Generation-Y at the helm of Greek Shipping

Describing their visions for a sustainable future:

A. Hadjipateras
A. & S. Koropoulis
K. Livanos
I. Martinos
A. Miliou Theocharaki
P. Stasinopoulos
& G. Karaouzas

Safety is at the heart of EMSA’s mandate

A discussion with Maja Markovic Kostelac

Developments in the U.S. wet & dry cargo market

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On the seafront

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Generation Y at the helm of Greek Shipping

Alex Hadjipateras

Aris & Stefanos Koropoulis

Kalli Livanos

Ioannis Martinos

Periklis Stasinopoulos & Giorgis Karaouzas

Amalia Miliou Theocharaki

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On the seafront

This month’s top news from naftikachronika.gr

**Value of the global merchant fleet hits a new all-time high**

The total value of the global merchant fleet has hit a new all-time high on the back of this year’s booming container and dry bulk markets. More specifically, the global merchant fleet is currently valued at $1.2 trillion, which is a 26% increase since the beginning of the year, according to Clarksons Research Services. The increase in the global fleet’s value in the last decade is noteworthy; in 2010, it stood at $700 billion. Of course, a critical parameter in this increase is the fleet’s rapid 65% increase in terms of GT.

In a recent weekly report, Clarksons noted that containership secondhand prices had increased particularly sharply in 2021 and, in some cases, had doubled or tripled. There has also been a significant increase in bulk carrier values due to the excellent freight market performance.

**Ship orders: The truth behind the numbers**

VesselsValue has released its monthly report, which includes ship supply data for the first seven months of 2021.

In terms of the number of ships recorded in the orderbook in the period January-July 2021, it amounted to 694 ships. The huge volume of containerships orders in conjunction with the increased volume of gas carrier orders offset the slow rate in bulkers and tankers orders, according to VesselsValue’s July report.

Although there has been a decline in orders for tankers and bulkers, the same cannot be said about their value. The increase in shipbuilding prices may be due to the limited availability of shipyards brought about by the large volume of orders they receive in a more general context.

**Bulkers**

According to VesselsValue, the order figures were lower in the first seven months of the year com-
pared to the same period in 2019 and 2020. More specifically, in January-July 2021, 102 new bulker orders were placed, 36.3% down compared to 2020 (160) and 45.7% less than 2019 (188).

However, the downward trend in orders is not reflected in their total value, which amounted to $2.654 billion, a 50.2% increase compared to 2020 ($1.77 billion) and a 56.5% increase compared to 2019 ($1.7 billion).

**Tankers**

As a consequence of the weakened freight market, new tanker orders declined. From the beginning of the year to the end of July, there were a total of 138 orders compared to 160 in 2020 (a 22% decrease) and 223 in 2019 (a 38.1% decrease).

The value of the 138 tanker newbuilding orders amounted to $5.4 billion, an increase of 8% compared to 2020 ($5 billion) and 60.4% compared to 2019 ($3.4 billion).

**Containerships**

2021 can indeed be described as the “golden year” of containerships. In January-July, an “explosion” was recorded in both the number of new orders and their value. In particular, 349 orders were placed, marking a 926.5% increase compared to 2020 (34) and a 534.5% compared to 2019 (55).

The value of these orders amounted to $21.8 billion, increased by 2,086.2% compared to 2020 ($998 million) and by 6,412.8% compared to 2019 ($335 million).

**Gas carriers**

Orders for new gas carriers reached high levels in the period under review, reaching 105, with a total value of $8.72 billion. In 2020, 47 orders had been placed (123.4% less than in 2021), with a total value of $4.15 billion (110.4% less than in 2021). In 2019, there had been 50 orders (110% less than in 2021), with a total value of $3.6 billion (159.8% lower than in 2021).

**IHS Markit: Capesize market will remain relatively strong in the coming months**

According to Abigail Mott, senior research analyst, Maritime & Trade, IHS Markit, the coal market will be an influential factor for the Capesize market in the coming months. Capesize vessels have gained a larger share of the Indonesia-India coal market this year, becoming the predominant
carrier on this route. In the months ahead, when India starts importing coal again, she expects an increase in Capesize coal shipments. With strong demand for Panamax vessels for the Indo-Chinese routes and Black Sea grain business, the Capesize market had previously been trapped in an unnatural negative spread with the Panamax market. However, in recent weeks, Capesize freight rates have soared above Panamax and triggered the much-needed correction in the dry bulk market. In July, Brazil exported 31.6 MMt of iron ore. Forecasted Brazilian iron ore shipments for 3Q21 have been revised down to 100-102 MMt with the news of steel production curbs in China. Although total exports may be lower than expected during this quarter, they are still 5% higher than the previous year. In previous years, Brazilian iron ore exports have peaked at around 35 MMt a month. Indicating the latest forecasted export volume for August is close to full capacity for Brazil.

In its analysis, IHS Markit says that Australia, the other major exporter of iron ore, also showed a slowdown in exports in July, in line with previous years’ seasonality. Australian iron ore exports in July totaled 74.3 MMt, a 9% drop from June’s exports of 81.9 MMt. Like Brazil, Australia commonly exhibits slower exports in July in conjunction with the new financial year. In terms of supply, ballasters to Brazil look to be much lower than in previous years. With fewer ballasters to the region, a squeeze on supply should help to counteract the negative impact of reduced exports. Furthermore, the recent typhoon in China has resulted in a backlog at Chinese ports. Capesize congestion in China has spiked again and almost to levels seen earlier in the year, reducing the tonnage profile in the Pacific. Since China released fresh news of steel-cut enforcements, iron ore prices have been dropping and have now reached a three-month low. Although it is not unusual for the Chinese Government to intervene and try to impose restrictions on steel production, firmer guidance has been issued to restrict steel production in the second half of 2021. However, there is still a lack of clarity regarding production, which has resulted in steel mills pausing their iron ore procurement strategy. Lower steel output and strong demand will increase steel margins; therefore, it is likely that China will show a preference for higher grade Brazilian iron ore to maximize output. In the longer term, decarbonization and environmental demands will, in fact, benefit high-grade Brazilian iron ore export growth.

IHS Markit’s previous assumption that Capesize would take a larger share of the Indonesia-India coal trade was based on Capesize being a more attractive option to export coal than Panamax. In the Pacific, Capesize freight rates are just shy of 1.5x higher than the Pacific Panamax routes. Abigail Mott expects Capesize to take a larger share of the coal market from the smaller sizes when the Pacific Capesize market TC rate is less than $40,000. Pacific routes could come under pressure if China prioritizes exports from Brazil over those from Australia. With Pacific Panamax routes performing well, any negative pressure put on the Capesize vessels in the Pacific from fewer Australian iron ore cargoes could be lightened by an increase in short Indonesia-India options if the monsoon season is delayed and any possible new Covid-19 restrictions are enforced. Downside risk still exists if the monsoon season delays and any fresh new Covid-19 restrictions are enforced.

In summary, IHS Markit maintains its bullish view for the Capesize market in Q3. It expects coal and iron ore imports into China to remain strong this quarter, providing the steel margins continue to be profitable. Although fundamentals look positive for Q3, the freight market is increasingly driven by the overall finance and commodity environment. Abigail Mott believes that due to
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Beijing’s decision to curb exports, physical steel demand will slow down, and the Capesize market will soften later this year.

**Fit for 55%: The reactions of the shipping industry to the EU proposals**

On 14 July 2021, the European Commission proposed the “Fit for 55%” package, a series of climate and energy proposals to revise and update the EU climate and environmental legislation. The package includes eight revisions to existing laws and five new proposals, some of which significantly impact shipping. Among them are:

- The Revision to the EU Emissions Trading System (EU ETS) to lower the overall emissions cap per economic sector, phase out free emission allowances for aviation, and include shipping for the first time;
- FuelEU Maritime, which sets standards for fuels used by ships moored in European ports, and
- The Revision of the Energy Taxation Directive, aiming to align the taxation of energy products with climate policies and promote clean technologies.

Regarding the reaction of collective shipping bodies, the Cyprus Maritime Chamber announced that shipping decarbonization cannot be the sole responsibility of shipowners. Instead, it must be a collective action by all those involved in the supply chain maritime sector.

Furthermore, the International Chamber of Shipping expressed its frustration at the lack of research funding initiatives.

**InterManager members double onboard oxygen provision after life-threatening incidents**

Ship managers have pledged to go above and beyond international maritime regulatory requirements in their onboard provision of medical oxygen – to be better able to save the lives of crew at sea.

The move follows a life-threatening scenario when a seafarer suffering from Covid-19 almost died during a long ocean crossing due to a shortage of oxygen. InterManager members discussed the situation and agreed unanimously to double their onboard provision of oxygen from the standard one 40-liter cylinder to two. They also recommend stocking oxygen concentrators that can provide a continuous flow.

Announcing the new measure, InterManager President Mark O’Neil, who is also President of Columbia Shipmanagement, explained: “This distressing incident highlighted the shortcomings of the existing requirement for onboard oxygen, particularly when dealing with Covid-19, which can have severe respiratory effects.

“Crossing the Pacific Ocean can take 12 days, and it’s seven to eight days to cross the Atlantic. One cylinder of oxygen would not last that long in a medical emergency, which would result in crew members having to ration a patient as they desperately tried to keep them alive until shore could be reached or a medivac arranged.”

He continued: “I’m very grateful to Anglo Eastern for highlighting this issue. It was a matter InterManager members took very seriously and responded to immediately with decisive action. We believe the regulations are not adequate, and we need to do more to safeguard the lives of our crew.”

**Change in piracy threats in the Indian Ocean prompts re-think of High-Risk Area**

A continued downward trend in Somali piracy has prompted leading shipping organisations to reduce the geographic boundaries of the ‘High Risk Area’ (HRA) for piracy in the Indian Ocean, which applied from 1 September 2021.

In broad terms, the changes agreed by BIMCO, ICS, INTERCARGO, INTERTANKO, and OCIMF, representing the global shipping and oil industries, will reduce the HRA boundaries to...
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the Yemeni and Somali Territorial Seas and Exclusive Economic Zones in its eastern and southern reaches.

In consultation with international partners, the organizations will also take a comprehensive new approach to assessing international maritime security threats to allow shipowners and operators to fully gauge the risk of voyages worldwide. This second step is expected to be completed by 31 December.

The HRA was created at the height of the Somali piracy threat in 2010 to show shipowners, operators, and seafarers where pirates operated and where extra vigilance was required to avoid attacks.

Subsequent updates to the HRA have reflected the changing nature of threats in the region, including the successful suppression of Somali pirate action. Somali pirate groups have not attacked a merchant vessel since 2017. However, new asymmetric threats from local conflicts and insurgents and more severe security threats, such as piracy off West Africa, have emerged, necessitating a change in how industry assesses such dangers to shipping.

Guy Platten, ICS Secretary General, said: “The security landscape is constantly evolving, and as new security threats have emerged or intensified outside the Indian Ocean, it has become clear the HRA is outdated and misleading. At the height of the crisis, the HRA was essential in raising awareness of the Somali Pirate threat and applying mitigation measures, but it has essentially served its purpose in protecting crews and vessels in the region. Now our attention must shift to ensuring we cover all maritime security threats around the globe, so we continue to protect the lives of our seafarers and keep global trade moving.”

David Loosley, BIMCO Secretary General and CEO, said: “The current form of the HRA is no longer the best way to guide maritime security risk management processes. As demonstrated with the recent security incidents in the waters around the Arabian Peninsula, we need a more granular approach to the concepts of threat and risk. The next logical step is to develop a global, threat-based concept which captures how ships of various type, size, nationality, ownership, etc., face different risk levels.”

Katherina Stanzel, INTERTANKO Managing Director, said: “This new designation is an interim measure to allow for the continued application of BMP 5 whilst the Co-Authors undertake substantive work to address maritime security threats in a global context.”

Robert Drysdale, OCIMF Managing Director, said: “This adjustment to the HRA better reflects the reality of the piracy threat but given the breadth of maritime security threats faced by seafarers, a more intuitive and dynamic system for highlighting threats will be most welcome.”

Sierra Leone to implement IMO 2020 penalties for non-compliant fuel

As of 1 September 2021, ship owners and operators calling at ports in Sierra Leone risk penalties of up to USD 15,000 if they carry fuel with a sulphur content exceeding 0.5 percent.

Enforcement, compliance, and monitoring of the IMO 2020 Sulphur limit fall under Regulations to Annex VI of the International Convention for the Prevention of Pollution from Ships (MARPOL). It states that nations that have ratified MARPOL and acceded to Annex VI are obliged to give effect to and enforce the provisions of the regulation. Port states must therefore enforce the provisions of MARPOL by monitoring vessels within their territorial waters and reporting non-compliance to the relevant flag state. This reporting ensures that adequate amounts of compliant low-sulphur fuel are available within their jurisdiction and provides shore-based facilities for receiving and removing scrubber waste.

