipping industry making special reference to the industry's development and the challenges it faces on a national, communal and international level as well as the contribution it makes to the economy and country generally

# World supply chain hitch

**W**e live in a changing world, and as a truly global business, the shipping industry faces more challenges than most in keeping abreast of the changes.

Indeed, many of the changes are being forced on the industry by interests who have very little idea of what the smooth operation of shipping means to them. That is until their world is impacted by a hitch in the world's supply chain.

There is no doubt our environment is suffering from climate change and that creates uncertainty. We all have to play our part in making the world a better place to live in, but the goals set to achieve this must be obtainable.

This year, 2022, was always going to be a year of challenge for the shipping industry as operators battle the economic crisis and get to grips with the full impact of the IMO's environmental targets and mounting outside pressure. In addition, further turmoil has been encountered by the ongoing impact of the COVID-19 pandemic and Russia's invasion of Ukraine in February.

Despite the seemingly ever-growing hardships, life goes on, and dealing with them is a universal chore.

Regarding the shipping industry, as Greece's

Shipping and Island Policy minister, Ioannis Plakiotakis, recently said, the industry needs to gradually move, 'from the current uncertainty, to a predictable environment that will guide future investments and ensure they will deliver the expected benefits for the environment'.

Addressing the 1st Greek-Cypriot Business Summit, on the road to the decarbonisation of the shipping industry, Plakiotakis, said: 'Any new measures, including those of an environmental nature must be practical, realistic and feasible, taking into account, on the one hand, the specific characteristics of each model of maritime activity and on the other hand the central environmental principles.'

Greece is a world leader in shipping and has been at the forefront in the battle to ensure the industry can still operate in a changing world.

Its government and shipping community are powerful voices in the call for 'greener shipping' but both recognise this will come at a cost and insist the cost has to be shared. A good example of this is the principle of 'the polluter pays' when it comes to decarbonisation. In shipping, this means the cost of energy transportation should be passed on to the ship's commercial operator.

As Plakiotakis said: 'Greece, having a clear orientation and an ally of other shipping states of a similar mind, will continue to

contribute with solid proposals to the ongoing negotiations at the EU and IMO level on new environmental legislation, with the aim of adopting regulations for embracing clean energy in a comprehensive way, without compromising the sovereignty of European shipping and the resilience of our economies, especially the growth prospects and prosperity of the most vulnerable citizens.'

Referring to the crisis in Ukraine, Plakiotakis noted that 'our two main priorities are: first, to address threats to the safety of navigation and, above all, seafarers, and second, the economic impact on shipping, such as the further increase in the cost of shipping fuel'.

On EU sanctions against Russia, Plakiotakis said: 'Our concern is to preserve the message that must be sent to the attacking state, but at the same time ensuring the basic principle that we must not harm our own economies more than that of the attacking state. Sanctions should be accompanied by a documented impact analysis to avoid shortages of critical goods for the operation of equally critical sectors of the European economy – including our own shipping.'

Shipping has operated and continues to operate as a stable sector in volatile marketplace, says Union of Greek Shipowners (UGS), president, Melina Travlou.

This is especially true in the case of Greek

Among the most active contractors of newbuildings has been the Evangelos Marinakis-led Capital Shipmanagement Group. The 174,000cu mtr Adamastos was built by South Korea's Hyundai HI and is equipped with the latest available technologies including an air lubrication system and increased filling limits



shipping. 'The Greek-owned fleet maintains its leading role in the shipping industry,' said Travlou. 'Today it represents 21% of global tonnage and 59% of the European Union fleet. It controls 32% of the world fleet in tankers, 25% of bulk carriers and 22% of LNG carriers. Greek shipping, which is an integral part of European shipping, provides a strategic advantage to the European Union in its effort to ensure the adequacy and independence of its supply with essential goods and energy,' said Travlou, who in February was elected the first female president in the UGS' 106-year history.

While Greek shipping and the Athens/ Piraeus cluster goes from strength to strength, the face of the industry, like that all over the world, is changing. Climate change and digitalisation have combined to ensure that.

Another change is that the new generation entering the industry no longer has a seagoing background, but comes armed with an impressive academic background and though the traditional 'gut feeling' is still evident, they are able to face the challenges and technological changes sweeping the industry with a different mind-set.

Further, as in so many facets of the shipping industry, Greece is producing more female leaders. In addition to Travlou being the first woman to be elected president of the UGS, the country's two largest shipping companies are run by women. Maria

Angelicoussi's Maran Group runs 149 ships of 27.31m dwt ahead of Angeliki Frangou's Navios and its stable of 164 ships of 16.81m dwt; we find an increasing number of women at the helm of Greek shipping organisations and operational and service companies.

The Greek cluster remains the envy of all. It is the home of some 590 shipowning groups, of which 76 run fleets of more than 1m dwt capacity. There are 67 fleets of 20 ships or more.

In addition, some 4,200 service companies are located in the cluster playing their part in ensuring the over 4,000 Greek-owned ocean-going ships of some 350m dwt continue to serve world commerce.

Indeed, there is no doubt, Greece has been at the centre of shipping for decades.

Reflecting Greek shipowners' activity in the newbuilding and S&P rings, the Greek-controlled fleet continues to grow and at the beginning of spring had reached an all-time high in terms of gross tonnes and deadweight. Further, in ship numbers the fleet stood just eight units short of the record set in 2018.

According to data assembled by the London-based Greek Shipping Cooperation Committee (GSCC), Greek interests controlled 4,038 vessels of 350.466m dwt and 205.648m gt. This is an increase of 102 vessels, 4.9m dwt and 4.43m gt in 12

months. The figures include 167 vessels of various categories on order from shipyards, of a total of 16.264m dwt and 11.14m gt, many equipped with the latest technology.

Indeed, it's no wonder world shipping is waiting with bated breath for Posidonia 2022 and the opportunity to meet, greet and exchange views after four years during which the shipping industry continued to serve 90% of world trade without interruption.

'In the volatile global environment, shipping has acted as a beacon of stability, responding to the unprecedented conditions we have been facing due to the international health crisis the last two years, as well as the geopolitical crisis of recent months in Europe,' said Travlou.

Posidonia will be, she underscored, 'an excellent opportunity for promoting the environmental footprint of global shipping, as well as the environmental performance of the Greek-owned fleet.' The fair will also showcase a unique communication platform for ship operation, with applications that will lead gradually to carbon-free shipping, she added.

Travlou stressed: 'The Union of Greek Shipowners is committed that Greek shipping, as a global leader in the industry, will be at the forefront of initiatives to adopt viable policies for the benefit of sustainable development and the smooth functioning of the global ecosystem.' ●

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Panos Mitrou, Lloyd's Register

# Greek owners have lion's share of LNG orderbook

Several leading Greek shipping dynasties have stamped their mark on the LNG business as the sector has transformed from a long-term contractual business to a dynamic shipping market with spot, short- and medium-term contracts. In little more than a decade, the cross-trading nation's heavyweights have moved in on the capital-intensive sector in a big way, and now control about 140 ships in the approximately 620-vessel world total.

The Greek LNG fleet now ranks as the most valuable, according to a VesselsValue study last November. At that time, it was worth more than \$19bn, the consultancy estimated, ahead of Japan in second (\$18bn) and China, third with \$10.4bn. The rankings are unlikely to change any time soon, although the fleet values will have increased significantly this year, as secondhand prices reflect both higher construction costs and a shortage of building slots.

But companies like Angelicoussis, Capital Gas, Dynagas, Maran Gas Maritime and TEN LNG are certainly not biding their time. They successfully signed a substantial number of newbuilding contracts, booking relatively early delivery slots and closing deals at keen prices, before the latest dash for new capacity.

The precise number of Greek-owned LNG carriers under construction is hard to pin down but best estimates suggest that there are close to 30 ships on order for Greeks, requiring a capital commitment of around

\$7-8bn. However, the real number could be much higher, since databases such as Clarksons Research still list 40-50 contracts placed by unidentified contracting parties.

One thing is certain, however. As the world comes to terms with an entirely new energy order following Putin's mad invasion of Ukraine, almost everyone is hot about gas. There are abundant supplies – the US is now a major exporter, a relatively new trade in which Greek owners are heavily involved, and new capacity is coming on stream in Qatar and Australia, the world's two largest suppliers.

New facilities are also at various stages of planning or construction in a range of other locations including Canada, Indonesia, Mauritania, Mexico, and Nigeria. New capacity is under construction in Russia, but related shipping requirements for these projects have been excluded from the following vessel requirements.

Three LNG trains are being built at Golden Pass in the US as well as a new export facility at Calcasieu Pass. They are likely to require more than 40 ships of 174,000cu mtr equivalent, according to analysis by Clarksons. The vessel requirement for all projects under construction, excluding Russia, is 132. These numbers do not include projects that are currently at the FEED stage, or others that are merely proposed.

Not everyone is on side, however. LNG is still a hydrocarbon and there are plenty of activists who get wound up, quite

justifiably, about the impact of methane as a greenhouse gas. However, LNG is widely seen as a transition fuel – bioLNG and synthetic LNG can reduce its carbon footprints substantially. As a fuel, it is also many times cleaner than coal, wood or charcoal, widely used in vast areas of the world for cooking and heating.

Leaving no stone unturned, the Greeks have also moved in on the floating LNG sector where demand for converted floating storage regasification units (FSRUs) and other floating assets is ramping up sharply. Floating facilities are usually faster and cheaper than shore-based plant (see article on page 8).

There are likely to be plenty of conversion candidates available over the next few years, according to experts. Panos Mitrou is Lloyd's Register's Global Gas Segment director. He has analysed the existing LNG fleet and estimates that as many as 400 ships – almost two-thirds of the total – are likely to fall into unacceptable categories D and E when their Carbon Intensity Indicator (CII) assessments are made from January 2023 onwards. Even if they make an acceptable A, B, or C grade initially, they are likely to sink later in the decade as the CII framework tightens.