Against this background, the Sierra Leone Ports Authority, in consultation with the Ministry of
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* Source: Clarkson Research’s World Fleet Register

www.register-iri.com

Port State Control Detention Trends (%)

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<th>Marshall Islands</th>
<th>Liberia</th>
<th>Panama</th>
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<tbody>
<tr>
<td>USCG</td>
<td>0.74%</td>
<td>1.11%**</td>
<td>1.03%**</td>
</tr>
<tr>
<td>Tokyo MoU</td>
<td>2.32%</td>
<td>3.09%</td>
<td>3.14%</td>
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<td>Paris MoU</td>
<td>1.52%</td>
<td>2.22%</td>
<td>4.78%</td>
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<tr>
<td>AMSA</td>
<td>4.23%</td>
<td>8.03%***</td>
<td>6.30%***</td>
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** Liberia and Panama are targeted for additional port State control (PSC) examinations by the USCG for having a detention ratio “between the overall average and up to two times the overall average.”

*** Liberia and Panama have exceeded the overall AMSA average detention rate over the three years from 2018 - 2020.

Transport and Aviation, consented to implement this important international member state mandate in July 2021.

It is also important to note that Sierra Leone is 18 months behind the global mandate to implement the IMO 2020 statutory instrument. In view of the above, the Sierra Leone Ports Authority will serve as the consulting government agency to implement IMO 2020. Furthermore, the Port Authority will undertake a joint implementation of the regulation, together with a competent institution for efficiency and standardization. The Port of Freetown in Sierra Leone will extend a grace period spanning from 15 July 2021 to 31 August 2021 for non-compliant vessels. Penalties will not be instituted against defaulting or non-compliant vessels on or before 31 August 2021. However, a non-compliance report, together with a warning letter, will be issued to non-compliant vessels for corrective action to be taken prior to their next call at the port and within this grace period as stipulated above.

The Port Authority will take appropriate measures to ensure compliance by initial inspections based on documents and other methods, including remote sensing and portable devices. If there are clear grounds to conduct a more detailed inspection, sample analyses and other detailed inspections may be undertaken. The samples to be analyzed may be the representative samples provided with the Bunker Delivery Note.

**Steady commercial growth on the New Silk Road**

Despite the challenges facing the global supply chain, traffic on the New Silk Road has increased in 2021, according to an article by rail transport specialist RailFreight. In the first half of the year, 7,323 trains moved between China and Europe, compared to 12,406 trains that moved between them in 2020. UTLC ERA, the largest cargo carrier between Europe and China controlled by Russian Railways, Kazakhstan National Railways, and Belarussian Railways, expects rail traffic on the Silk Road to increase by 20% in 2021. According to the company’s CEO, Alexej Grom, they are two years ahead of their relevant forecasts.

The reasons for this growth are complex; in maritime transport, there were multiple obstacles in the first half of the year, and transport costs skyrocketed, whereas in rail transport, costs remained stable, and train traffic was unimpeded. Thus, at present, the railway is more popular than maritime transport. This trend has been evident since 2020, when the UTLC ERA handled 547,000 TEUs compared to 333,000 in 2019, recording 64% growth while transported goods corresponded to 5.5% of the value of the total cargo moved between Europe and China. As a result, stable costs and improved speed and reliability have made rail an attractive alternative to road and sea transport in Eurasian transport, according to Grom.
UTLC ERA, the cooperation between the Russian, Kazakh, and Belarusian railways, covers this network between Europe and China, i.e., a route of 5,430 km lasting 5.5-days. The capacity of this network is constantly being improved with the addition of new terminals - most recently, the Dostyk Trans Terminal on the Sino-Kazakh border. Improvements are also seen on the Belarusian side and in the Kaliningrad region, where the total volume of cargo handled increased by 320% in 2020. However, there is room for further improvement that would potentially quadruple this volume. In addition, new routes are constantly being developed: 64 new routes operated by UTLC ERA in 2020 alone and 23 new starting points and terminals, 18 of which are in Europe. Finally, new types of transported goods are added; in 2020, 40% of the total consisted of electronic items (85,135 TEUs), mechanical equipment (80,556 TEUs), and car parts (57,796 TEUs). Three years ago, the above products accounted for 80% of the cargo; since then, cheaper products have been added, such as plastic parts (28,838 TEUs), wood (14,859 TEUs), and fabrics (12,825 TEUs).

**SYN-ENOSIS: The Greek shipping community by the side of the wildfire victims**

The Union of Greek Shipowners (UGS), through the Non-Profit Greek Shipowners’ Social Welfare Company SYN-ENOSIS, has joined the wave of solidarity and support to the victims of the wildfires that hit large areas of land and settlements in Greece, leaving thousands of people in an extremely difficult situation. The extensive wildfires and their consequences have mobilized the shipping community, which has systematically undertaken and implemented collective large-scale solidarity actions in recent years. Following the recent events, the most suitable ways of assisting the fire-affected citizens and the affected areas will be immediately evaluated, in cooperation with the State, utilizing the experience gained through the three-year aid program for the wildfires in Mati implemented by SYN-ENOSIS.

Mr. Theodore Veniamis, President of the UGS and SYN-ENOSIS, stated in this regard: “Shocked by the magnitude of the devastation caused by the fires, the shipping family feels a strong sense of responsibility to support and contribute to our community. We have decided to stand by our fellow citizens and the State once more in order to help them meet the next day’s needs.”

**P. Laskaridis donates ship to the Navy**

On Friday, 20 August 2021, the General Support Ship “AIAS” arrived at the Salamis Naval Base. The ship was donated to the Navy by the President of the Aikaterini Laskaridis Foundation, shipowner, and Honorary Vice Admiral Panos Laskaridis. The said donation acceptance procedure is in progress.

The General Support Ship “AIAS” has impressive operational characteristics. It has a length of about 85 meters, and its displacement reaches 4,426 tons. It can reach a maximum speed of 16 knots and has 1000 square meters carrying capacity on its open deck.
The third General Support Ship donation comes exactly one year after the delivery of the second donation, the General Support Ship "IRAKLIS," to the Navy and only twenty months from that of the General Support Ship "ATLAS," the first donation. The operational utilization of the two previous ships that Mr. Laskaridis donated to the Navy has been crucial as they have substantially supported the strike units of the Hellenic Navy Fleet. They have taken on regular roles and crucial missions as "operational" multi-tools.

What significantly differentiates the AIAS from her two previous "sister" ships is that she is equipped with fully electric propulsion, giving her significant operational advantages. This third ship will further enhance the operational capabilities of the units of our Navy.

In his statement, Mr. Panos Laskaridis stressed that it is a great honor for any Greek to be allowed to contribute to their country to the best of their ability. He wished warships and crews strength, calm seas, and to always have Saint Nicholas at their bow.

Propeller Club Piraeus donates firefighting equipment and protective gear to the Greek Rescue Team

In the face of the challenging conditions Greece has been experiencing recently due to the catastrophic fires, the Propeller Club Board of Directors held an extraordinary meeting on Tuesday, 17 August 2021, where it decided to make an additional donation to the "Greek Rescue Team" NGO for the purchase of forest firefighting and personal protective equipment for volunteers involved in firefighting, primarily to ensure their personal safety.

The equipment will include firefighting coats and trousers, boots, helmets & neck covers for helmets, masks, goggles, gloves, fireproof hoods, flashlights, and handheld two-way radio transmitters.

"Propeller Club Piraeus is always by the side of Greek society. We are present in the battle our country is waging against the catastrophic fires this summer, directly supporting the urgent needs of the Greek Rescue Team, an organization known to us with which we are collaborating for the second time this year. We want to support their significant volunteer work and commendable goals. In this way, we also contribute to the protection of human lives and property, the protection of our forests and their valuable flora and fauna that is in immediate danger," said Kostis Frangoulis, President of the Propeller Club.

Furthermore, the President of the Hellenic Rescue Team, George Kalogeropoulos, stated: "A heartfelt thank you on behalf of all the Greek Rescue Team volunteers seems too little for the Propeller Club Board's extremely generous decision to finance forest firefighting equipment now that the raging wildfires are testing our country. All of us, faithful to the organization's cause, continue our fierce battle against anything that endangers human life, the environment, and property. The next day, clearly with the help of the Propeller Club, finds us better organized in the defense and shielding of Greece, a homeland that deserves so much."
Blue Planet combines traditional Greek shipping values along with an innovative spirit. The vessels are equipped with contemporary technology devices that enhance the level of safety and protect the environment. In close cooperation with Anemoi Marine Technologies, Blue Planet Shipping is the first company worldwide to manage a bulk carrier equipped with wind rotors based on the Flettner principle.
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Aspirations for a sustainable future
Generation Y* at the helm of Greek Shipping

* "Generation Y" refers to the generation of people that were born between the early '80s and the early '00s. "Generation Y" is the first generation born after "Generation X", and the second generation after the "Baby Boomers".
One could argue that shipping has been facing fundamental changes in recent years, mainly due to the urgent need to limit the climate crisis, which requires investment, ongoing training, and adaptability. The pandemic has added another dimension to the way shipping companies operate. For a year and a half, telework, the inability to carry out crew changes, and the imbalance in the global supply chains have been at the top of the agenda of every shipping company.

In this volatile environment, the Greeks are managing to adapt and expand their activities, as they have always done, remaining at the forefront of international shipping. But how is the next generation of Greek shipping entrepreneurs dealing with this new order of things? What do they consider the most significant challenges and opportunities for the shipping industry in the coming years? The above questions are answered by distinguished representatives of Greek maritime entrepreneurship who express their views on the next day for the industry.

Feature Editor:
Giannis Theodoropoulos
GENERATION Y AT THE HELM OF GREEK SHIPPING
The flexibility of Greek shipping companies in adapting to the extreme cyclicality

Alex Hadjipateras Executive Vice President of Business Development, Dorian LPG (USA) LLC, discusses the impact of the pandemic on shipping companies, the dynamics of small and medium-sized Greek shipping companies amid significant fluctuations in the shipping market, and the prospects of the LPG segment. Mr. Hadjipateras also talks about the technologies that will shape the international shipping environment in the coming years and the role that the new generation of shipowners and managers will play in maritime policy matters.

How has the Covid-19 pandemic affected the way a shipping company operates?

The biggest challenge brought upon shipping companies has been the impact felt by our crews at sea, namely the prolonged contracts, difficulties with repatriation, and traveling during the pandemic. Ship management confronts these challenges indirectly, but the seafarers who crew our ships and keep our cargoes moving around the world to deliver them safely to our customers face them directly.

On a more positive note, we have adapted to working remotely as a team to manage our vessels. These changes have been positive because they have forced us to re-think how we operate our company and our vessels. In the future, we will retain some of these best practices as they have led us to be more efficient and to find smarter ways of carrying out maintenance.

Given that companies that manage small or medium-sized fleets are the backbone of Greek-owned shipping, do you think the extreme fluctuations in the freight market will diminish the prospects of Greek shipping?

I believe that small and medium-sized Greek shipping companies have historically shown tremendous perseverance and flexibility in adapting to the extreme cyclicality of the freight markets. Moreover, in many cases, being small or medium can provide certain advantages. The limitations I see are that certain banks have narrowed down their client list due to the high cost of doing business. So, unless you have a certain scale, you may be at a disadvantage. This is not true in every case, but it is indeed the case with some big Scandinavian banks. Moreover, when it comes to tankers, having a smaller to medium fleet may limit some of your spot chartering options as you don’t have a whole “deck of cards,” so to speak, to offer the larger oil majors and charters. Again, there are exceptions to this, but it is a factor that leads many small to medium-size owners to focus more on time charter, asset play, or both.
What do you think are the prospects of the LPG carrier freight market? Do you believe that our society’s long-term decarbonization targets will significantly impact the LPG/LNG segment?

Analysts predict further strengthening of the LPG market in the coming year as the U.S. has fully re-started and boosted its LNG and, accordingly, LPG output. Newbuilding prices have risen on the back of increased ordering in South Korea and China, which has come on the back of record ordering of VLGC newbuildings. The orderbook now stands quite high. Congestion in the Panama Canal is another factor that may influence developments in this market. Still, as with other segments, only time will tell what impact the forthcoming deliveries will have on the market’s future stability.

In your opinion, what will be the most relevant technologies for global shipping in the coming years?

On the shore side, ship performance management will be a key growth area and exponentially relevant, as we have seen with companies like DeepSea or Nautilus sprouting up. Shipping companies will move to the model of a Formula 1 team: a member with a laptop will be managing thousands of data points to optimize a vessel’s speed, trim, routing, and overall engine performance. This shift in approach also requires a change in soft skills and the way we train our crews.

All of these are steps towards the ultimate destination of autonomous ships and reduced emissions. On the engine side, the story is even more dramatic. As one of the initial signatories to the “Getting to Zero” coalition, Dorian LPG is aware of the handshake that has to occur between engine manufacturers, ship owners, and charterers to hit the IMO 2030 and 2050 targets. To succeed, we need even more collaboration. As primary actors in this story, we are keen to see how it unfolds. Shipping companies will do their part, but they cannot act alone, so the big entities and customers must respond to their roles in achieving these targets.

How much say should the younger generation of shipowners and managers have in maritime policy matters, given that often environmental regulations implementation does not take into account the needs and priorities of the shipping community?

They should be at the forefront of the EU corridors, beating the drum for whatever changes need to be made. Perhaps, in addition to their physical presence via social media and understanding of how information and opinions are disseminated these days, the younger generation should use the platform they are afforded with respect, steering the changes needed and leading this beautiful industry into the future.
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GENERATION Y AT THE HELM OF GREEK SHIPPING

L-R: Stefanos Koropoulis and Aris Koropoulis.
Aris and Stefanos Koropoulis, Astra Shipmanagement's Managing Directors, share their thoughts on shipping's environmental initiatives and the social issues and groups on which the maritime community should focus its support. They also discuss the efforts made by the industry to absorb the best executives at a time when supply in the specific job market exceeds demand, as well as the long-term sustainability strategy a shipping company can pursue amid the uncertainty in the international shipping landscape.

Maritime entrepreneurship has been called upon to play an important role in environmental protection from as far back as 1970. Despite the systematic efforts made collectively and individually, society seems to be ignoring the maritime community’s environmental initiatives. What would be a socially acceptable green profile for shipping?

Society is indeed ignoring the maritime community’s environmental initiatives because these initiatives are simply not enough to have any significant impact. Unfortunately, no regulation after the phasing out of single-hull tankers has made any significant environmental impact. Savvy ship managers and shipowners have found ways to dodge any efforts made with the 2020 Sulphur Cap. Regulations need to be stricter and clearer going forward. Shipping companies will need to respect and follow all international and local regulations instead of resisting the inevitable changes bound to happen in the next 5-10 years. A shipping emissions trading system should be implemented unilaterally. Such an adjustment will only help the industry by creating solid entry barriers and force everyone involved in shipping to work harder and more efficiently.

Do you consider the purchase of eco-friendly ships the most appropriate solution to reduce the environmental footprint of shipping? What initiatives has Astra Shipmanagement introduced in terms of environmental protection?

The shipping industry and especially the dry and container markets have been struggling for the past ten years. We finally see markets that will pay off most investments made over the past decade, which could be an excellent chance for fleet renewals and eco-friendly orders. At the moment, we are not looking at building new ships, but we will look into renewing our fleet in the next couple of years.
Unfortunately, no viable solution regarding alternative propulsion systems is in sight for our fleet profile/age/size. Nevertheless, we have invested in numerous technological upgrades in primary and secondary machinery in our vessel’s engine rooms, such as alpha lubricators, new-type fuel valves, and ballast water systems, as well as environmentally friendlier marine paints and osmosis systems for potable water on board (instead of plastic bottles). We have also invested in fuel and performance optimization tools. We have several performance tools to monitor fuel consumption on a daily basis, including Danaos ERP, StormGeo s-Insight, and DeepSea. We have unlimited access to essential data that can be retrieved from sensors installed onboard our ships. In addition, free Internet on board gives our crews the chance to keep in touch with their loved ones.

For the time being, small or medium-sized companies cannot invest in new ships due to the uncertainty surrounding regulations, the lack of appropriate technologies to support their investments or the fact that their costs are particularly high. In this context, we are trying to optimize our onboard and shoreside processes, and in this way, reduce our environmental footprint.

Greek shipowners have always supported society in critical times. In your opinion, on which social issues should the shipping community focus its support?

The shipping community should focus more on both local and international social issues. Unfortunately, the Covid pandemic and economic inefficiency have created income inequalities in most countries around the world. In theory, world trade growth should help the least developed countries (LDC), but that is not always the case. A fact not widely discussed in the shipping community is that countries with abundant natural resources – our big exporting clients – end up having less economic growth, more corruption, and worse development outcomes. The shipping community has the utmost responsibility for checking out the financial and ethical backgrounds of the charterers, shippers, receivers, and brokers involved. A cargo might make more financial sense than another, but the cargo shipper or receiver could be a leading palm oil producer responsible for destroying virgin rainforests in Indonesia. We might have two cargoes loading out of Brazil, but our background checks and market knowledge might show that one of the two cargoes is linked to soybean trade that involves deforestation in the Cerrado and Amazon areas. Our business ethics and environmental/social sensitivity are not always in sync with those of our clients. But we should always strive to create business relationships with clients/charterers who share the same environmental and ethical principles. There are large charterers with whom we have excellent communication on ecological issues as their strategies focus on the environment, like ours. If that turns out to be profitable, we must try our best to support the vulnerable social groups in our country of residence and the countries in which we trade and work.

“The next 10-15 years will prove to be the most challenging for the shipping industry. Unfortunately, we are navigating uncharted waters.”
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The anxiety of the new generation over their employment prospects is widely acknowledged, and the reason young people are exploring the option of entering the wider shipping industry labor market through postgraduate studies. How can shipping contribute towards curbing the country’s brain drain? Given the increased supply-demand imbalance in this market, how can the industry absorb the best executives?

The shipping industry has proven to be an excellent platform to contain Greece’s brain drain, and in our opinion, this will continue to hold true in the future. The opportunities within the industry are endless. Young people can choose a career in the legal, accounting, procurement, crewing, technical, safety, HR, marine, operations, and commercial departments of ship management companies, as well as careers onboard ships. Shipping-related services companies have grown both in numbers and quality. We cannot think of a better country and industry for young shipping executives to begin their careers. However, from our own experience, we would say that young people mostly choose chartering, accounting, and crewing jobs, which creates an imbalance and an inability to find a workforce for positions such as marine superintendents, etc.

As far as crews are concerned, crewing seems to be the biggest challenge we face currently. In companies like ours, you have to create quality seamen on your own as it is harder to attract quality, reputable seamen from larger companies. As our company develops, so do the people who staff it. Crew training will be vital going forward.

How can a shipping company pursue a long-term sustainability strategy in this uncertain landscape when even international shipping organizations do not have a clear picture of what lies ahead regarding the green transition of shipping?

The next 10-15 years will prove to be the most challenging for the shipping industry. Unfortunately, we are navigating uncharted waters. Shipping companies will need to ensure CO₂ emissions per transport work are reduced drastically in the coming years to meet the 2030 and 2050 UN goals. Achieving these goals is crucial if we wish to tackle climate change and preserve our oceans. In doing so, we will see the world becoming less dependent on fossil fuels. Shipowners will need to show quick reflexes and opt for investments in sectors that seem to have a viable future during shipping and the planet’s green transition. Furthermore, shipowners will have to invest in new engine technologies that meet the new requirements and regulations concerning GHG emissions. To do so, shipowners will need to be very conservative with their finances and take advantage of any expansion and peak economic cycles to create the necessary reserves to invest in new ship types and ship engines.
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GENERATION Y AT THE HELM OF GREEK SHIPPING
It is in our nature to be resilient and adaptable

Kyla Shipping’s Commercial Director, Kalli Livanos shares her views on the new decarbonization era in shipping and the technological changes that will critically affect the industry in the next decade. Mrs Livanos also talks about the short-term outlook of the dry bulk freight market and diversification as one of the possible risk aversion strategies in a volatile market.

In your opinion, will a shipping company with a medium or even small number of vessels have the necessary time to adapt to current and future regional and international legislation in this new shipping decarbonization era?

Although decarbonization has been an ongoing project for decades, today, it is all the more relevant since we are called upon to implement solutions that will successfully propel us to attain the IMO 2050 goals. Sustainability is undoubtedly a priority for everyone; therefore, to reach a satisfactory outcome, all stakeholders should contribute by sharing their perspectives.

Shipping has been exposed to a number of challenges with excellent results; it has embraced regulations and implemented procedures for the good of the environment and humanity. It is in our nature to be resilient and adaptable.

The main issue for companies of all sizes is that the shipping industry has not had a strong enough voice in the key regulators’ decision-making fora. The industry is a highly fragmented landscape ranging from small, private companies to large, publicly listed companies operating in multiple jurisdictions. In addition, it is largely dependent on the human element and capital, affected by adverse weather conditions, and sensitive to political change while striving to facilitate globalization and satisfy daily needs.

Considering the above, small and medium-sized companies could indeed face stronger headwinds than their larger peers when it comes to decarbonization. While they have flexibility in decision making and good access to information, meeting execution requirements, such as access to financial and specialized human capital, may be more cumbersome. Thus, I expect larger organizations will have a competitive advantage in this transition, making it smoother, faster, and more cost-effective.

Do you believe that shipping’s transition to eco-fuels will be successfully implemented within this decade?

The eco-fuel requirements of the global commercial fleet of almost 50,000 vessels (container, tanker, dry bulk, and general cargo ships) operating worldwide cannot be easily met in the short term, mainly due to supply restrictions. Alternative fuels, such as ammonia, hydrogen, LNG, and electricity, are the basis for the new propulsion systems currently being developed.

However, a single fuel may not be the solution for all types of vessels, cargoes, and trades. Whether it is a container ship carrying finished goods from China to the United States and consumes more than a 100mt VLSFO per day or a dry bulk vessel carrying iron ore from Brazil to China and consumes around 40mt of VLSFO per day, there will need to be suitable fuels available in order for the commodity flows to continue uninterrupted. That
Currently, we are at a turning point where in order to survive, companies must evolve together with technology to improve their operations and maintain their significant role in the global trade and economy.

Consequently, it is a matter of time before shipping is affected by more new regulations coming into effect through initiatives within the continent. When it comes to regulations of any sort, their commercial aspect is not a priority for legislative bodies. Certain trades involving European ports, flag states, or other parts of the chain will be impacted. It may become prohibitive for certain vessels to trade under the new regulations. There is definitely pressure on operators, which is apparent from other measures too, such as the Energy Efficiency Existing Ship Index (EEXI) and Carbon Intensity Indicator (CII), which will eliminate the trading potential of a large portion of the existing fleet. As a result, it will create a strain on companies that are unable to comply and increase the cost for the highly regulated trades.

Will companies that do not adapt swiftly to new technological developments survive in the short run? In your opinion, which technological changes will critically affect the shipping industry in the next decade? How can a family-run ship management company adapt to these changes?

In shipping, as in nature, it is the most adaptable species that survive. Generally speaking, the shipping industry is known for its traditional character. Currently, we are at a turning point where in order to survive, companies must evolve togeth-
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er with technology to improve their operations and maintain their significant role in the global trade and economy. Technological progress will shape the next generation of ships, as well as how a management company operates. The automation of systems onboard, also leveraging artificial intelligence, will change the role of the human element and require training on operating the new systems safely. Likewise, certain processes ashore will be supported by new software and hardware that improve quality and decision-making through big data analytics. It will not be a surprise if IT departments grow and new positions for data analysts are introduced more frequently in shipping companies. A family-run ship management company should evaluate all the available new technologies and weigh each solution in terms of safety, quality, and cost-efficiency. Additionally, with the ongoing consolidation, smaller companies will have to assess the available solutions in the market in order to renew and increase their business sustainably. Such enhancements in a company’s onboard and shore-side operations will be reflected in its bottom line.

Do you expect the euphoria in dry bulk freight rates to be sustained until the end of the year? What are the main reasons behind the recovery of the freight rates in this sector?

During the past decade, the dry bulk market experienced historical lows. Since earlier this year, we have seen an uptick in rates that hadn’t been reached in over ten years. It seems that the current euphoria in the dry market will continue until the end of the year, and I expect it to last for the next couple of years as well. However, market volatility will remain pertinent, driven by the dynamics between physical trading and forward freight agreements (FFAs).

Investing at the right time in the cycle remains the main accelerator of growth for any shipping company. Identifying the market trends to acquire vessels considered “commercial” creates resilience even in the most difficult times. Diversifying across maritime segments and sizes has been an approach that sustains cash flows when the others are in a downturn; however, it is not the only possible strategy to minimize risk. At Kyla Shipping, first and foremost, we value building long-term relationships with our charterers and being able to provide a superior service at all times. Over the years, we have developed strong ties with leading charterers that operate in critical industrial and agricultural commodities. To effectively serve our partners, we focus on specific segments within the dry sector (ranging from Panamax to Capesize), which are the vessels that best fit the above needs. The specialization and expertise we have developed in these focus segments, combined with our personal touch and commitment to our partners, have been the driving force behind our company’s resilience and modest success so far.
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GENERATION Y AT THE HELM OF GREEK SHIPPING
Signal Ocean’s innovative platform is at the top of the preferences of shipping and oil companies, trading houses, etc. What are the company’s next development moves, and how would you say the Greek shipping community, often characterized as traditional, is reacting to such digital ventures?