The main reason for their non-compliance is their lack of systems for effective handling of boil-off gas. Steam-turbine ships cannot use boil-off gas as fuel, and many early diesels cannot reliquefy boil-off gas to use it for propulsion. ●



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Shipping minister, Vassilios Demetriades; chamber president, Themis Papadopoulos and president of Cyprus House of Representatives, Annita Demetriou

# Cyprus maritime industry

**T**he Cyprus shipping industry remains resilient and continues, despite the current significant difficulties, with resolute determination to create a 'One-Stop-Shipping-Centre' based on the country's Shipping Ministry. This was the message delivered at the Cyprus Shipping Chamber's 33rd AGM, May 3, in Limassol.

President of the Chamber, Themis Papadopoulos, said the Shipping Deputy Ministry is a driving force behind on-going efforts to 'upgrade even more the image of Cyprus as a modern, quality and sustainable maritime centre'.

He referred to the serious efforts of the Cyprus shipping industry to meet the important goals set for the decarbonisation of shipping in an effective and safe way.

Shipping deputy minister, Vassilios Demetriades, on behalf of the country's president, Nicos Anastasiades, said the government stands ready to offer any assistance deemed necessary in order to facilitate the shipping industry and safeguard a sustainable future for shipping.

Addressing the same meeting, president of the House of Representatives, Annita Demetriou, praised the chamber for its

invaluable contribution to the growth and development of the Cyprus economy and society and expressed the house's commitment to keep supporting the Cyprus shipping sector, so it can continue on its successful course.

A global success story, the Cyprus shipping industry plays a prominent role as a leading shipping and shipmanagement centre built on a sound maritime infrastructure, a favourable tax regime and competitive ship registration and annual tonnage tax rates.

The country is one of the top five ship management centres in the world, having around 60 ship management companies in operation backed with more than 200 shipping-related service companies. Its flagged-fleet stands at some 1,750 vessels of near 26m gt.

In a recent move to take its drive for total involvement of all shipping stakeholders a step further, the ministry launched an online communication platform which encourages all stakeholders involved in the maritime transport supply chain as well as the civil society to share thoughts and ideas.

The platform follows the launch in 2021 of SEA Change 2030, a long-term strategic vision for Cyprus shipping. The new

platform: Cyprus Open Maritime Exchange (COME) will collect information which will be regularly reviewed and incorporated into actions and policies.

The platform has six focus areas for feedback – green transformation, digitalisation, safety and security, coastal navigation, seafarer welfare, training and education. There is also an additional section that allows the shipping community and the civil society to explore other issues not encapsulated in these core areas.

Demetriades contends: 'Cyprus has always prided itself on being a collaborative and proactive nation. In line with our new strategy, the COME platform is an opportunity for ongoing consultation with individuals from right across the global shipping industry and wider supply chain, enabling productive discussion informed decision-making, and genuine progress.

'I firmly believe collaboration lies at the heart of progress. Cyprus will continue to launch and build upon key initiatives to get even closer to the industry – fostering an environment for honest discussions and, ultimately, advancement for the entire sector. We are starting 2022 as we mean to go on, with the introduction of a new tool that we believe will help us effectively



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With a budget of €1.2bn (\$1.344bn) the development of Larnaca Port and Marina represents the largest infrastructure investment on the island. Works began early April with president Nicos Anastasiades saying the project will create 3-4,000 jobs and attract interest from foreign companies



tackle the challenges of the year ahead and beyond. As ambassadors for the industry, we want to listen, to understand, and then deliver for shipping.'

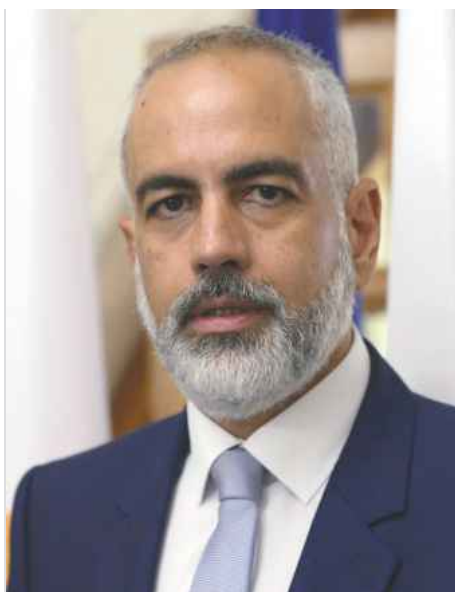
One area likely to dominate Cyprus strategy is climate change. Cyprus president, Nicos Anastasiades says that maritime transport has an international character, while climate change knows no borders, and 'it is obvious we need to act together to agree on targeted international measures'.

Anastasiades says Cyprus feels it is its duty to accelerate the transition of shipping to a low-carbon and climate resilient industry.

The president says the country is extremely pleased that after systematic deliberations among the Mediterranean states through the Barcelona Convention, a proposal has been recently submitted to IMO for the designation of the Mediterranean Sea as an Emission Control Area for Sulphur Oxides. He said Cyprus is ready to work towards the proposal is approved and enters into force by January 1, 2025.

In addition to leading the way when it comes to the wellbeing of shipping, Cyprus has set a national goal to make energy a source of wealth, prosperity and security for the country and an instrument for green growth.

With Anastasiades leading the way Cyprus has taken important steps over the last two years to create a competitive and healthy internal electricity market, thus lifting the energy isolation of Cyprus and indeed turning the country into an energy producer.



Vassilios Demetriades, shipping minister

It is estimated the Eastern Med can provide Europe with 15-16% of its annual imports of natural gas now coming from Russia. Indeed, the implications of the Russian invasion of Ukraine, combined with Europe's energy dependence on Russia, further highlight the importance of the East Med.

Cyprus and Lebanon are ready to work together to exploit potential gas deposits in waters between the two East Med countries, though a deal on offshore rights hasn't been formally finalised.

Cyprus has issued exploration drilling licenses to ExxonMobil and partner Qatar Petroleum, a consortium made up of France's Total and Italy's Eni, as well as Chevron and partner Shell, to most of its 13 segments in its exclusive economic zone off its southern coast.

However, the future of the East Med gas pipeline construction which would connect gas fields in the East Med and reduce the EU's dependence on Russian gas, is currently under a cloud as the figures are being closely looked at. The East Med pipeline is not a one-way street says Cyprus' Energy, Trade and Industry minister, Natasa Pilides.

Pilides has said the goal is to make the best use of Cyprus' deposits in the most economically feasible and efficient way, pointing out that a good solution for Cyprus deposits was the LNG facilities in Egypt, something which was currently under discussion. She says Cyprus is more ready than ever to further increase the share of renewable resources in the energy balance.

Indeed, economic growth in Cyprus will slow sharply before recovering, due to the shock associated with the war in Ukraine, the International Monetary Fund (IMF) has said, adding the key near-term challenge 'is to calibrate a policy response to the economic fallout from the war in Ukraine'.

Meanwhile, there is little doubt the fallout of Russia's invasion of Ukraine will have a major impact on Cyprus. Wojciech Maliszewski, IMF mission chief for Cyprus, said that while the country's 2022 budget provides sufficient fiscal support in the baseline, 'additional discretionary support may be needed if the impact of the shock is larger than expected.

In the medium term, the IMF calls for a gradual fiscal adjustment that should aim to rebuild buffers by bringing the budget close to balance by 2024. 'Despite a reduction in exposures to Russia, Cyprus is highly vulnerable to the economic fallout from the war in Ukraine,' the IMF said, recalling that the island's tourism sector is highly dependent on arrivals from Russia, which represent about 20% of the total.

On Cyprus' growth prospects, the IMF says that growth is projected to slow from 5.5% in 2021 to around 2% in 2022, reflecting mainly the impact of the war and sanctions on export of services (including indirect from slower growth in Europe), and the negative terms-of-trade shock from higher energy and food prices. Last October, the IMF projected a 3.6% growth rate for Cyprus. ●



# Energy security transforms LNG backdrop

**A**s the world economy stumbles after the Ukraine invasion, energy security has become a top priority for many consuming nations. Several European countries are re-thinking their energy strategies as oil and gas imports from Russia have fallen dramatically. Experts say that floating LNG facilities offer a fast and flexible way to boost natural gas trade and underpin strategic new sources of energy.

Even prior to the outbreak of hostilities on Europe's eastern flank, the positive impact of floating gas facilities was being felt in various parts of southern Europe and beyond. Now though, one of Lloyd's Register's LNG specialists, Anna Apostolopoulou, believes that floating import, export and even production facilities can offer a cheaper, faster, and more flexible option as countries revamp their energy strategies.

Requirements are urgent and regulatory approvals are usually more straightforward for floating facilities, offering a faster route to final investment decisions (FIDs), says the classification society's Global Floating Offshore Installation Director. She also



Anna Apostolopoulou

believes that in a wider context outside of Europe, floating LNG offers great scope that promises to transform the lives of millions of energy-starved people. And here she is looking to parts of the world in which lengthy power cuts have become part of peoples' daily lives.

## Speed is of the essence

Apostolopoulou points to the speed at which LNG import terminals in the United States were converted into export hubs,

and the rapidly increasing volume of US LNG exports that are now being shipped to Europe to make up for war-related shortfalls. Areas of focus have also been floating facilities in the Mediterranean where the classification society has worked on projects in various countries including Greece, Cyprus, and Israel.