Ioannis Martinos, Signal Group’s Chief Executive Officer, discusses Signal Ocean’s next development moves, the competitive advantages of a Greek-owned technology group in the international markets, and the shipping industry’s technological transition. Mr. Martinos also talks about the contribution of technology to transparency and synergies as a means of dealing with the significant challenges faced by shipping.

Greek shipping has always been highly entrepreneurial. When you can clearly show that technology adds measurable value, decision-makers are there to listen. But some of the problems in shipping that technology could help solve are actually very hard by global standards, let alone industry standards. There is high computational complexity, low quality/availability of data, lack of standards, and ours is a niche industry with a very small number of users. As is the case with all other industries, some players are willing to innovate and take on adoption risks earlier, while others will wait for solutions to become more mature. The appetite for innovation is also strongly influenced by market conditions. All in all, we currently see an increased appetite for technology adoption, but we also believe that digitalization will span decades, not merely a couple of years.
Signal Group has gained a US patent for an innovative algorithm that predicts the movements of merchant ships based on developments in the freight market. How can a Greek technology group compete in the international markets, the Asian market, for example, in the absence of government subsidies?

We are very proud of our truly exceptional team for having achieved this milestone. We think it proves that if you have passion, talent, and put in the hard work, you can contribute to innovation at a global scale, even if you operate outside the world’s more mature technology ecosystems. It is true, nevertheless, that these same ecosystems strongly influence the likelihood of start-up success. Government subsidies can sometimes help kick-start things, but other factors, such as education and a productive entrepreneurial work ethos and culture, are even more critical. Since the onset of the economic crisis, and certainly also during the COVID era, Greece, driven by steep challenges, has been taking increasingly steadier steps towards fostering and supporting innovation; after all, they say necessity is the mother of invention.

How do you see the shipping industry’s technological transition unfolding? Will the IMO environmental regulation requirements help accelerate this transition? Which technologies are most likely to impact the industry more in the near future?

We think it will take time. Technology and its accelerating capabilities will definitely play a role, but this transition will be predominantly rooted in political and societal will, practical ingenuity, and effective enforcement. A critical mass of cost-efficient, easy-to-execute steps will be needed to get the ball rolling. Many are considering expensive, sophisticated advances, like alternative fuels, evolved propulsion, emission control solutions, etc. But shifting our profit-and-loss perspective to include the environmental cost of transportation and adjusting operational behaviors will play at least an equally important role. For example, the Signal Ocean Platform offers its users instant forecasts and CO2 emissions comparisons on any or all vessels competing for a cargo. This raises awareness of the environmental cost involved in shipping at the pre-fixing stage when action can directly turn into impact. We are also working on benchmarking to help the industry track and compare their performance and look into offset calculations.

In general, today’s global economy includes a much higher percentage of for-profit enterprises that also want to do good. Shipping is no different, but sailing towards the IMO 2050 goals will not necessarily follow a straight line.

Signal is also launching a “green” version of the Signal Ocean Platform, which essentially calculates the pollutants produced by a ship during a voyage. Do you think that such ventures can bring charterers and shipowners together vis-a-vis the IMO environmental regulations?

Although shipping may be perceived as a single industry, it is actually a collection of subdomains with diverse market dynamics. In areas where charterers are consolidated beyond shipowners/managers, charterers will undoubtedly need to play a dominant role if we are to be collectively successful. On the opposite side of the spectrum, like, for example, the container freight markets, large-scale operators will need to
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demonstrate strong resolve and take action first. Ship and trade financing institutions will need to partner with market participants and governments to create fair and enforceable rules and incentives. So, yes, there will be a need for many and diverse “green solutions,” but it is still early to predict which ones will be the more relevant and successful. We certainly see a tremendous amount of interest and momentum in this field through the vantage point afforded to us by Signal Ocean and Signal Ventures. And this is encouraging because the shipping technology ecosystem that has been growing fast over the last three years is probably the best and most efficient way to try different approaches and organically select the most effective ones.

Do you think that projects such as the Signal Ocean Platform are a means of attracting and retaining young people in shipping, given their great familiarity with technology and their choice of studies in related fields?

Yes, I most certainly do. We are very proud to have recently completed our hundredth traineeship. In the last six years, we have invited one hundred young and driven graduates from diverse fields of study, including software engineering, data science, shipping studies, and more, to join us in the pursuit of our vision. In fact, more than 30 of our current team members, including a few now in key positions, have grown through this 2-year program, discovered the world of shipping, and had a chance to work with leading-edge technologies and applied science concepts, like Artificial Intelligence and Machine Learning, under the guidance of exceptionally skilled senior team members and an advisors’ board that includes acclaimed academics from universities like MIT and ETH.

As previously mentioned, we are actively working with more than ten maritime universities. We have also developed an internal Tanker Chartering Academy program that has accelerated learning for our young commercial ship management team. The Signal Ocean Platform itself has proven an invaluable asset in this professional development process.

In recent years, there has been a lot of talk about the increased bargaining power of charterers vis-a-vis shipping companies. Do you think the Signal Ocean Platform, which is available to charterers and shipping companies alike, increases transparency between the trading parties and ultimately helps reduce the imbalance in their bargaining power?

Market asymmetries, i.e., a marketplace where one side has more information than the other, are not unique to shipping. Indeed, there has been talk about an imbalance between charterers and owners and the future role of brokers. Being active in shipping markets, Signal understands and respects their current structure; we believe the imbalance is a structural characteristic and that brokers play an essential role in the market. The Signal Ocean Platform does not try to “level the playing field” with regard to information advantages, nor does it try to remove the brokers from the process. Instead, it provides a powerful tool to help instantly process and combine the waves of information continuously arriving at freight desks.

We believe technology like ours adds an element of transparency, but this is accomplished by helping teams acquire and successfully interpret the information available to them on any given hour of a trading day. As far as shifts in market asymmetry are concerned, commercial consolidation will likely be a stronger influencing factor rather than some sort of electronic exchange, at least in the medium term.

Signal Maritime recently launched a new pool for MR product tankers following a similar successful venture with Aframaxes. Do you think synergies are a one-way street given the significant challenges in the shipping industry?

Synergies make a lot of sense in shipping, particularly in the less consolidated sides of the various market sub-segments. However, due to the limited transparency and standardization, they have been historically very difficult to pursue by the parties that want to try them. Very often, parties soon fall out and fail to see eye-to-eye because they interpret the synergy’s performance using insufficient analytics or, essentially, having to fall back on their gut feeling and intuition. Technology can effectively resolve this type of problem, allowing parties interested in synergies to evaluate them before entering and while they are engaged in them. The Signal pools have been set up in this way, and we believe they can show the way in an area that has been treated with deep scepticism in the past, particularly by Greek shipping participants. Our latest partnership with Shell Tankers (Singapore) Private Limited for our MR pool, reflects the increasing role that digital technology is playing in global shipping.
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Seaspire Maritime was founded in 2014 at a time when the bulker freight market was under pressure mainly due to an oversupply of tonnage. What led you to get involved in this industry and the specific segment? Does investing in smaller ships necessarily mean less risk?

To answer this question properly, we have to take some steps back and explain how we got interested in the shipping industry. We did not have a shipping background - we are the first generation within our families to get involved in the industry, which probably explains some of our views. We met in New York where we were studying other -not shipping related- subjects.

When we came back in 2012, we explored several entrepreneurial ventures and ideas, including shipping in which we developed a strong interest. We did not think it was a good time to enter the market. We kept an eye on shipping until 2014 when we felt it was the right time to make our move.

We spent a year focused on figuring out the size, type, segment, and timing, by gathering information and being consulted by persons from our personal and family network in the shipping industry. This process resulted on purchasing our first vessel in October 2014.

Regarding the segment, we considered the Handysize to be the most conservative option because of its lower volatility. We also believed that Handies had the best fundamentals in the dry-bulk sector at the time, because of the low orderbook/fleet ratio and the higher scrapping potential due to the age of the fleet. Handysize vessels tend to have a longer lifespan and are also more versatile.

Although the types of risks are similar across the various sizes in the dry-bulk sector, Handysize vessels tend to have more operational risks because of the variety of cargoes, port calls and machinery. The financial risks overall are fewer, while budgets are more manageable.

Your company manages a fleet of four Handysize and one Supramax bulk carrier. Are you thinking of investing in bigger types of bulkers or a different market (containerships, tankers, etc.)?

So far, we have invested in second-hand Japanese-built vessels for their quality and liquidity, in an attempt to mitigate risk. Of course, Japanese built vessels may not always be considered the best investment for us, as the gap between Japanese and Chinese vessels is closing. This is the first boom in the freight market since we established our company and we are
trying to enjoy it while considering our options and thinking about our next steps. It is easy to get disappointed when things go wrong. However, we persisted; we had the stomach and the patience to stay and invest in the market through the bad years and now it is paying off. Managing both the booms and the troughs in the market and how you move forward is crucial. In that respect, we have already moved forward with a bigger size (from Handy to Supramax).

Shipping is characterized by cyclicality, with opportunities arising at different points in time and segment. Flexibility is key. You can take advantage of the opportunities by taking a counter-cyclical approach. Thus, we do not rule out investing in even bigger sizes or entering other segments, either in the short or in the long run. Things change, and our strategy is to be flexible and keep our eyes open. Diversification is always an option and our plan is to keep growing with steady steps while managing the risks.

Are you optimistic about the prospects of the bulk carriers’ freight market? Will the favourable fundamentals of the market last in 2022 as well?

Currently, all signs are very positive, and momentum is building up. But we live in a very volatile environment, so we need to be skeptical in regard to any kind of predictions.

In this context, we would split the questions into two sides: supply and demand. Supply is easier to interpret as a concept: it cannot change from one day to the next, and we don’t see a wave of massive orders coming forward. It looks like supply will continue to be very limited also due to the uncertainty regarding the upcoming environmental regulations.

On the demand side, things are more complicated, hence it is difficult to assess and predict. From our point of view, we were expecting a market rebound since the end of 2017, but every year, the market would not recover due to several global unfortunate events. However, we can feel that we are finally at the beginning of a sustained upturn in the cycle with many positive signs on the demand side. The global economy is on a recovery trajectory after Covid-19, and many countries have introduced stimulus packages that will increase demand for dry bulk commodities.

Overall, we are optimistic about the prospects of the freight market, at least in the short term, and that 2022 will also be a good year for the dry-bulk market.

Which trade routes offer the most attractive prospects for Handysizes, in your opinion?

As stated before being a Handy and Supramax owner, you have to take advantage of the versatility of your ships. Our vessels can carry a variety of cargoes and call various countries, something which has advantages but also entails risks. We are quite flexible with the trading of all types of cargoes managing the risks associated with them. When it comes to calling dangerous countries or ports, we tend to take a more conservative approach having always in mind the safety of our crew and also that sometimes the risks there can be hard to quantify. Our vessels trade mainly in the Atlantic Basin, where the market has been traditionally stronger. However, after seeing the Far East markets improving drastically this year, we are following a more diversified approach.

We still find the traditional trade routes very attractive, even though due to various reasons such as Covid-19, trade, and geopolitical tensions etc., we see new trade routes arise. An extreme recent example is seeing bulkers carrying containers. Of course, you must try and take advantage of the specific characteristics of the vessels. For example, all our Handysize vessels are Open Hatch – Box Shaped, which gives them a competitive advantage for carrying steels and bagged cargoes. Again, you have to be flexible and adapt your strategy to new opportunities.

How easy is it today for small or medium-sized shipping companies to have access to finance?

When we started, we essentially had to buy our vessels with solely our own funds, as we didn’t actually have access to bank finance. We had
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some alternatives that were either not attractive or too risky. Thus, we chose not to use them. Back in 2014, banks financed only established players. Although we considered the shipping sector as an industry with entry barriers, we came to realize that, at least in our case, some people were willing to listen. Due to our persistence and our specific business plan, people in the Greek banking sector trusted us and our vision.

Of course, the size of a shipping company matters. Bigger, publicly listed companies have more tools and better access to finance. Unfortunately, usually banks have the appetite to lend when the numbers make sense. But usually, our job is to take the risk and make decisions instinctively, when the numbers actually don’t make sense. Fortunately, we found a Greek bank that was willing to support our counter-cyclical approach.