One of these is the new floating storage and regasification unit (FSRU) for Cyprus which is in the final stages of construction at Cosco Shipping Heavy Industry in Shanghai. The FSRU is expected to be commissioned in 2023 and is based on conversion of the Galea (pictured), a 137,000cu mtr LNG carrier built for Shell Singapore in 2002.

Lloyd's Register receives regular enquiries on projects like this across the region and worldwide and has developed a wide range of consultancy services at every stage of the process, including outline, technical and financial appraisals, Apostolopoulou explains. They include functions such as option evaluation, site assessment, plant design review, permitting, investment appraisal, HAZID and HAZOP risk analyses, conversion design, planning and oversight, and lifelong assurance.

When the converted Galea is sited at Alexandroupolis, she explains, LNG imported by ship will be stored as liquid on the FSRU, and then regasified and pumped via a 28km pipeline into Greece's national gas grid. However, gas from the facility will also be supplied to countries in the wider region including Bulgaria, North Macedonia, Romania, and Serbia.

**Wide range of options**

There are many choices in any floating project and a first task is to narrow these down by analysing possible development pathways, the LR executive explains. After a decision to choose floating rather than fixed plant, issues to consider include newbuild or conversion; whether to have an FSRU or a floating storage unit (FSU) tied into a regasification plant either on barge or shore; and optimal processing and storage capacity.

If conversion is deemed the optimal route, then suitable ships should be identified and assessed. LR's analysis indicates that there will be plenty of conversion candidates over the next few years. Older LNG carriers are unlikely to perform well against the IMO's new carbon intensity measures (see article on page 5) and owners could see a conversion sale as an interesting option to recycling.

Although conversions are faster and cheaper, there are still many complex and detailed considerations. They include issues such as a new regasification system, mooring arrangements, possible redesign of cargo tanks, energy requirements, treatment of boil-off gas, and external factors such as pipelines and jetties. It is also important to bear in mind that a ship to be converted must be viewed over a timeframe of two decades or more.

Choosing the right option rarely boils down simply to cost. But obviously the scale and length of the capital commitment must make sense. The economics of every project differ but, in broad terms, Apostolopoulou reckons that a new FSRU is typically about 40-50% cheaper than a fixed plant ashore. It could cost \$250-300m with a build time of 24-30 months. A conversion, on the other hand, might cost \$80-100m and take about 18 months.

Another factor to consider, she says, is that a spate of LNG carrier contracting

**Gastrade's FSRU project begins**



Official kick-off of the construction of Alexandroupolis FSRU unit on May 3, pictured: Greek PM Kyriakos Mitsotakis (centre) with PMs of Bulgaria, Serbia and North Macedonia and representatives of the operating company Gastrade, ministers and parliamentarians, as well as Charles Michel, president of the European Council

A number of high-profile dignitaries gathered in Alexandroupolis early in May to celebrate the start of Gastrade's floating storage regasification unit (FSRU) project to supply gas to south European markets. The Greek utility company will have LNG delivered by LNG carriers regasified and pumped through a 28km pipeline via Alexandroupolis to the Greek gas network

and thence to other countries in southern Europe.

Livanos company, GasLog, holds a 20% stake in the project and will provide and operate the FSRU ex-Galea, to be converted at Keppel in Singapore.

Meanwhile, Gastrade has also applied to the relevant authorities for a license to provide a second FSRU to be located close to the first.



recently means that few of the specialist newbuilding yards have slots available until the second half of the decade. Facilities with conversion expertise

including major yards in Singapore, for example, could offer a faster turnround with a positive impact on project economics. ●



# Regulation will shape future shipowner strategy

Greek shipowners are shaping their business strategies to reflect tightening environmental controls, writes **Stamatis Fradelos**, vice president, regulatory affairs, **ABS Athens**

**R**egulation is a constant presence in the global shipping industry and the changes taking place at present will do much to forge the operational landscape in the coming decades. Greece's shipowners are responding proactively to the challenges, making the operational, technical and financial adjustments required across the broader industry.

The environmental regulations already in the process of implementation and those still under development represent a radical shift towards lowering and ultimately removing carbon emissions from the industry.

And unlike some previous regulations that set a baseline and remain in place, the IMO's carbon reduction targets will see restrictions tighten as the years progress, while new regional rules will bring shipping into the European carbon market for the first time.

At the same time, the process of reducing SOx emissions that began in Europe and spread to the United States will be further extended, if a new emissions control area for the Mediterranean Sea is adopted.

## **IMO GHG strategy**

Influential IMO member states have proposed that IMO should adopt an ambition of zero emissions for the international shipping sector by 2050, together with strengthening the level of ambition for 2030 and to introduce an additional level of ambition in 2040 to ascertain that the full transition to zero-emission shipping is realized in 2050.

The IMO's 'mid term measures' which are expected to be finalised by 2025/26, include the International Maritime Research and Development Board (IMRB) supported by flag administrations and most of the shipowners' associations.

Funded by a mandatory payment \$0.624 per tonne of CO<sub>2</sub> emissions – corresponding to about \$2 per tonne of liquid fuel oil (MGO/MDO/LFO/HFO) purchased – approximately five billion US dollars will be gathered over the 10 years of the programme. The funds are to be invested in R&D projects for decarbonisation while cross-checking of payments against emissions will be reported in IMO DCS.

The International Maritime Sustainability Funding and Reward mechanism represents the alternative proposal by China. The proposed system is designed on the basis of the existing CII mechanism, where funding contributions will be collected from ships with actual CO<sub>2</sub> emissions above the upper benchmark level and 40% would be used to reward the best performers with actual carbon emissions below the reward benchmark level, 30% for capacity building and negative impact mitigation

in developing countries, 20% for research, development and technology transfer and 10% for administrative costs.

Japan is proposing the Zero Emission Vessels (ZEVs) Incentive Scheme where revenues raised by a carbon levy will be used as rebates to incentivise the uptake of zero-emission fuels. Although the levy rate would vary depending on assumptions made, a levy rate well below \$100 per tonne of CO<sub>2</sub> would likely ensure revenues that provide sufficient levels of incentive, at least in the initial period, as the analysis assumes rapid deployment of zero-emission fuels.

An Emission Cap-and-Trade System has been proposed by Norway which once it has established a cap on emissions, will ensure an annual reduction, following an agreed pathway aligned with the ambitions of the Initial IMO Strategy. The annual cap will determine the total amount of Ship Emission Units (SEUs) which will be made available for ships. The surrendering of SEUs equivalent to a ship's verified GHG emissions reported through the Data Collection System will result in substantial revenues.

Finally, the GHG Fuel Standard (GFS) is a European Commission proposal supported by EU member states for a technical goal-based measure to help ensure that the demand for low- and zero-GHG fuels from the shipping sector will increase. The GFS would require all ships above a certain size limit, e.g. 400 GT or 5,000 GT, to use fuels (or other energy sources) which have a well-to-wake GHG intensity at or below a certain limit value over a compliance period. The standard is expressed in the mass of GHG emissions per unit of energy used on-board a ship, e.g. CO<sub>2e</sub>/MJ. The GFS would be strengthened over time, thus ensuring a gradual and predictable phase-in of low- and zero-GHG fuels compatible with a trajectory towards the emission reduction level of ambition for 2050.

### Well to Tank and Tank to Wake

Also important to monitor will be the development of the lifecycle GHG/carbon intensity guidelines (LCA) aim to incentivize the uptake of sustainable alternative low-carbon and zero-carbon fuels. These guidelines provide well-to-tank



Stamatis Fradelos

and tank-to-wake GHG emission factors for all fuels and electricity used onboard a ship.

Although the well-to-tank emissions are not accounted for in international shipping, the LCA Guidelines will provide information to ship-managers and charterers on the sustainability of the fuels, both for GHG and other emissions, so they can make informed decisions during the selection of the fuel to be used on board.

Tank-to-wake emissions now include methane (CH<sub>4</sub>) and nitrous oxides (N<sub>2</sub>O)-equivalent CO<sub>2</sub> emissions. In addition, fugitive emissions such as methane slip are being considered with the introduction of a slip factor expressed as % of fuel mass while default emission and slip factors per fuel type, engine/converter type are proposed.

### EU Impact

The European Union's 'Fit for 55' package of measures and in particular, the extension of the EU ETS to shipping and the FuelEU Maritime Regulation are subject to negotiation in Brussels while shipowners put efforts to introduce amendments to the originally proposed text.

Concerning the revision of the EU ETS, discussions include the definition of the 'commercial operator' in a bid to make charterers equally responsible for

carbon emissions as well phasing-in the implementation between 2023 and 2025/26.

Operators face volatile compliance costs based on the fluctuating carbon price which reached almost €100 per ton of CO<sub>2</sub> at the beginning of February, falling to around €60 per ton CO<sub>2</sub> due to the war in Ukraine and quickly recovering to around €80 per ton.

### A new ECA?

Another consideration for operators planning their fuel selection strategy is that countries bordering the Mediterranean Sea have set out a proposal to designate the Mediterranean Sea as an Emission Control Area for Sulphur Oxides. The proposed 'Med SO<sub>x</sub> ECA', would operate in accordance with Regulation 14 and Appendix III of MARPOL Annex VI, to take effect from 1 January 2025, setting the sulphur content of fuel oil used on board a ship within its boundaries not exceeding 0.10% m/m.

Specifically, the proposed Med SO<sub>x</sub> ECA includes all waters bounded by the coasts of Europe, Africa and Asia, as well as:

- the western entrance to the Straits of Gibraltar,
- the Dardanelles,
- the northern entrance to the Suez Canal

The designation of the proposed Med SO<sub>x</sub> ECA is supported by an acknowledged need to prevent, reduce and control emissions of sulphur oxides and particulate matter from ships.

### Conclusion

Headquartered in Athens and serving the global industry, the objective and mission of the ABS Regulatory Affairs department is to support our clients in coping with forthcoming regulations and providing to the regulators the feedback from ship operators in order to assist in the development of a fair regulatory framework, assuring level playing field.