Of course, criteria such as persistence, financial performance, and financial track record play an essential role too. We have to mention that the Greek banking sector is these days more competitive than in other countries, especially for smaller companies.

Throughout your career in the maritime arena, what lessons would you say you have drawn? What would you advise a young person who would like to get involved in the shipping business in the coming years?

Getting involved in the shipping business, be it ship owning-ship management, ship broking, or any other sector, is challenging due to the enormous competition. Some of the key skills needed to succeed in this sector are flexibility, patience, adaptability and decisiveness. To be adaptive, you have to control your ego. Opportunities arise, and you need to be there and have your eyes open with confident decision-making skills. From a psychological and economic point of view, instinct and trying to deal with the market’s extreme volatility are also fundamental in our industry.

The most important thing is to have the ability to accept that a decision you make today may be wrong tomorrow, which is not easy. There are times that a year in shipping might feel like a decade in any other industry. Classic business models do not always apply in shipping.

Do you consider shipping an industry that offers opportunities to new players, given the high volatility that has always characterized it?

We wouldn’t be here if it wasn’t possible. We believe we are an excellent example of newcomers successfully entering the shipping industry, without any background in the sector. In our opinion, there are two main barriers: capital and knowledge. With regards to capital, we think we covered it in the previous question. Regarding knowledge, there are several ways to gain it. We did it by investing in our first vessel and then cooperating with another well-known ship management company with long-standing experience, with whom we shared common values and vision. Their team was by our side and supported us in our first steps. And needless to say, our partnership has been proven to be essential in all aspects.

To conclude, we would like to say that shipping is a traditional industry with no easy access for outsiders. However, if someone is serious about entering, with the right planning and synergies it is not impossible.

How much has the traditional management model of Greek shipping changed through the rapid growth of technology and the new skills required by the industry? In your opinion, what is the outlook for the Greek shipping business?

There are two game-changers in shipping: technology and regulations. A successful shipping company nowadays is the one that can effectively comply while growing. Successful compliance with the environmental regulations is becoming the driver for the sustainability of a shipping company. As for the Greek shipping business prospects, we see a new generation entering the scene with different characteristics and management approaches. That by itself will change things, and we can already see it happening.

However, the way the new generation invests in shipping is no different from that of previous generations. We are adaptable, willing to take risks and try to take advantage of all potential opportunities. One will have to wait and see the results of this transition, but we are generally very optimistic. As the leading ship-owning country globally, we should try to make our voice heard to influence the current state of play in shipping.
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To what degree do the IMO targets for shipping’s green transition by 2050 influence decision strategies given the current freight rate market? What impact is the regulatory decision to reduce CO₂ emissions having on seaborne trade and freight market performance?

The green transition of shipping and the strategies planned by international regulatory bodies have affected important investment decisions that shipping market practitioners need to make now for the future. Chartering-wise, we are witnessing a resistance to committing to long-term contracts unless the vessel is relatively young or regulation-compliant (for example, has at least a C-GHG rating), given that it will affect the flexibility of the vessel’s tradability in different countries in the years to come. With respect to the sales and purchase market, even though we have noticed a second-hand sale turmoil, ruled mainly by speculative asset play, very long-term decisions, such as new building investments that need a 20-year projection, have been muted primarily due to the uncertainty of the regulations’ evolution. Nonetheless, most owners have rushed to explore soft or short-term solutions so that their vessels comply with EEXI and CII guidelines. The potential commercial implications arising from compliance could be lower speeds and creating a multi-tier market where more efficient vessels will need to reduce main engine power less than older vessels and get a premium for their efficiency and flexibility. Other possible consequences could be less loadable quantities, preference to sailing for longer distances, different rates for bad weather trips, and even earlier retirement of some older units given the investment for retrofitting.
Will mounting tensions between China and Australia impact the future performance of the freight market for both large dry bulk carriers and smaller vessels?

The China-Australia tension has been characterised mainly as a political game in which shipping is stuck in the middle. Initially, the market reacted negatively, presuming that China could not satisfy its coal needs and would soon resume coal imports. We have also observed several operational issues arising from the vessels carrying Australian coal that had already arrived in China, where they were denied clearance and were unable to discharge. However, after several months, most of them had been diverted to other countries for discharge, and the market had absorbed the upheaval. Australia found new alliances or strengthened existing ones, supplying coal to India, Japan, Korea, Vietnam, and other Southeast Asian countries. On the other hand, China has increased its short-haul trade by importing more coal from Indonesia and Russia in smaller quantities (mainly on Supramaxes and Panamaxes) and has also diversified its imports sources, which now include the US, South Africa, Canada, and Colombia. Ultimately, this has benefited the dry freight market, given the increase in tonne-mile demand due to longer distances and even larger stems.

It is crucial to monitor the tension between the two countries in case it escalates into other dry bulk goods, such as iron ore, which proved to be a valuable commodity, surpassing US$200 a tonne in May, double its price a year ago.

Do you think that economic and shipping centers other than China and the Southeast Asia region will become a benchmark of the dry bulk segment’s strength and capabilities in the coming years?

China has a dominant role in the dry bulk market and will not easily give up the first-place now or in the foreseeable future. China still accounts for over 40% of the dry bulk market, and its appetite for imported commodities such as iron ore and grains continues to grow. Especially during this period of post-pandemic growth, China is augmenting its investment in industrial production, which has vastly increased iron ore demand (and prices), stimulating economic growth. Undoubtedly, we have also seen substantial growth from India, which has shown its power in several cargoes, including coal, iron ore, steel, and rice, on both the import and the export sides. Although India has absorbed a lot of the Australian coal that was going to be imported by China, it remains to be seen whether this country has the infrastructure and power to curtail China’s supremacy. Moreover, Indonesia and Vietnam have generally played a stabilising role in the market, creating new opportunities and absorbing significant volumes. Europe and the US play an important role in consumer demand and shaping regulation, especially when it comes to the decarbonisation process. Brazil and Argentina will always show their strength in the grains export market, a seasonal driver that boosts freight volatility. Australia, which has a rich commodity exports history, is also a pioneer in governance, social responsibility, and applying new maritime restrictions.

In terms of export growth, Africa as a whole has

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seen an array of new investment opportunities. In addition to South Africa, which has proven to be an important ally supplying China with coal and minerals such as chromium, manganese, and magnetite ore, other countries in North and West Africa have also been developing various iron ore projects.

In your opinion, how have technology and digitisation differentiated the way a shipping company negotiates with a charterer? Do you think we are moving away from the traditional negotiation model characterised by interpersonal relationships and contacts towards a model where data analysis and interpretation play a more prominent role?

Instead of disrupting the market overnight, digital transformation will probably come in stages and evolve in hybrid modes. Several e-broking platforms have been developed over the years, which may potentially work for the more standardised commercial contracts, but they have yet to show their potential. Yet even with the rise of smart shipping, most charter and sale and purchase negotiations are still conducted on an interpersonal level, usually with the help of a broker. I firmly believe that commercial chartering is based on the good relationships you maintain with your customers. Usually, a mediator helps to minimise friction during hot negotiations. It is important to remember that good cooperation between parties is not only judged when fixing a vessel but throughout a vessel’s journey; at the same time, it also depends on the vessel and management team’s operational and technical performance.

One of the main issues we will have to address during digitalisation is the lack of information transparency and the unwillingness of parties to share data. But I am confident the new generation entering shipping will soon be able to fight this resistance and develop a culture in which the human element remains in control but is optimised by technology. One must also always remember the paradox of automation: the more we depend on technology and push it to its limits, the more we need highly-skilled, well-trained, and well-practiced people to make systems resilient. So, the market necessitates a balance between smart systems and the human element.

There is often talk of political initiatives regarding the future of shipping. These initiatives, however, rarely take into consideration the views of shipping sector representatives. What role can young members of the ship-owning community play in such a complex environment?

Politics exist in every aspect of business life, and shipping is no exception. Several inter and intra-organisational bodies have been taking initiatives to make their views known to governments and international regulatory bodies. All such entities are crucial for the future of shipping, given its worldwide breadth and the need for both local and international regulation. As shipping is currently experiencing fundamental changes, such as decarbonisation and the search for alternative fuels, naval architecture designs, and environmental and social governance applications, we need to focus on collective solutions that will benefit (and burden) all market participants equally.

Young members of the ship-owning community should engage in open dialogue and focus on partnership and alliances under the guidance of international regulations. The same should be done by various shipping practitioners, including owners, charterers, financiers, and shipbuilders, in order to create synergies. Some examples are those seen in the trials of alternative fuel bunkering, engine designs, and flag decisions for seafarers’ vaccination schemes. Due to the concept of borderless trade, there is an urgent need for our key workers to get a vaccine approved by international organisations, regulatory bodies, local governments, and port state controls. Sustainability will come hand in hand with uniformity between private, public, and international bodies; global decisions are very important to go forward.

The Theocharakis group is one of the country’s pioneering conglomerates. Do you believe that companies managing fewer than ten ships will be able to cope with the difficulties of risk diversification without participating in such conglomerates?

In recent years, we have seen several small/medium-sized shipowning companies not only maintaining their status but emerging out of the crisis that has hit shipping from the end of 2008 until the current post-pandemic boom. So yes, I think that SMEs will be able to cope with the difficulties of risk diversification - and they can do this even within shipping by hedging with different types of vessels, different sizes within the same segment, or even by differentiating their chartering strategies. Volatility is part of the shipping game, and the Greeks are particularly good at spotting assets when they are at a slump and selling when at a peak. Shipping companies, like ships, need good masters and crews and the help of smooth seas to cope with any difficulty ahead.
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Safety is at the heart of our mandate

Ms. Maja Marković Kostelac, Executive Director of European Maritime Safety Agency (EMSA), talks to Charis Pappas
In your capacity as the Executive Director of the EMSA, what would you say have been the Agency’s main achievements in terms of safety of navigation in the European seas?

Since our foundation nearly twenty years ago, we have underpinned a harmonised approach to Flag, Port, and Coastal State activities across our Member States. We work to improve knowledge and capacity in the most fundamental areas of the maritime domain.

That includes digitalisation – the provision of advanced tools and services for our users inside and outside the EU. It encompasses the human element where our work has expanded to include the EMSA Academy, which is supported by the latest technologies, including virtual reality, to offer a fully immersive training experience.

Safety is at the heart of our mandate: monitoring the implementation of EU maritime safety legislation and safety analysis of different vessel types (including container ships) from our data and reporting. And, of course, our work takes in a wide range of environmental issues facing the maritime sector today.

Among all these tasks, though, I would particularly like to underline our operational role.

To support the relevant competent authorities at Member State level, we build and offer a comprehensive awareness picture; our Integrated Maritime Services. Through this, we fuse data from a variety of sources, including Earth Observation, to support a vast range of tasks at sea - anything from maritime safety and security to environmental protection and response and border and fisheries control to law-enforcement and customs.

In 2020 alone, more than 6,500 users from 560 different authorities were able to access over 1 billion vessel positions per month through this service for over 200,000 unique vessels around the world. In the same context, we also provided more Earth Observation images last year than at any other time in our history.

We further build on this service via artificial intelligence to turn data into information that can be used – for example – to identify situations of potential risk or danger.
The next decade will be critical for policymakers and industry in terms of the future development in the European maritime sector.

So far, RPAS has been a success story, both for EMSA and for our RPAS users. Emissions monitoring continues to be an in-demand service, as options that can measure the emissions of ships whilst sailing. Last year alone, our RPAS delivered 245 individual emissions measurements across the EU.

As we move forward, our experience is rapidly improving in terms of conducting in-flight sulphur measurements. We have a number of concrete activities planned for 2021, such as providing active RPAS emission monitoring services to Lithuania, while similar operations are starting in France and Spain.

Which areas of R&D is EMSA especially interested in regarding the further enhancement of its operational capabilities?

A very large proportion of our work involves cutting-edge technologies, so we are constantly monitoring developments across our areas of activity, with a particular interest in pre-operational demonstrations. For example, in terms of satellite monitoring, we are looking at High Altitude Pseudo Satellites (HAPS) and, separately, into maritime frequency detection by satellite in conjunction with the European Space Agency. We’re assessing how optical satellite data from medium resolution satellite sensors can be systematically used to detect, characterize, and quantify the volume of any spilled oil, and monitoring developments in satellite-based marine litter monitoring, with a specific emphasis on plastics.

In addition, we are also following ongoing, mainly EU, research projects related to the development
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of unmanned vessels, which will help us to better understand the safety challenges and mitigation options for the future operational use of this new category of vessels.

We’re also following with great interest new developments in machine learning, big data, and AI.

**What actions could the industry take to achieve further gender balance?**

All the research points to the fact that the more inclusive a workplace is, the better it does, particularly in innovation. According to one study, businesses with stronger equality cultures can be up to six times as innovative as those with a weak equality culture – and in a technologically advanced sector like shipping, this is a powerful message. But we still have an information gap that has to be filled in that we will need more data going forward to effectively recruit and retain more women. We need, in effect, to drill down into the areas within the sector where they are not represented. That’s why the WISTA-IMO survey on women in maritime launched at the start of the year is so important. It will be an important building block in the future policies and actions we develop in this area.

I think we all have a part to play here. For example, at EMSA, we have a gender balance plan that we are executing across our Agency, and we’re part of the Women in Transport network at the EU level. We’re also rolling out initiatives like our recent “speed networking” in which women interested in a career in the maritime sector could book a chat with female experts in EMSA in order to gain information and guidance on how to go about it.

But underpinning all our efforts is the role played by industry and those working within it. This is the area in which a gender-balanced approach has to be implemented at the operational level and the area that can benefit most from it. 50% of the world’s talent is female. Not incorporating or accommodating that talent would be a loss for the maritime industry as a whole.

Some suggest that local and maritime media tend to over-exaggerate about the issue of maritime security. Is the situation as dramatic as the press and NGOs report?

I do not think the issue of maritime security is over-exaggerated. The Gulf of Guinea has been called the new maritime danger zone, and with good reason. In 2020 alone, according to the International Maritime Bureau, the Gulf of Guinea experienced 84 attacks on ships, with 135 seafarers kidnapped for ransom. Regional kidnappings for ransom increased by nearly 50% between 2018 and 2019; today, they account for just over 95% of all kidnappings for ransom at sea.

Obviously, this is a cause for great concern. But I firmly believe that the kind of concentrated, cooperative action we saw off the coast of Somalia can bring tangible results. The EU-NAVFOR Operation Atalanta has made a significant difference to security there; indeed, statistics show that once again, last year, there were no incidents of piracy or armed robbery reported in the region. EMSA has given strong support here via the provision of integrated maritime services to EU-NAVFOR, which we will continue providing through the operation’s renewed mandate.

Earlier this year, the Council of the European Union adopted the Coordinated Maritime Presences tool, which can operate in regions designated as Maritime Areas of Interest. The Gulf of Guinea has been chosen as a pilot case for this new concept. Of course, EMSA stands ready to provide support here; indeed, we have already been supporting individual Member States in that region via the provision of an integrated maritime picture.
Σημαία: Ελληνική
Μήκος: 79 μέτρα
Πλάτος: 17,7 μέτρα
Ιπποδύναμη: 1.500 ίπποι
Ταχύτητα: 12 κόμβοι
* 1.500 Τόνοι

Σημαία: Ελληνική
Μήκος: 304 μέτρα
Πλάτος: 40 μέτρα
Ιπποδύναμη: 78.000 ίπποι
Ταχύτητα: 25,6 κόμβοι
* 6.420 Εμπορευματοκιβώτια

Ενα από τα 6 αδελφά πλοία

Σημαία: Ελληνική
Μήκος: 157 μέτρα
Πλάτος: 25 μέτρα
Ιπποδύναμη: 12.000 ίπποι
Ταχύτητα: 18 κόμβοι
* 956 Εμπορευματοκιβώτια

Ενα από τα 8 αδελφά πλοία

Σημαία: Μάλτας
Μήκος: 300 μέτρα
Πλάτος: 48 μέτρα
Ιπποδύναμη: 64.505 ίπποι
Ταχύτητα: 22,5 κόμβοι
* 8.827 Εμπορευματοκιβώτια

Ενα από τα 7 αδελφά πλοία

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The Biden presidency’s impact on the U.S. wet & dry cargo market

by Capt. Kostas Kanellopoulos.
Managing Director, Nereus Shipping S.A.
These are some thoughts and comments on the reasons behind the upturn in the
global markets, attributed, among other things, to the recently improved United
States-China relations following the Biden election.

Biden’s agenda

In January, Joe Biden was inaugurated as President of the United States along with a Democrat-con-
trolled Congress, making the passing of legislation easier for the Democratic Party. Biden’s ambitious
agenda included plans on the following three key issues:
• Halting the construction of the Keystone XL pipeline (running from Canada to the U.S. Gulf)
• Passing laws/regulations to lead America towards a more “carbon neutral” economy
• Introducing a massive infrastructure bill that will provide over a trillion dollars for roadworks,
  bridges, tunnels, etc.

The Keystone XL pipeline

To begin with, the Keystone Pipeline has been in existence since 2010, allowing 500,000 bbls of crude
per day to flow from Canada’s oil sands to the U.S. Midwest and via connecting lines to the U.S. Gulf.
As crude demand continued to grow, the U.S. passed a bill in 2015 authorizing the Keystone XL pipe-
line extension. The proposed extension would transit the States of Montana and South Dakota (where
it would also access shale crude) en route to the U.S. Gulf refineries. President Trump promptly issued
permits and reduced regulations to get the Keystone XL portion started and completed.
As noted above, one of the Biden Administration’s platforms was to stop Keystone XL from ever
being constructed. On 9 June, President Biden revoked the Keystone XL pipeline permits – essentially
killing the plan altogether. That was a win for environmentalists but a loss for Canadian oil producers
as the XL portion was to carry 830,000 barrels of Canadian crude per day to the U.S.
Along the same line of thought, and while crude continues to be profitable for U.S. crude suppliers,
the Keystone XL pipeline plans were quashed by the Biden Administration. Keystone XL was to move
heavy Canadian oil from Alberta to the U.S. Gulf refineries and export terminals. The pipeline faced
pushback by environmentalists, farmers, ranchers, and Native American tribes from the very beginning.
Unlike other pipelines in the U.S., Keystone XL would transit environmentally sensitive land in several
U.S. states. The crude to be carried would be produced by processing Canadian oil sands, which is
a very costly venture. Unlike West Texas Inter-
mediate (WTI) crude, which can simply be pro-
cessed at the well, the Canadian oil sands require
a separation process prior to being refinery or
export suitable. When looking at all the num-
bers, the local pushback, and the U.S. incentive to
increase its crude exports, it is not surprising the
Keystone XL Pipeline plans were thwarted.
The future for Canada and its oil sands will
depend on how desperate the world might be
for that type of oil when crude prices justify its
processing. Analysts report that crude needs to
reach at least $55/barrel for the oil sands extrac-
tion process to break even. With crude below
$55 for some years now, this is also a likely con-
sideration. The oil sands trend began when crude
touched $100/barrel and has managed to stay in
the conversation ever since. With the Keystone
XL pipeline effectively dead, we may see the
Canadian crude exiting the conversation, at least
until crude touches $100 /barrel again.
See map on the right for reference:
What does the quashing of the Keystone XL pipeline mean for shipping?

On the surface, putting an end to the proposed increase in the Canadian crude carried to the U.S. Gulf would be a substantial loss for the tanker market. Typically, this would be where the story ends; however, we should not forget that the U.S. has its own crude and has been increasing its export volumes after a two-year decline due to the pandemic. In June 2021, the U.S. crude export figure was around 9.1 million bbls/day. The U.S. is currently down by about 1.0 million bbls/day compared to pre-pandemic levels, but the trend is moving in the right direction.

In the reference chart on the left, the Y-Axis is in thousands of barrels per day. One can see that pre-2015, the U.S. exported between 1 to 3 million barrels per day, mainly to Canada, or through exclusive trade arrangements, such as the U.S. arrangement with Israel, for example. These barrels were not seen on the open market.

In December 2015, President Obama (with Joe Biden as his Vice President) had lifted a four-decade ban on crude exports, after which export volumes took off. When President Trump was elected, he contributed to this increase by issuing presidential permits and following a deregulation policy. Support for crude exports has therefore come from both sides in Congress. Obama lifted the ban paving the way for Trump to issue permits approving new wells, domestic pipelines, and terminals. Now the ball is in Joe Biden’s court, who has given no indication that he intends to dampen crude exports plans. Besides helping to reduce the U.S. trade deficit, high crude oil export volumes are also a diplomacy tool.

The graph on the left illustrates where U.S. crude has been going.
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Happy to export to others, but pressing for a “carbon neutral” U.S.

President Biden has not been shy about his plan to steer the U.S. away from consuming fossil fuels, but at the same time, he has maintained an Obama-era law that permits U.S. crude oil exports for the first time since the 1970s. It is important to note that in 2020, the U.S. became a net exporter of crude oil for the first time in 70 years.


Interestingly, the U.S. government is pressing for “carbon neutrality” while supplying an increasing volume of U.S. crude oil to the global marketplace for consumption elsewhere. We can expect the Biden administration to strengthen carbon regulations and incentivize businesses/industries to reduce their carbon footprint.

As regards the shipping market, we expect a reduction in U.S. tanker imports. Currently, we see this in the VLCC market, where traffic between the Arabian Gulf and U.S. Gulf has been almost non-existent in the past two years. When the U.S. export volumes were around 10 million bbls/day, it was common to see ships ballast from Europe to the U.S. Gulf for cargoes. When the market turns around, we can expect the combined effect of reduced U.S. refinery runs and increased U.S. crude exports to result in a locally tight tanker market. Ships will again have to ballast to the U.S. Gulf from Europe to make up the difference in available ship supply. The U.S. is pushing to reduce reliance on crude oil domestically. Yet, at the same time, it is happy to export as much crude as possible for use in the rest of the world, although not at the rapid pace expected in the first two months of the Biden Presidency. The Biden Administration is trying to walk both lines of the issue. On Wednesday, 11 August, Biden shared his views regarding the OPEC, noting that “the production cuts made during the pandemic should be reversed in order to lower prices for consumers.” OPEC had previously agreed to increase crude outputs slowly; however, Biden has argued that these increases are not enough to ease rising fuel prices within the United States. Naturally, more output from OPEC countries would result in increased shipping demand, so this fresh, unexpected vocalness in support of increased oil imports to the States is a welcome sign for the tanker community.

Meantime the EIA noted the following regarding the OPEC production forecast and U.S. production expectations:

- OPEC crude oil production is forecast to average 26.5 million b/d in 2021, up from 25.6 million b/d in 2020. OPEC crude oil production in the forecast rises from 25.0 million b/d in April to an average of 27.1 million b/d in 3Q21. The expectation of rising OPEC production is primarily based on the assumption that OPEC will raise production through the end of 2021 in line with targets it announced on 18 July. OPEC crude oil production is expected to rise to an average of 28.7 million b/d in 2022.
- EIA’s most recent monthly data show U.S. crude oil production was 11.2 million b/d in May. Production is expected to be relatively flat through October before it starts rising in November and December and throughout 2022. Forecast U.S. crude oil production for 2022 averages 11.8 million b/d, up from 11.1 million b/d in 2021.

Lastly, the Brent–WTI price spread is expected to widen in the months ahead, which should make WTI more attractive to Euro-Med buyers. That could mean an increase in USG/UKCM voyages which will certainly help if it holds and Europe’s crude demand does not slip.
Δραστηριοποιούμαστε στην ελληνική αγορά από το 1929, και είμαστε στην καθημερινότητα ανθρώπων τριών γενεών. Διατηρούμε την ελληνικότητα και τον οικογενειακό χαρακτήρα εδώ και σχεδόν έναν αιώνα.
Biden’s infrastructure plan

Upon reviewing White House press release papers, the following elements of the Biden plan are likely to have an impact on the dry cargo market into the U.S.:

**Fixing highways, rebuilding bridges and upgrading ports, airports, and transit systems.** The President’s plan will modernize 20,000 miles of highways, roads, and main streets. It will fix the ten most economically significant bridges in the country in need of reconstruction. It also will repair the worst 10,000 smaller bridges, providing critical linkages to communities. And, it will replace thousands of buses and rail cars, repair hundreds of stations, renew airports, and expand transit and rail into new communities.

**Building, preserving and retrofitting more than two million homes and commercial buildings, modernizing the nation’s schools and child care facilities, and upgrading veterans’ hospitals and federal buildings.** President Biden’s plan will create good jobs building, rehabilitating, and retrofitting affordable, accessible, energy-efficient, and resilient housing, commercial buildings, schools, and child care facilities all over the country, while also vastly improving our nation’s federal facilities, especially those that serve veterans.

**Revitalizing manufacturing, securing U.S. supply chains, investing in R&D, and training Americans for the jobs of the future.** President Biden’s plan will ensure that the best, diverse minds in America are put to work creating the innovations of the future while creating hundreds of thousands of quality jobs today. Our workers will build and make things in every part of America, and they will be trained for well-paying, middle-class jobs.