We have already started working with shipowner associations and the department has a new, additional objective to enhance ABS' engagement with administrations and regulatory bodies and support the industry with compliance guidance offering detailed insight and guidance on the impacts of today's unprecedented and dynamic regulatory environment. ●

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The last WISTA Hellas Annual Forum where panel discussions 'Operating in a world of sanctions' and on digital transformation in Shipping took place

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# Let's talk women in maritime

Gary Howard interviews **Maria Petraki**, operations, chartering and business development manager for ENEA Management, president of WISTA Hellas and second vice president at Hellenic Short Sea Shipping Association.

Speaking ahead of the inaugural IMO International Day for Women in Maritime, Petraki said the involvement of the IMO in raising awareness of diversity issues in our industry is important, so long as action and attention remains beyond days of celebration.

Petraki said that in her 24-year career and her time studying maritime business and maritime law before that, there are a lot of differences between the modern maritime industry and that of the past.

'When I started my career, there were not so many women around, although I come from a family where my mum also used to work in shipping. Now it's massive. In the beginning of my career, I would see many women lawyers involved, but now it's all over the sector and have seen change' said Petraki.

'The most important thing I've seen WISTA doing, and it has worked for myself, is the networking, bringing people together. You get the paradigm of other people that have succeeded, and you understand that it's easy for you to do it as well.'

Education is another important part of what WISTA does, said Petraki, and



Maria Petraki

the organisation believes in continuous education as the only way to make people qualified and prepared for the difficulties we face every day in our industry.

'In WISTA Hellas we are running a leadership program specifically for women in maritime with big graduate business schools in Greece. We have three universities supporting us and we jointly give scholarships for Master's degrees for ladies in the shipping, logistics, and in maritime businesses.'

Where there has been less change is at sea, said Petraki, which is an area of focus for WISTA Hellas and WISTA organisations around the world.

'With Posidonia, WISTA Hellas is taking the initiative of having a seminar where we will talk about women at sea. We will try to give good examples of the companies that have succeeded in integrating women into the workforce, and women who are captains or mechanical engineers and how they have succeeded.'

The aim of the event is to show the industry that while it may initially involve difficult changes to create the right environment onboard, women can be successfully integrated into crews and ships and companies alike are better for it.

'On an international level, I know that WISTA International has worked with Anglo Eastern to create a booklet on safety issues for women at sea. So these are initiatives that we now have, and I'm sure in the future, we will have more where we can tackling the issue because it's not a problem. It's just an issue that we have to overcome.'

Petraki views shortsea shipping as a potential gateway for female seafarers

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```
public static final int... (ble d);  
// Public Instance Methods  
public void addPattern(String newPattern)  
public Object...  
public boolean...  
public void search... (String[] format);  
public String toPattern...
```

**Port Management System**

```
class Block {  
    constructor(index = 0, previousHash = null,  
    data = {}, difficulty = 1) {  
        this.index = index  
        this.previousHash = previousHash  
        this.data = data  
        this.timestamp = new Date()  
        this.difficulty = difficulty  
        this.nonce = 0  
        this.mine();  
    }  
}
```

**Container Value Chain**

```
(value) {  
    for (let i = 1; i < this.blocks.length; i++) {  
        const currentBlock = this.blocks[i]  
        const previousBlock = this.blocks[i-1]  
        this.blocks[i].hash = this.blocks[i-1].hash + currentBlock.value;  
    }  
}
```

**Teleport 2.0**

```
// Public Class Methods  
public static double getDouble (double d, boolean positive);
```

**BrainPort 2020-2025**

```
class Blockchain {  
    constructor() {  
        this.blocks = []  
        this.index = 1  
    }  
}
```

**Pit Stop Port Operations**

```
addBlock(data) {  
    const index = this.index;  
    const previousHash = this.blocks[index-1].hash;
```

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[www.apba.es](http://www.apba.es)



Board of directors, WISTA Hellas  
with Minister, Mr. Ioannis Plakiotakis

looking to get experience at sea without committing to long deployments in unknown environments and removing some of the stresses seafarers undergo as highlighted recently by the pandemic.

‘Short sea shipping is an area where women can more easily go on trips, because the stress factor is out. Like in the cruise industry, there are many more women on board in short sea shipping.’

Through her work in the Hellenic Short Sea Shipping Association, Petraki sees companies doing their best to hire and retain women.

‘We have to stress that the environment has to be right on board. We need for these women to be safe, and be happy on what they do. And of course, there are many companies with longer haul voyages that do have women onboard, and it works.’

The short sea market in Europe is facing stresses of its own, mostly in the form of upcoming regulatory changes both at EU and IMO level and how they will affect a fragmented market mostly comprising smaller companies with smaller assets. For these kinds of companies, associations are even more crucial both for alerting companies to upcoming changes, and for relaying the concerns and input of smaller owners and operators to those regulatory decision makers affecting markets.

While smaller companies in the shortsea sector may not have the means to invest heavily in new technologies like those needed to meet environmental goals, the sector is an ideal test bed for such equipment.

According to Petraki, the shorter times at sea, smaller scale of the vessels and predictable trade patterns are ideal for testing technologies like ammonia- and hydrogen-fuelled ships, but outside assistance is often needed.

‘We are not talking about huge companies who have enormous amounts of money to use to test and invest in experiments.’

Countries like Norway and Germany have managed to access funds for environmental



technologies in shipping through their own governments and the EU, and Southern Europe needs to do the same, said Petraki. Companies big and small have accepted the need to decarbonise and are onboard, but for now access to alternative fuels and funding are a hurdle for smaller owners.

One area owners can and are making progress on decarbonisation is in retrofitting existing vessels, where upgrades like new propellers, better paints and more intelligent engine management are making gradual improvements to efficiency and performance. ‘Everybody is trying to do something,’ said Petraki.

Although regulatory pressure on the shortsea shipping market could lead to consolidation, Petraki hopes the industry finds another way forward.

‘Consolidation might need to happen because it will give the companies the power

and the means to facilitate and to follow all these new regulations. The reality is that some small companies will not have the means and the costs will be huge for them. But we will see, I do remember in the 90s when the ISM was coming into force. We were crazy, wondering which small companies would not be able to adapt and would not exist anymore. Everybody adapted and moved forward.’

One strength of smaller companies is in their agility and ability to adapt, Petraki added, something she expects will come into play during the transition to zero carbon shipping.

‘Think about how I introduced myself: chartering, operations, business development. Maybe we have a more hectic job, but it’s a smaller fleet, so it can be done. We are involved in every area that is necessary. Maybe that’s the way for us that we survive. ●



WISTA Hellas visited KESEN in February 2022 to discuss training and certification of seafarers



## Christina O fitted with low-flow BIO-SEA

**W**hat is undoubtedly one of the world's most famous luxury yachts is successfully operating an advanced BIO-SEA ballast water treatment system fitted as part of a major refurbishment at the Fotinakis D.K. Ltd yard in Greece.

Christina O, the 1943-built motor yacht named after the only daughter of Greek shipping magnate Aristotle Onassis, was fitted with a low-flow BIO-SEA system from France's BIO-UV Group last year.

To fit the system in the limited space available in the 325ft long vessel's machinery room, the 87cu mtr per hour capacity BIO-SEA L03-0087 system was supplied on two separate skids – one housing all mechanical components, the other the system's electrical works.

'System size was a critical concern,' said Costas Carabelas, md, Costas Carabelas Technical Office (CCTO), the naval architect and engineering firm responsible for yard and equipment selection, engineering and installation.

'It was a challenge. This ship is like a museum, so any new installations had to fit in the existing space without requiring any significant structural change,' said Carabelas.

The French manufacturer suggested a plug-and-play, split skid version of its BIO-SEA L-Series as this allowed CCTO's technical teams to dismantle the main components to easily pass-through the hatches without cutting holes in the vessel. The BWTS was rebuilt in-situ, in the engine room.

'The BIO-SEA system is operating as expected; performance is excellent. It is very simple to operate, and the yacht is now compliant with the IMO D2 standard and the USCG regulations. In BIO-SEA we found a ballast water treatment system that meets the very high standards required of this sector: a compact design, high-end components, yacht-standard aesthetics and a competitive price,' said Carabelas.

Franck Perier, the technical supervisor leading BIO-SEA, said: 'This is a very famous ship and the testimony received reflects the positive feedback we get from all operators of a BIO-SEA system. Since the Christina O installation, CCTO has recommended BIO-SEA systems to other luxury yacht operators.' ●

## BV launches container sector guidance

As fortunes in the container sector exceed those in the tanker and dry bulk markets, Bureau Veritas (BV) Piraeus office's technical team led the development of a formalised approach to support the safe carriage of containers in bulk carriers. BV's Guidance for Studying and Preparing a Bulk Carrier for the Carriage of Containers provides operators with pathways based on analysis and a thorough understanding of safety, regulatory and operational requirements.

The guidance was developed by technical experts based in Greece, in collaboration with BV's technical directorate in Paris.

Piraeus-based Paillette Palaiologou, BV Marine & Offshore's vp for the Hellenic, Black Sea & Adriatic Zone, said: 'We have significant experience and knowledge of bulk carrier design, classification, and operations across BV and particularly here in Greece.'

'Additionally, our class rules for



Paillette Palaiologou

container lashing and our own associated lashing software are highly sophisticated. The combination of bulker and boxship capability and understanding has enabled our teams

to rapidly provide a framework to meet market requirements as demand emerges for bulkers to be able to carry boxes.'

The guidance outlines two main pathways for stowing containers in holds, either as a 'block' of lashed cargo without retrofitting of special container securing fittings, or as more conventional stacks of containers, in which case such equipment may need to be fitted permanently or temporarily.

The IMO Code of Safe Practice for Cargo Stowage and Securing (CSS Code) for ships equipped with a Cargo Securing

Manual, provides a key reference point in its Annex 1 'Safe stowage and securing of containers on deck of ships which are not specially designed and fitted for the purpose of carrying containers', as well as the calculation methods for forces acting on cargo units and the efficiency of securing arrangements.

However, the fact bulk carriers are 'not specially designed and fitted for the purpose of carrying containers', combined with the potential need to maximise the intake of containers, may raise concerns related to the integrity of the vessel's structure and the cargo itself, as well as the safety of the crew and the stevedores.

Palaiologou said: 'In many ways, we are going back to the future, as general cargo and multi-purpose ships have always been able to carry containers. In the context of today's market demands, the capacity to move containers in bulk carriers is a key advantage. With our guidance, we wish to ensure modern analysis tools and techniques can be applied to support safety as well as modern operational efficiency.'



Helmepa's inspiration is working

Helmepa [Hellenic Marine Environment Protection Association] this year celebrates 40 years since Greek shipowners and seafarers inspired by George P Livanos joined forces in an unprecedented move, in a collective desire and voluntary commitment to pass on to future generations a clean and healthy marine environment

Since its launch in 1982, when environmental challenges were not as imperative as they are today, Helmepa has led the way in mapping best practices, promoting the exchange of knowledge and know-how on the green and digital transition of shipping.

Based on implemented awareness raising campaigns on the marine environmental protection, climate change and maritime safety, Helmepa strengthened the interconnection between the academic community and the shipping industry. Today many organisations and groups are following Helmepa's lead and organising events aimed saving our seas.

It has also led to the birth of other 'Mepas' and on June 6, 2006 Intermepa was born and comprises AUSMEPA (Australia); CYMEPA (Cyprus); HELMEPA; NAMEPA (North America); TURMEPA (Turkey); UKRMEPA (Ukraine); and URUMEPa (Uruguay).

Helmepa has advanced the employment prospects in the blue economy for youth through the Blue Generation initiative, focusing maritime training for the development/strengthening of professional skills