The infrastructure plan comes with a price tag of $1.2 trillion dollars. A preliminary breakdown of the entire $1.2 trillion-dollar plan shows that $312 billion will go to transportation with $109 billion invested in roads, bridges, and other major projects, $66 billion in passenger and freight rail, and $49 billion in public transit. Furthermore, President Biden called on Congress to invest $17 billion in inland waterways, coastal ports, land ports of entry, and ferries, all essential to the U.S.

The Senate approved the bill on 10 August. As per a Washington Post article: “The Senate gave overwhelming bipartisan approval on Tuesday to a $1 trillion infrastructure bill to rebuild the nation’s deteriorating roads and bridges and fund new climate resilience and broadband initiatives, delivering a key component of President Biden’s agenda. The vote, 69 to 30, was uncommonly bipartisan." The challenge now passes on to the U.S. House of Representatives, where despite facing more challenges, it is expected to be passed by October.
We can expect an increasing demand for concrete, building materials, steel, and other raw materials needed to fulfill this ambitious plan. U.S. dry cargo terminals will likely see increased volumes to meet the demand from contractors and others tasked with completing the plans Biden has set out.

### The U.S. Dollar

The U.S. Dollar’s strength (or weakness) is a core commodity pricing and freight rate component. The U.S. dollar has been trending stronger over the past few months on the back of increasing inflation being felt across most sectors of the economy. The U.S. housing market is hot in most regions, with “work from home” drawing people away from the cities as more and more are relocating to suburban homes. The post-pandemic rise in raw material prices has raised the prices on just about anything U.S. consumers are looking to purchase. All things remaining constant, a stronger U.S. Dollar will tend to put downward pressure on commodities priced in USD (such as crude oil). We should not lose sight of the fact that freight rates are also priced in USD besides crude oil.

### The current sentiment

According to the latest CDC figures, to date, about 189.9 million Americans (57% of the total population) have received at least one dose of a Covid-19 vaccine, and 163.9 (49% of the total population) have been fully vaccinated. That is only a 3% increase between June and August, which is slow. Although there were signs of “back to normality,” “increase in air travel,” and “driving to work again,” signifying a re-start and boom in the economy by mid to end-September, the Delta variant is putting a damper on global economic recovery and crude demand.

In the U.S., many companies are introducing a hybrid or flex work schedule to allow employees to work from home a few days per week. Many countries are now considering further lockdown and safety measures. The initial oil demand at the beginning of summer has since reversed course, and analysts are pessimistic about further increases in crude demand in the second half of 2021. The initial vaccine push has now progressed to vaccine booster discussions, with some countries already offering a booster shot to the elderly and high-risk groups.

The overall view is that the turn-around has been delayed/has slowed down; the Delta variant has become a significant challenge; China has cut crude runs; Chinese owners are putting ships into warm lay-up; the Biden Infrastructure plan continues to make its way through Congress; the U.S. dollar remains strong; the mixed approach about the way ahead in the U.S is leading to uncertainty as to when we will see a sustained economic turn-around.
The reasons behind the recent mini economic boom in the U.S.

Firstly, China’s infrastructure redevelopment boom following the stimulus measures launched by Beijing to jump-start the Chinese economy after the Covid-19 lockdown has sparked a strong demand for many seaborne raw commodities and finished products, like iron ore, coal, cement, copper, minerals, grains, soya beans, etc. - meaning an increased demand for bulkers and containers. Consequently, trade between China, the USA, and Europe has increased, especially after the recent changeover from the dysfunctional Trump administration that favored sanctions to the more easy-going Biden administration. In the last few months, the development, successful distribution, and use of Covid-19 vaccines in developed countries have resulted in a rapid return to normality - at least in the developed world - and have also contributed to the global economic recovery.

So far, one of the positive effects of the improved economic collaboration between the USA and China is the increased trade in grains, soya beans, corn, coal, steel products, and other finished products between these two nations.

Certain other factors have also contributed to the increases in commodity prices and freight rates. The most significant is the ongoing dispute between China and Australia, which mainly affects the coal trade between these two countries. The restrictions on Australian coal imports resulted in China importing this commodity at a higher price from far away destinations, including the USA, thus increasing the tonne-mile equilibrium - mainly for the cape sector but other sizes too - and improving the freight rates and commodity prices. Although this dispute is currently affecting the coal trade primarily, there are obvious indications that the iron ore trade between the two countries will also be affected.

An overview of the ore & coal market

China’s aggressive acquisition and development of iron ore mines in Africa continue. On 30 March, a consortium of three Chinese companies signed a memorandum of understanding with the Algerian National Iron and Steel Company to exploit iron ore in the North African country. The consortium will conduct a feasibility study to exploit the Gara Djebilet iron ore deposit in western Algeria.

It is reported that apart from Algeria, a Chinese company named Sangha Mining has signed two mining deals with the Republic of Congo to exploit iron ore on licenses the Congo government revoked from Australian mining companies last year. With an investment of about $10 billion, Sangha plans to start exports in 2023 and eventually produce over 100 million tons of iron ore per year.

The Chinese-funded New Tonkolili Iron Ore Project in Sierra Leone started operation in September last year. By January this year, the first shipment of iron ore set sail for China from the Port of Pepel in Sierra Leone - no small feat considering that it usually takes two to three years to export iron ore from a project in Africa. Due to the required investment in local roads and railways, it is more difficult and time-consuming to exploit iron ore in Africa. Still, such diversification yields long-term benefits for China in terms of securing resources.

The Simandou iron ore mega-project in the southeast of Guinea and the four new deep-water ports in China announced last summer are set to reshape global iron ore trading patterns. The new deep-water ports will accommodate very large ore carriers carrying up to 400,000 dwt of ore. The market views this move as a vote of confidence in Vale’s long-term ability to supply China with high-quality iron ore, as Vale operates the majority of vessels this size. Moreover, in a move to increase its market share in China, Vale struck a deal with the Chinese state-owned port operator to create an additional 20 million tonnes capacity to handle iron ore shipments.

Due to the ongoing disputes with Australia, China sees these moves as steps towards reducing her reliance on Australian iron ore by having mines and supply lines of the raw materials she needs that are not under Western interests/influence. Iron ore is a raw material essential for steel manufacturing. Most of the iron ore China needs comes from Australia and Brazil, accounting for about 60 percent and 20 percent of total imports, respec-
tively. China’s General Administration of Customs data show that China imported 1.17 billion tons of iron ore in 2020, a 9.5 percent increase year-on-year. However, last year China’s iron ore imports from Australia as a share of the market dropped about 1.3 percentage points year-on-year, reflecting increased purchases from other countries. Chinese-Australian economic and trade relations have reached their lowest point in history. Closely following the U.S. anti-China campaign, Australia launched a series of ferocious attacks on China. It took the lead in imposing a blanket ban on Huawei, curbing China’s technological development, and aligning with former U.S. President Donald Trump’s blame-shifting tactics in calling for an “independent inquiry” into the COVID-19 pandemic’s origin and spread. Australia’s move to coordinate with the U.S. to contain China and constantly politicize its economic and trade problems with China - including the discrimination against Chinese investment - has led Chinese companies to downgrade their favorable assessment of Australia. Therefore, China has started looking for other friendly and welcoming partners. However, I believe that even if there were no friction between China and Australia, Chinese companies would still make the reasonable choice of diversifying their supply of key raw materials to ensure safety.

**Meanwhile, there have been two vital structural changes in the Chinese coal shipments:** The share of long-haul trade will surge despite the increase in trade on the Indonesia-China route. Indonesia has signed a $1.5 billion coal deal with China that allows the latter to import coal over three years. The deal will strengthen the trade on this route by 5-10 million tonnes annually until 2023. In 2020, China imported close to 80 million tonnes of coal from Australia, but this year’s imports will be muted amid the coal ban. However, Australia’s share will be partially counterbalanced by Indonesia, the US, Canada, Colombia, Russia, and South Africa. These five distant countries contributed 10% of China’s total coal imports in 1Q20, which strengthened to 24% in 1Q21, and this share will continue to rise in the remainder of 2021. The increasing share of long-haul trade will employ dry bulk vessels for longer durations, creating additional demand. It takes a little over a month to complete a round voyage between Australia and China. On the other hand, it takes almost two months to complete a round voyage between Richards Bay and Qingdao and close to three months between Qingdao and Norfolk — the largest coal exporting port in the U.S. The shift in cargo movements away from Australia-China towards US-China would increase the demand for vessels by close to three times. The second major change has been the size of vessels used in shipping coal to China. The share of Capesizes and Panamaxes has fallen while that of smaller vessels, particularly Supramaxes, has grown. China used to import

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coal from Australia in Capesizes and Panamaxes, whereas now it imports from Indonesia, mostly in Supramaxes. The share of Supramaxes in China’s total coal imports has gone up from one-third in IQ20 to more than half in IQ21. However, my opinion is that the share of Supramaxes could come down as China is expected to import more coal from South Africa and the U.S. (both of these routes employ Capesizes).

The abnormal cargo flow created by China’s ban on Australian coal is causing headaches for the Chinese government. As Indonesia and Russia hike prices to take advantage of the situation, lower-quality coal is currently commanding a significant premium over higher-quality Australian coal. This leaves Chinese buyers looking for alternative sources to avoid potential shortages in the summer peak demand season.

On the other hand, the efforts by local producers to increase domestic production have not been successful on account of the ongoing safety inspections throughout the country.

The USA is emerging as a major beneficiary of this situation. In April 2021, it became China’s largest supplier of coking coal for the first time. China imported 970,000 tons of U.S. coking coal during that month, up 46.9% on the March total. In the first four months of the year, the U.S. supplied 2.21 million tonnes of coking coal to China, over five times more than in the 2020 same period.

Another contributing factor, and not only in the Capesize sector, is the current difficulty in performing crew changes. Australia’s Covid-19 requirement of a two-week quarantine on any vessel visiting their ports has taken out of the market a lot of tonnage, which is now sitting idle. However, it is not only the coal and iron ore trade that are being affected. Less frosty trade relations between the U.S. and China and the improved Covid-19 situation have propelled total grain shipments from the former by an estimated 40% YoY over 1H 2021. That was partly driven by a boost in soybean exports but also in liftings of corn and sorghum, which China has been buying in record quantities to replenish domestic stockpiles of these goods.

We have almost become used to these impressive growth figures from South American grain shippers. Still, in contrast to the last couple of years, they are currently competing with the elevated volumes from the USA, which is still enjoying the tailwinds of a bumper export season. Over the last six months, a surge in Chinese demand helped push U.S. grain exports up by 69% YoY, buoying rates on both the country’s Pacific and Atlantic coastlines. That includes record purchases of corn to restock depleted supplies.

Although we’re coming to the tail-end of the U.S. exporting season, the pace of shipments remains high relative to last year. April volumes surpassed 11.1 MMT, up by 17% YoY, though exports from the Pacific Northwest region, where cargoes are primarily Panamax stems, are trending 23% higher YoY.

On the other hand, soybean trade is not expected to grow at the same rate over this period, partly down to a reduction of exportable supplies in the U.S. In the current marketing year, China has re-emerged as a buyer of U.S. soy after a period of weak demand due to the pandemic outbreak and the trade war, and U.S. exports have shot up by 36%.

Corn is a different story. Global production is expected to grow by over 5% YoY to a record 1.2bn tonnes over 2021/22, with all major producing regions seeing significant increases. Meanwhile, global exports are projected to grow by nearly 6% to 197m tonnes, underpinned by sustained high prices and consumption in China. This source of demand has driven huge increases in seaborne corn trade over the past few months: China’s imports of corn hit a record 3.1m tonnes in May, nearly six times higher YoY. Over the first five months of the year, imports stood at 11.5m tonnes (316% higher YoY), with the majority of this commodity coming from the U.S.

Despite the prevailing euphoria which will remain for the foreseeable future in the dry bulk market, we have to keep in mind:

• Over-investment in expensive assets, both in the newbuilding and second-hand market, is very attractive in the short run but a risky journey in the long term.

• From mid-2021, China is weakening imports in crude oil, LNG, iron ore, and copper. For the rest of 2021, we may see import figures around the 2019 levels instead of the highs recorded in the second half of 2020.

• The post-pandemic era could be seriously affected by how the spread of the Covid-19 Delta variant will be managed and the worldwide turn-around delay.

• Although about 60% of the Chinese population has been vaccinated, it remains to be seen how drastic decisions/restrictions the country will impose to control the spread of the Delta variant. This could profoundly influence global trade, as we can see from the initial effects of the first measures taken in certain places. We see signs of impact in the service sector and the broader economy, which are jeopardizing the government’s 6% annual growth target.
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Nuclear power for ships
The Distance Between Perception and Reality
Efforts to reduce the environmental footprint of shipping have brought to the fore new proposals and alternatives which, due to the lack of available technology, are not currently being implemented on ships. Undoubtedly, significant progress has been made in phasing out fossil fuels, but international shipping regulations complicate the situation by increasing uncertainty among shipowners, managers, charterers, insurers, and others. One suggestion heard more and more often is the use of nuclear power on ships.