and projected through international collaborations and fora the commitment of the Greek shipping and society for the health of our oceans.

Helmepa's chairperson Semiramis Paliou, says Helmepa 'proves to be resilient and adaptable, with fast reflexes to meet the challenges and needs of our time. Our strongest points are the pioneering DNA and of course the people who have shaped us. Hundreds of thousands of volunteers, youth and adults, from Greece and abroad, the shipping community and beyond, the media that help us spread our message, we all share the same mission and belief that we can save the seas,' said Paliou.



## Danaos booming

The last 12 months have very rewarding for Piraeus-based container ship operator Danaos. Listed on the NYSE the company's stock is proving a top performer as the John Coustas-led owner is going from strength to strength in a container ship bull market.

Indeed, Danaos continued a trend that saw its stock appreciate 253% during a rampant 2021.



The global supply chain woes resulted in Danaos reporting a massive net income of \$1.053bn for 2021, up from \$153.55m in 2020.

Further, Danaos recently placed a newbuilding order with China State Shipbuilding Corp (CSSC)'s Dalian Shipbuilding Industries Co (DSIC) for up to four 7,100teu methanol-ready ships to cost just under \$80m each with the firm ships to deliver in 2024. And in step with the times, Iraklis Prokopakis (pictured centre) Danaos' senior vp, treasurer and coo signed the contract via video conference.

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# Is Liberia Flag's major customer Greece?

Posidonia will welcome the shipping industry, owners, providers, registries, and an important participation by the Liberian Registry for the first time since the disruption caused by the pandemic. **Michele Labrut** reports.

The Liberian Registry (Liberian International Shipping & Corporate Registry-LISCR) has been the preferred flag for Greek shipowners for several years now. With Liberia continuing to be the fastest and largest growing major Ship Registry in the world, the Greek fleet under the Liberian flag has grown accordingly. Greece makes up over one fifth (1,420) of the entire 5,000 ship Liberian fleet; so, as the Greek shipping fleet grows, so Liberia grows. Last year, Greece added 326 vessels with 75.5m gt to Liberia's fleet.

'We have seen tremendous growth in the tanker and container segments, of which Liberia is the world's largest. But also, in dry bulk. Our fleet growth in Greece has been diversified,' says LISCR coo Alfonso Castellero. Tankers represent 35%, container vessels, 30% as well as bulk carriers and dry cargo, offshore and others, 3%.

'The key to this growth, and it is no secret, is service. The Greek shipowners are amongst the most professional and most intelligent in the world; they demand the best and when it comes time to flag their fleet, they look to the Registry with the best service available locally. In Greece that is the Liberian Registry,' he adds.

Michalis Pantazopoulos is the manager and senior vice president of the Liberian Registry Greek office since 2004. He has focused on reforming the Register's services to Greek shipowners and management



Alfonso Castellero

companies, an effort that was valued and recognised, while actively promoting the interests of Greek shipping.

'Today, 18 years later, we thank the Greek shipowners for their preference

of the Liberian flag, that proves once again the Register that was adopted by Greeks in 1948 continues its strong links and service offering to Greek shipping.

'The recipe of our approach to Greek shipping is simple and based on consistency, responsibility, prompt response and prompt service, any day and hour as shipping works around the clock. Our goal is to find solutions, to support the ship and the shipowner. Our faith in the capabilities of Greek shipowners who, regardless of shipping conditions, continue to invest and contribute to our Greek economy, creates additional obligation for support and solidarity,' says Michalis Pantazopoulos.

The Liberian fleet evolution within Greek shipping is testament to the strong links which have existed between Greek shipping and the Liberian flag, dating back to the day in 1949 when the Stavros Niarchos-owned oil tanker World Peace became the first ship to be registered under the Liberian flag. From that time, until the present day, the

Greek shipping community has supported the Liberian Registry, and vice-versa, through good times and challenging times.

Whilst COVID-19 and its effects in the shipping industry have been dramatic requiring adaptation of services. Immediately, Liberia set up a framework of proactive measures to continue full operations and support to the vessels and ship managers worldwide.

'Liberia was the first flag to implement 'Remote Closings' whereby vessels could still be delivered and change flag without the need for the in-person meetings previously required. This ensured the maximum in safety for not only the clients of the Registry, but the staff too and it has become the Registry's great success that allowed the Greek office to record 'All Time record in 2021,' explains Pantazopoulos.

'At a time when companies were looking to reduce overheads, we even increased them, especially in Greece, as we invested in professional maritime staff to service the fleet. Liberia focused on streamlining, using common sense, and removing bureaucracy and extra red tape,' adds Castellero.

Greece remains the undisputed number one shipping nation in the world, and Liberia remains the number one flag of choice for Greek shipowners. Liberia has contributed to the quality growth of Greek shipping, which is testament to the trust and respect that exists between the Greek ship-owning community and the Liberian Registry.

Since 2019 the Liberian Registry has grown 35% (in terms of Gross Tonnage, the main metric of measurement for flag States). Recently, the Liberian Registry was awarded Qualship21 status for 2022-2023 by the United States Coast Guard's (USCG). QS21 status brings advantages to vessels visiting the US.

'Liberia continues to not only grow through newbuilding, but an increasing number of ships registering with Liberia moving away from the Marshall Islands and Panama. We are confident this growth will continue, especially as we launch our latest services such as our Detention Prevention Programme, and our 24/7 Duty Officer video-chat function,' concludes Castellero.

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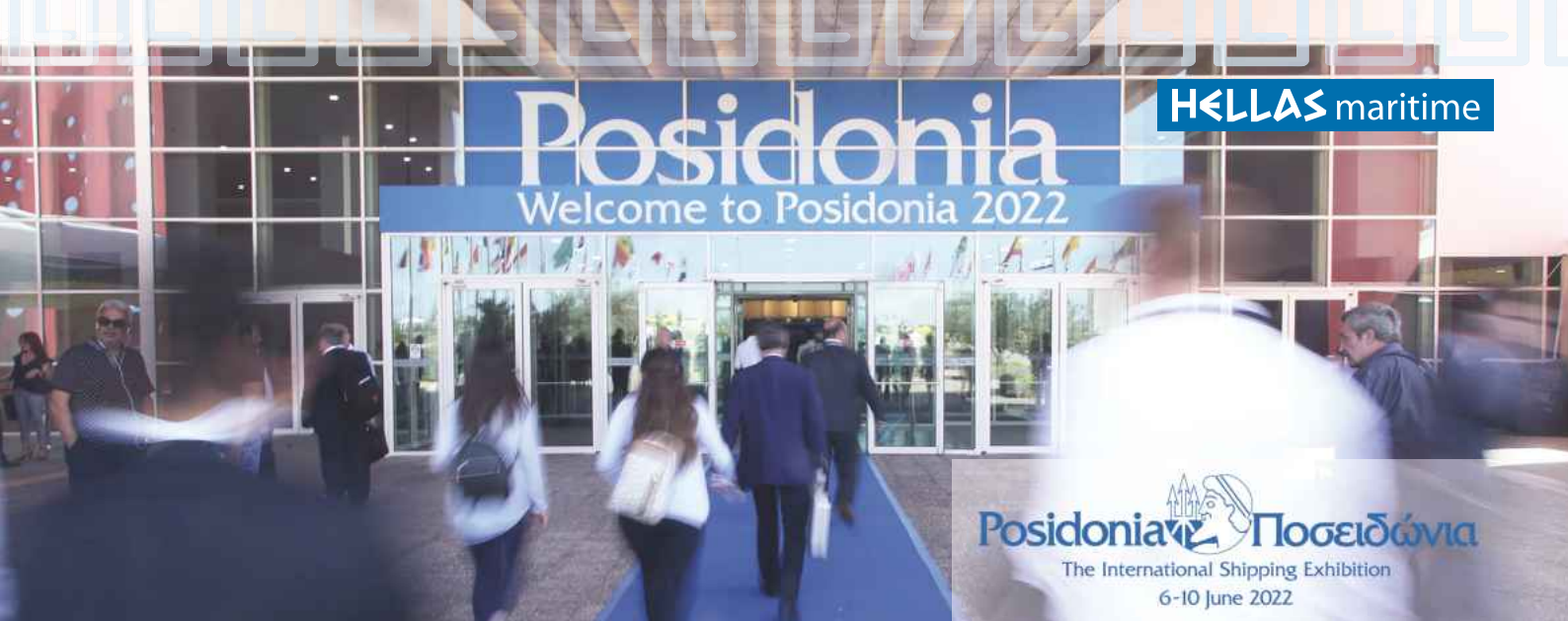
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# Posidonia welcomes 'great reset of the shipping industry'

This June sees the return of the well-established international shipping exhibition, **Posidonia**, after a 4-year absence due to the pandemic, with solid foundations to not only meet the high expectations of the international shipping community, but also exceed them.

In a statement from the President of the Union of Greek Shipowners, Ms Melina Travlos, she said: 'It is with great pleasure that we welcome to our country, the home of the world's largest shipowning community, international exhibitors and visitors, to participate in this prestigious global maritime event.'

'It is notable that during the four-year period since Posidonia 2018, the shipping industry continued, uninterrupted, to serve 90% of world trade. In the volatile global environment, shipping has acted as a beacon of stability, responding to the unprecedented conditions we have been facing due to the international health crisis the last two years, as well as due to the geopolitical crisis of recent months in Europe. Once again, the shipping industry has demonstrated its strategic dimension and its essential contribution to the functioning of the global ecosystem as well as the welfare of the citizens of the world.'

In this context, Posidonia 2022 will be the ideal event to highlight the key, multi-level and irreplaceable role of the shipping industry in the global economy.'

The Greek-owned fleet maintains its leading role in the shipping industry. Today it represents a 21% of the world's tonnage and

59% of the European Union (EU) fleet. In particular, it controls, inter alia, 32% of the world fleet in tankers, 25% of bulk carriers and 22% of LNG carriers. Greek shipping, which is an integral part of European shipping, provides a strategic advantage to the European Union in its effort to ensure the adequacy and independence of its supply with essential goods and energy.

Theodore Vokos, managing director, Posidonia Exhibitions, the event's organiser, said: 'We are ready for the great reset of the shipping industry. And we are delighted to witness such strong demand and feel the desire of the international maritime community for Posidonia's physical

resumption. As the home of the Greek shipping community, Posidonia has always been a popular destination to network with leaders of industry, showcase the latest in maritime engineering and technologies, and engage in discussions that shape the international discourse on the sector's most important issues,' said Vokos.

Taking place at the Athens Metropolitan EXPO Centre from 6-10 June 2022, more than 1,900 exhibitors will be hosted and some 18,000 trade visitors are expected over the five days. The global appeal of Posidonia is not just measured in square metres and exhibitors numbers, but by the 85 national flags that are hoisted outside





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Right: 92,500 DWT Bulk Carrier *Eptalofos*  
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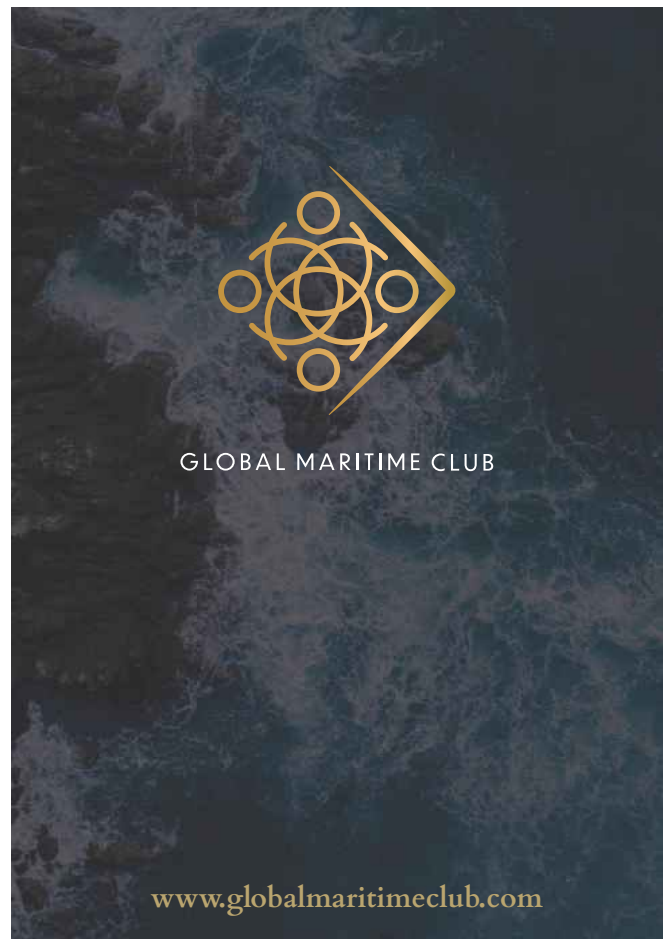
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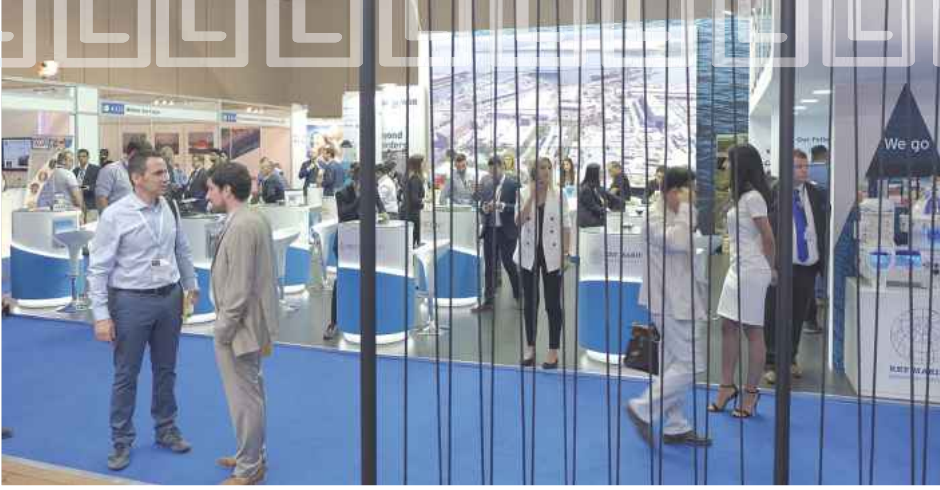
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## Focus on Climate Change

With all eyes set globally on tackling climate change, Posidonia 2022 will also be an excellent opportunity for promoting the environmental footprint of global shipping, as well as the environmental performance of the Greek-owned fleet. At the same time, the Exhibition will offer a unique communication platform of the most innovative and technologically advanced capabilities of ship operation, with a particular focus on applications that lead gradually to carbon-free shipping.

President of the Union of Greek Shipowners, Ms Travlos, said: 'I would especially like to highlight the timeless commitment of Greek shipping to the promotion of 'green shipping'. Greek

shipping, utilizing its accumulated know-how and experience, remains a frontrunner, always promoting realistic proposals and goals, such as the research and development of alternative, environmentally friendly marine fuels. Furthermore, we support any substantiated effort aimed at making shipping even more environmentally friendly and internationally competitive.

'The Union of Greek Shipowners is committed that Greek shipping, as a global leader in the industry, will be at the forefront of initiatives to adopt viable policies for the benefit of sustainable development, the protection of the planet and the smooth functioning of the global ecosystem.'

the venue's main entrance representing nationalities of the event's highly diverse demographic profile of exhibitors and visitors alike.

Inside the venue, a total of 25 national pavilions will have a presence – five more than in 2018 – showcasing each country's shipping eminence.

'We have also seen a 20% increase in exhibitors from the United States,' added Theo Vokos, 'as well as over 100 Posidonia new entrants including more than 30 start-ups from the digital economy.'

As the President of the Union of Greek Shipowners Travlos has said, 'This family's strong roots go deep: five millennia for Greek shipping and half a century of Posidonia. Together at Posidonia we will be looking ahead, to great opportunities and to addressing the challenges that we face together. Renewing and beginning friendships that are the foundation of long-term success.'

## Spotlight on digital economy

A significant number of marine industry-focused tech start-ups from around the world will showcase their solutions and platforms during the exhibition.

Online marketplaces designed to bridge the gap between marine service suppliers and ship owners & managers and developers of innovative solutions promising to help the industry achieve decarbonisation goals and solve just about any issue they are faced with, will converge on the exhibition floor of the world's most prestigious shipping event to educate the industry on the latest technological developments and promote their solutions.

'Ground-breaking innovations backed up by cutting-edge technologies which are set to transform shipping will be in full display in great numbers this June as the race towards the digitisation of the marine sector is well underway in a market which experts estimate to be worth \$345bn by 2030,' said Theodore Vokos.

Market forces, such as increased profitability in the container and dry bulk sectors, combined with increasing regulatory and social pressures to reduce carbon efficiencies are driving owner and operator interest in the accelerated adoption of new technologies that improve competitiveness and fuel efficiencies.

The list of tech start-ups participating at Posidonia this year includes Opsealog, a French company specialized in performance management; SOL-X, a leading Behavioural Based Safety company initially from California and now based in Singapore; Harbor Lab which was



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6-10 June 2022



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launched in March 2020 in Athens to provide software for the disbursements departments for shipowners, management companies and charterers and TICTAC Recovery, the first Data Recovery Company in Greece operating since 1999, which has saved the day for many companies ever since.

Joining the digital list is Bid2board whose ceo, Andreas Minos Zompanakis, said: 'Posidonia is a great place for us to demonstrate our technology in front of a targeted and influential audience from the global maritime community.'

Digital frontrunner Dualog is preparing to showcase its solutions with the purpose of bringing ship and shore closer, whilst Shipping 4.0 is the motto of KeeIX, another

exhibitor at Posidonia 2022 along with Lemissoler Group.

The reduction of maritime emissions is the focus of another Posidonia 2022 exhibitor, ChordX, which develops and provides innovative solutions that help ship owners and operators reach the industry's decarbonisation goal.

The ever-growing list of tech start-ups exhibiting includes Nereus Digital Bunkers, a Greek marine fuel brokerage and technology company and MESPAS, a Swiss IT and engineering company.

#### **Focus on decarbonisation roadmap**

The world's leading classification societies – including the likes of ABS, BV, CCS, Class NK, DNV, KR, LR and RINA – are

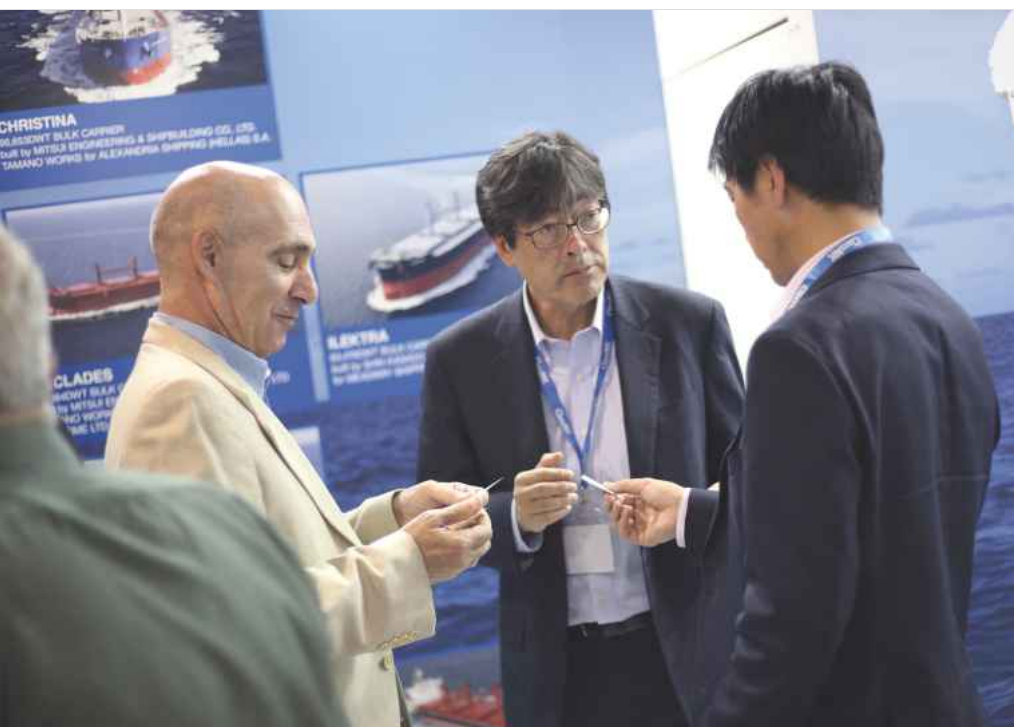
returning to Posidonia this June, following the pandemic-induced hiatus, during which they have been mapping out the path to the International Maritime Organisation's 2030 deadline, for an at least 40% reduction of shipping's average carbon intensity (CO<sub>2</sub> per tonne mile), compared to 2008.

The most imminent milestone of the IMO's decarbonisation roadmap is 1st January 2023, requiring all vessels calculate their Energy Efficiency Existing Ship Index (EEXI) and establish their annual operational Carbon Intensity Indicator (CII).

Speed is of the essence, both in terms of how quickly shipowners and the industry at large could respond to the IMO's short term monitoring requirements, as well as insofar their long-term commitment to lower the limit of knots their fleets can travel.

'We know that the journey to a destination of net zero by 2050 must begin and many shipowners and operators are well on their way. But companies and individuals will move at different speeds. Classification will play a key and vital role on the way to net zero, supporting stakeholders, whatever their speed of change, but we probably need to prepare to be surprised,' said Paillette Palaiologou, vp marine & offshore division, SE Europe, Black Sea & Adriatic Zone, Bureau Veritas.

American Bureau of Shipping (ABS) is another classification leader with many nautical miles under its belt on the course to decarbonisation. From its Athens-based central hub of its international sustainability network, ABS has been working with owners and operators



to develop individual decarbonisation strategies across the areas of benchmarking, improvement and monitoring.

According to DNV, decarbonisation is a challenge that no one player, or even industry, can tackle on its own. 'Today we have moved on from declarations of intent to

action. We need a collaborative effort, with joined-up infrastructure, energy, technology, understanding, regulations, and financial support, all striving towards the same goal. There is real momentum building, and we all need to keep focused on taking the next step forward to get to this goal,' said Knut Ørbeck-Nilssen, ceo DNV Maritime.

Theodore Vokos said: 'Decarbonisation and its drivers of new propulsion technologies, alternative fuels and required infrastructures will be extensively debated at the Posidonia 2022 Conference programme, as indeed will all other issues of interest and concern to the global shipping industry.'

## Thought Leadership takes centre stage



The Posidonia 2022 conference programme is set, once again, to be an outstanding global platform designed to educate, inform, update and provoke debates around every aspect and sector relevant to the international maritime community.

The booming dry bulk and container markets, the decarbonisation debate, new technological challenges and how they reshape the industry, the initial impact of COVID-19 and the subsequent rebound from it, as well as the uncertainty of what the future holds in a post-pandemic world, will be some of the topics to be addressed during the conference programme of Posidonia 2022.

On 6th June, Capital Link returns with its 8th Maritime Leaders Summit at the Four Seasons, Astir Palace Hotel, whilst back at Posidonia, two sessions will be held by Heraklion Port Authority SA with a focus on alternative maritime power and Suez Canal Authority/Consult Navigation Agency will discuss latest news.

Kicking off the conference programme at the Posidonia venue on 7th June, Tradewinds – a regular since 2012 – brings its iconic Tradewinds Shipowners Forum 2022. Throughout the day – from

10.30hrs right through to 18.30hrs, nearly 16 other content sessions will take place brought to Posidonia by industry names including: UKHO Admiralty Maritime Data Solutions; Hellenic Ports Association (ELIME); Institute of Chartered Shipbrokers Greek Branch and Maritime London and Society of Maritime Industries.

The 8th June promises to be no less busy with the HELMEPA Conference from 10.30-14.30hrs in the Conference Hall and a hive of activity across the Seminar Rooms with sessions from the likes of WISTA Hellas; National University of Athens; BIMCO and Ocean Technologies Group.

Making its global and Posidonia debut on 9th June is the Global Maritime Club Summit, organised by Seatrade Maritime. Taking place from 1030-1900hrs in the Conference Hall, the day will consist of sessions looking at Digitalisation Demystified and a deep dive look at the future of seafarers.

Across the Seminar rooms, multiple sessions will take place throughout the day and include a session from the America-Hellenic Chamber of Commerce/North American Marine Environment Association/US

Commercial Service, US Embassy Athens. Other companies bring their content to the table include: Orca AI; RINA Consulting and Dataports consortium.

The last day is by no means the least filled with activities and includes YES to Shipping Forum 2022 from 10.30-17.00hrs in the Conference Hall and multiple sessions from the Union of Greek Shipowners; National Technical University of Athens and a press conference at 11.00hrs from the Union of Greek Shipowners.

Other highlights include: the Japan Ship Exporters Association seminar; the 3rd Korea-Greece Hellenic Maritime Cooperation Forum and a conference by the Polish Embassy in Greece. Posidonia is also proud to support HELMEPA, WISTA Hellas, the Yes Forum youth project, the Hellenic Institute of Maritime Technology, Isalos.net, Adopt a Ship, Sailor's Society, Mercy Ships, the Municipality of Piraeus and the Institute of Chartered Shipbrokers, who will also be organising conferences and seminars at Posidonia 2022.

The signature Posidonia Games will again be an essential part of the Posidonia experience, with hundreds of exhibitors expected to participate in the multidisciplinary sporting calendar comprising of the sailing Regatta Posidonia Cup, the Posidonia Running Event, the Posidonia Shipsoccer Tournament, the Posidonia Golf Tournament and the all new Posidonia 3on3 Basketball.

Posidonia is organised under the auspices of the Ministry of Maritime Affairs & Insular Policy, the Union of Greek Shipowners and the Hellenic Chamber of Shipping and with the support of the Municipality of Piraeus and the Greek Shipping Co-operation Committee.

2024

The International Shipping Exhibition



# Posidonia

**3-7 June 2024**

**Metropolitan Expo, Athens Greece**

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The International Shipping Exhibition

Organisers: **Posidonia Exhibitions SA**, e-mail: [posidonia@posidonia-events.com](mailto:posidonia@posidonia-events.com)

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	Organiser	Event Title	Venue	Time
1/6	University of Piraeus, Dept. of Maritime Studies	Soft Skills & Human Wellbeing - The case in Shipping	Piraeus Chamber of Commerce and Industry - Events Hall	10:00-17:00
	Capital Link	8th Capital Link Maritime Leaders Summit - Greece	Four Seasons, Astir Palace Hotel	08:30-15:30
6/6	Heraklion Port Authority SA	ELECTRIPORT - Alternative maritime power in the Port of Heraklion	Seminar Room 2A	18:45-20:30
	Suez Canal Authority/ Consult Navigation Agency	Suez Canal Authority: Dues, Rebate, Traffic, Latest News	Seminar Room 2B	18:45-20:30
TUE 7/6	TradeWinds	TradeWinds Shipowners Forum 2022	Conference Hall	11:00-16:00
	Embassy of the Republic of Poland	Conference	Seminar Room Central	10:30-12:30
	Hilo Maritime Risk Management	Preventing Maritime Incidents Through Data & Analytics	Seminar Room 1A	10:45-12:30
	Glafos Marine Ltd	Presentation of Bugwright2 - Autonomous Robotic Inspection and Maintenance on Ship Hulls, European H2020 research project	Seminar Room 2A	10:45-12:30
	Admiralty Maritime Data Solutions	Navigating the Maritime Future	Seminar Room 1B - Sponsored by Admiralty	11:00-13:30
	Maritime London & Society of Maritime Industries	Addressing safety and assurance concerns on the road to net-zero shipping	Seminar Room 2B	11:00-12:30
	Maritime Research Institute Netherlands (MARIN)	Wind Propulsion, One of the Drivers Towards Sustainable Shipping	Seminar Room 1A	12:45-14:30
	Ocean Finance PC	EALING: Electrification in Ports and Vessels - Challenges and Sustainable Solutions in Europe	Seminar Room 2A	12:45-14:30
	Hyundai Heavy Industries	Technical Seminar & Networking	Seminar Room 2B	12:45-14:30
	Japan Ship Exporters' Association (JSEA)	JSEA Seminar	Seminar Room Central	13:00-17:00
	Ninety Percent of Everything	Eating the Elephant - Digital Transformation in Maritime	Seminar Room 1B - Sponsored by Admiralty	13:45-15:15
	SKF	Smooth operation with SKF Lubrication Management & Condition Monitoring services	Seminar Room 1A	14:45-16:30
	Vessel Performance Solutions	Fleet Performance and Carbon Intensity management	Seminar Room 2A	14:45-16:30
	Hellenic Ports Association (ELIME)	Ports looking to the future: Challenges and perspectives	Seminar Room 2B	14:45-16:30
	Admiralty Maritime Data Solutions	Meet the UKHO experts	Seminar Room 1B - Sponsored by Admiralty	15:30-18:00
	Bureau Veritas	Maritime Cybersecurity Challenges - What does the future hold?	Bureau Veritas stand 2.201	16:00-16:45
	Maritime Battery Forum	Which battery for your ship? - Comparison and Q&A with the manufacturers	Seminar Room 1A	16:45-18:30
	Institute of Chartered Shipbrokers Greek Branch	Future of Shipping Skills: Digital, Green, Social	Seminar Room 2A	16:45-18:30
	Eutelsat	How to meet Evolving Demands for Maritime Connectivity?	Seminar Room 2B	16:45-18:30
	WED 8/6	Hellenic Marine Environment Protection Association	HELMPEA Conference	Conference Hall
BIMCO		No Turning Back: Decarbonisation in practice	Seminar Room Central	10:30-14:30
Digivalue		d> MarIns - The Ultimate Software Solution for the Marine Insurance Industry	Seminar Room 1A	10:45-12:30
National Technical University of Athens		The initiatives of NTUA for technology transfer and promotion of innovation and entrepreneurship	Seminar Room 2A	10:45-12:30
Admiralty Maritime Data Solutions		Navigating the Maritime Future	Seminar 1B - Sponsored by Admiralty	11:00-13:30
Shipmedcare		Panel discussion on Medical Teleconsultation for commercial vessels. Ask the experts	Seminar Room 1A	12:45-14:30
DNV		DNV Event	Seminar Room 2A	12:45-14:30
Ocean Technologies Group		Powering the People that Power World Trade - enabling our maritime professionals in a time of change	Seminar Room 2B	12:45-14:30
Hyundai Global Service		HHI Group Seminar	Seminar Room 1B - Sponsored by Admiralty	13:45-15:15
WISTA Hellas		Women at sea	Seminar Room 1A	14:45-16:30
RINA		RINA Event	Seminar Room 2A	14:45-16:30
The Embassy of the Republic of Korea - IOBE		3rd Korean - Hellenic Maritime Cooperation Forum	Seminar Room Central	15:30-19:00
Admiralty Maritime Data Solutions		Meet the UKHO experts	Seminar Room 1B - Sponsored by Admiralty	15:30-18:00
Danica Crewing Specialists		The Importance of employing a Diversified Crewing Strategy	Seminar Room 1A	16:45-18:30
Green-Jakobsen A/S		Strategically driving and directing human performance using the Delta Method	Seminar Room 2A	16:45-18:30
One Sea		One Sea Press Briefing	Seminar Room 2B	16:45-18:30
THU 9/6	Global Maritime Club in association with Seatrade Maritime	Global Maritime Club Summit	Conference Hall	10:30-19:00
	American-Hellenic Chamber of Commerce (AmChamGR)/ North American Marine Environment Protection Association (NAMEPA)/ U.S. Commercial Service, U.S. Embassy Athens	3rd Trading in US Waters: Towards a Decarbonized Maritime Sector by 2050, Seminar	Seminar Room Central	10:30-15:00
	School of Mechanical Engineering, Aristotle University Thessaloniki & Atmospheric Composition Research, Finnish Meteorological Institute	H2020 SCIPPER and EMERGE Projects: Monitor and decrease emissions of shipping	Seminar Room 1A	10:45-12:30
	RINA Consulting	Engimmonia Project	Seminar Room 2A	10:45-12:30
	SHIPSERV Ltd	Powering Simple, Secure and Sustainable Trade in the Maritime Economy	Seminar Room 2B	10:45-12:30
	Admiralty Maritime Data Solutions	Navigating the Maritime Future	Seminar Room 1B - Sponsored by Admiralty	11:00-13:30
	DataPorts consortium	DataPorts H2020 Project - Cognitive Ports of the Future	Seminar Room 1A	12:45-14:30
	Hellenic Institute of Marine Technology	New Technologies 2023, 2030, 2050 and Beyond	Seminar Room 2A	12:45-14:30
	ABS, Global Ship Systems Center - Joint Development project with ABS, SDARI (CSSC), Thordon Bearings Inc. and National Technical University of Athens	Sterntubeless Vessels	Seminar Room 2B	12:45-14:30
	Orca AI	Enhance fleet safety and efficiency with AI and computer vision algorithms	Seminar Room 1B - Sponsored by Admiralty	13:45-15:15
	Economia Group - Kerkyra Publications SA	Winning Shipping Strategies	Seminar Room 1A	14:45-16:30
	A.S. Prote Maritime Ltd	Effectively Supporting anti-Piracy Measures and Contributing to the Recovery of Hostages and Vessels by using UAS: the Active Role of the Aboard System ARSx2	Seminar Room 2A	14:45-16:30
	Sea Commerce (America) Inc. Houston Texas	Decarbonization: Rise of methanol as a future-proof marine fuel	Seminar Room 2B	14:45-16:30
	American-Hellenic Chamber of Commerce (AmChamGR)/ SHIPPINGinsight/ U.S. Commercial Service, U.S. Embassy Athens	SHARK TANK Event	Seminar Room Central	15:15-16:30
	Admiralty Maritime Data Solutions	Meet the UKHO experts	Seminar Room 1B - Sponsored by Admiralty	15:30-18:00
	Hellenic Electricity Distribution Network Operator S.A. (HEDNO S.A.)	Supporting the Proteus plan for the decarbonization of the maritime sector via the electrification of ports	Seminar Room 1A	16:45-18:30
	Venlys Maritime Specialisation Services	Human Machine Safety Culture: a strategic element for the Human Performance in Shipping	Seminar Room 2A	16:45-18:30
Hyundai Welding	Introduction to HiBallast NF and other products: Hyundai Welding Seminar 2022	Seminar Room 2B	16:45-18:30	
Isalos.net & Real Time Graduates Conference - Under the Auspices of Greek Shipping Co-Operation Committee, INTERCARGO and the Hellenic Engineers Society of Great Britain (HESGB)	At the Helm of Global Shipping: Ensuring Continuity in times of Change	Seminar Room Central	17:00-19:00	
FRI 10/6	Young Executives & Students (YES) Forum	YES to Shipping Forum 2022	Conference Hall	10:30-17:00
	Metropolitan College/ Maritime Academy	4th International Conference on Maritime Education - The impact of geopolitics on the future of shipping	Seminar Room 1B - Sponsored by Admiralty	10:45-14:30
	National Technical University of Athens	Port Facilities for Small Crafts and Yachts in Greece	Seminar Room 2A	10:45-12:30
	SPARES CNX	The answer to Inventory mis-management: A Data-Driven Solution that creates Value out of Chaos	Seminar Room 2B	10:45-12:30
	Union of Greek Shipowners	Press Conference	Seminar Room Central	11:00-13:00
	Turku University of Applied Sciences	MarISOT - Next Generation Training in Maritime Safety	Seminar Room 1A	12:45-14:30
	University of the Aegean-Department of Shipping Trade and Transport	Performing amidst high uncertainty: shipping resilience	Seminar Room 2A	12:45-14:30
	Alpha Marine Consulting (AMC) in collaboration with University of Birmingham (UoB)	Ship Decarbonization Technologies & Human Factors Development: A Zero Accidents - Zero Emissions Sustainability Goal	Seminar Room 2B	12:45-14:30
Teamworks & Online Data	The contribution of Digital Technologies to the development of Shipping and MultiModal Transports: Strategies, Policies, Actions and Developments	Seminar Room Central	13:00-17:00	