In this feature, outstanding members of the shipping industry express their views on the prospect of atomic energy. Will we see more nuclear-powered ships in the future, and how safe will they be? Time will tell.
The discussion on marine nuclear propulsion is back on the agenda

Merchant nuclear ships

The first nuclear-powered merchant ship to be built was NS Savannah, which was ordered in 1955 by MARAD (the US Maritime Administration) delivered in 1964 at a 46.9 M USD cost, of which 28.3 M USD was the cost of her nuclear reactor, including the nuclear fuel. She was meant to be a “peace ship,” serving as a goodwill ambassador to promote the concept of the peaceful use of nuclear energy around the world. NS Savannah was 182 m in length, with a deadweight of 9900 LT and a design speed of 21 knots. She had a 124 crew and 60 passengers capacity. Her endurance was around 300,000 nautical miles vs. the circa 20,000 miles of modern ships. The reactor

by Stavros Hatzigrigoris, Chairman of MARTECMA
compartment was at the center of the ship with access from above for refueling. The 74 MW reactor used low enriched uranium as fuel and was housed in a 15 m long, 4.3 m. containment casing to protect the fuel rods and refueling equipment. She was provided with a nine-stage, high-pressure turbine and a 7-stage, low-pressure turbine driving a single propeller. Her operating cost was 2.0 M USD/year more expensive than the operating cost of a conventional similar size ship. She was decommissioned in 1972 and is now a museum ship in Baltimore. Her reactor is still on board.

Three more commercial nuclear vessels have been built in addition to the Savannah: in 1968, the German-built Otto Hahn, a cargo carrier with research facilities that completed 126 trips without technical problems, which was decommissioned in 1979 and retrofitted with diesel engines; the Japanese Mutsu, which never traded and was converted to diesel in 1979; the Russian LASH carrier Sevmorput, was delivered in 1988 and is still trading. In addition, ten more Soviet and Russian icebreakers have been delivered so far, four of which have been deactivated (one was turned into a museum), and two more, which are under construction, and will be delivered in 2021 (Siberia) and 2022 (the Urals).

**Navy nuclear ships**

Discussing the performance of nuclear reactors on board navy ships in use since the mid-50s, the statistics as per the International Atomic Energy Agency are:

<table>
<thead>
<tr>
<th>Actual or potential radioactive releases</th>
<th>Accidents without risk of radioactive release</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface ships: France 2, Soviet Union 2</td>
<td>UK 1</td>
</tr>
<tr>
<td>Submarines: Russia 1, Soviet Union 10, USA 1</td>
<td>Soviet Union 1, UK 1</td>
</tr>
</tbody>
</table>

Nine nuclear submarines have sunk: five Soviet (one has sunk twice), two American, and two Russian.

The vast majority of the 120 nuclear reactors utilized for marine propulsion on navy ships today are of the pressurized water type. They use water to transform the heat generated by the reactor’s core to steam, always keeping the water under high pressure so that it does not boil, at temperatures of around 350 °C that are needed for efficient steam production. The hot water from the reactor generates heat through a separate closed water system. The steam is dried and led to high and low-pressure steam turbines. The returning steam condenses and returns to the system in liquid form. Reduction gears are used to reduce the revolutions of the turbines and drive the propeller shafts. Any leakage of high-pressure primary cooling water will mean a radioactivity leak. Large navy ships can be powered by twin reactors. Some ships are driven by steam-electric plants instead of direct drives.

Normally, marine power reactors and propulsion systems can develop a power of up to 100 MW. Several Russian-built nuclear icebreakers use their steam-electric plant to provide electrical power to land in remote locations.

The decommissioning of marine nuclear power plants, together with the possibility of an accident and the risk of using nuclear fuel onboard for manufacturing weapons, has made the use of nuclear-powered ships impossible until today. Other reasons have been the difficulty of arranging nuclear ship refueling and their very high capital cost (ship + reactor + initial fuel) compared to the cost of a conventional ship and the fossil fuel it would use in 20 years. Crew availability and training have been an additional burden.

To cover the possibility of an accident, the Brussels Convention on the Liability of Operators of Nuclear ships was developed in 1962. However, it was never ratified mainly because of the difficulty in agreeing to include the navy ships in the Convention. Nuclear reactors of USA-operated nuclear ships are insured under the USA Price Anderson Act.
The problems outlined above have led to renewed interest in developing an alternative nuclear reactor design called the Molten Salt reactor that can be mass-produced and modularized. In this type of reactor, instead of high-pressure water, molten chloride salt with a low content of depleted plutonium or thorium is used directly for generating the steam needed for the propulsion of the ship. The temperature of the molten salt mixture is around 400 °C. If there is a leak, the mixture will immediately cool down and solidify, so the reaction will stop, eliminating the risk of an explosion. The plutonium or thorium used is so depleted that it cannot be used for manufacturing weapons. The dimensions of the reactor are really small, and when the nuclear fuel is depleted to such a degree that the reaction stops, the reactor can be removed, and the molten sodium mixture enriched, making the reactor reusable for one more time. The expected lifetime of a molten salt system is up to 25 years without refueling, producing power of up to 100 MW. An additional advantage of the system is that the power output can be regulated over a much broader range than in conventional reactors. The energy density of nuclear fuels is about 25 million times greater than that of the fossil fuels being used today.

In 2014, a research paper was published by BMT (British Marine Technology), LR, Gen4Energy (a Denver USA company), and the Greek operator Enterprises Shipping and Trading discussing the basic design concepts for a standard-dimensions Suezmax tanker and comparing the emissions reductions for several propulsion systems. Needless to say, the NOx, SOx, CO2, and PM reductions for the nuclear propulsion option were all 100%. The selected primary system was a single loop, liquid metal-cooled fast reactor using Lithium Boron Eutectic (LBE) as a coolant. The reactor would be shielded in a containment vessel to protect it from external threats. With the reactor connected to the primary loop, the liquid metal coolant would be pumped through the reactor module to heat exchangers that heat the secondary liquid metal circuit. Additional primary system components included the cover gas system and the oxygen control system. The secondary system was a Rankine cycle steam generation system. The steam generator contained feed pumps, an evaporator, and a super-heater. High and low-pressure turbines would be connected to a common shaft. Recognizing the lack of regulatory legislation related to nuclear ship propulsion, the consortium authors pinpointed the primary safety considerations involved as:
- the minimization of potential radiation leakage due to any human or environmental factors,
- the elimination of small, medium, or large cargo oil spills resulting from accidental failures related to the implementation of the nuclear reactor technology, and
- a zero fatality and injury rate for the tanker design operations in question.

The design speed was set at 15.7 K, and the propulsion power at MCR was 18881 KW. The propulsion options considered were:
- twin-screw nuclear-mechanical,
- twin-screw nuclear-electric,
- single-screw nuclear-mechanical with CRP azipod propulsion, and
- single-screw nuclear-mechanical with single-shaft line.

Finally, they selected the contra-rotating propeller azipod solution.

Concluding, it can be said with some comfort that the discussion on marine nuclear propulsion is back on the agenda. The issues that have to be solved are:
1. Technical - concerning the design and operation of the reactor itself
2. Design - related to the onboard installation and operation of the nuclear power-driven propulsion system
3. Legislative - related to the development and ratification of international conventions
4. Financial – related to the capital expenditure involved in a nuclear ship’s lifetime operation vs. the building and trading costs of conventional vessels over the same period, including greenhouse gases-related costs
5. Commercial - related to the cost of the nuclear fuel onboard upon delivery of a ship
6. Operational – concerning possible refueling requirements, as well as recruiting, training, and retaining officers and crews of ships

A lot of money is being poured into small power reactor technology in countries involved or trying to get involved in this market. Progress cannot be stopped.
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Atomic energy could drastically change the “modus operandi” in shipping

Further to the recent IMO MEPC decisions, more attention is currently being given to greenhouse gas emissions arising from burning fossil fuels for international air and sea transport. Today, the shipping industry is focusing on alternative “carbon-free fuels” such as hydrogen or ammonia, but there will also likely be renewed interest in marine nuclear propulsion.

Despite the environmental benefits of nuclear energy, it is not widespread in many countries of the world due to the public’s perception and poor acceptance, which...
raises significant barriers to adopting this technology in shipping.

Nuclear propulsion is not something new. Today, about 160 vessels are being powered by nuclear reactors. All of them are naval ships, aircraft carriers, ice-breakers, and submarines, but there is also a Russian Ice Classed container vessel named Sevmorput, in service since 1988.

Over the last decade, various shipping community clusters have been taking initiatives for the adoption of nuclear energy - or atomic energy, as it is being called lately - on vessels other than naval ships and are preparing the framework for that. Large shipping companies like COSCO and Babcock commenced techno-economic studies in 2009 and 2010, respectively, for the design of container and LNG carriers propelled by atomic energy, which have since been abandoned for various reasons.

Major Classification Societies like Lloyd’s Register commenced research on the atomic regulatory framework, led by the IMO and supported by the International Atomic Energy Agency (IAEA), finally delivering new rules concerning the integration of an atomic reactor certified by land-based regulators onboard a commercial vessel. Later on, in 2014, a concept design was published concerning a conventional tanker hull form with an alternative propulsion arrangement of a 70MWt atomic plant able to operate for ten full-power years before refueling and a 25-year vessel life-cycle. Although the concept proved feasible, it was evident that further maturity of atomic technology and the regulatory framework would be necessary.

During the last couple of years, technological solutions other than the conventional nuclear reactors were developed, such as the modular molten salt reactors proposed by U.S. and British-based marine propulsion manufacturers, benefiting the ambient operating pressure low-enriched fuel requirements.

One of the big Korean shipbuilding companies recently announced their partnership with the Korea Atomic Energy Research Institute (KAERI) to develop molten salt reactors to power ships and market offshore power plants.

What are the expected commercial benefits from adopting atomic power on ships? The physical size of the reactor and the peripherals is expected to be much smaller compared to existing internal combustion engines and the necessary emission reduction accessories. That will result in smaller “engine rooms,” which, in conjunction with the absence of bunker tanks of significant volume, will be to the benefit of cargo space. Moreover, the service range of the vessels will not be dependent on any bunkering requirement.

Despite the excellent safety record of the atomic-powered vessels in service and the obvious economic advantages, it is evident that the shipping community does not prioritize this technological option in the new designs since many significant issues still need to be properly addressed. Among other things, the reactor design itself and the enrichment percentage of the atomic fuel are major issues. Subsequently, ensuring the proper shielding of the reactor and locating crew accommodation away from the reactor area are key aspects. Moreover, environmental considerations, such as the disposal of radioactive waste, reactor deactivation before recycling, proper management of nuclear fuel, and standardization of radiation monitoring in the environment and onboard, should also be addressed.

Other, equally important aspects in need of further clarification are:

- The qualifications, training, and certification of the crew on board
- The servicing and surveying requirements of the atomic reactor and its accessories throughout the vessel’s service life, and
- The safety devices and shut-downs in case the vessel is involved in an accident (collision, etc.).

Finally, the total shipbuilding cost cannot be accurately predicted, as it is based on multiple parameters and considerations. Nevertheless, it will definitely be the decisive factor for the commercial viability of these vessels.

Concluding, atomic energy could drastically change the “modus operandi” of shipping if adopted. It is believed that the first new-built commercial vessel powered by atomic energy can enter into service before the end of this decade, provided that all the stakeholders involved show the necessary commitment, and most importantly, the world’s apprehension about this type of energy is allayed.
Decarbonising shipping
Is nuclear power an option that will help the industry meet the 2050 emissions targets?

As the shipping industry forges a path to a clean energy future, there are multiple fuel options to consider. Is nuclear power one of them? This question is being addressed by the Lloyd’s Register Maritime Decarbonisation Hub through our ongoing work programme. The “Maritime Solutions Readiness Level” (MSRL) framework provides an assessment structure looking at how well developed a nuclear technology is (technological readiness), what the commercial challenges are (investment readiness), and how well-prepared wider society is in terms of its adoption (community readiness).

by
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Nuclear power as a fuel for ships does not emit any NOx, SOx, CO2, or particulates, achieving high energy density. Approximately 100 reactors are in maritime use today, with Russia and China being the frontrunners. The most common technology, Pressurised Water Reactors (PWRs), can be easily understood as big “kettles” using heat to generate steam. An alternative to PWR technology is molten salt. These reactors can offer benefits including higher efficiencies, lower waste generation, and much lower operating pressures. In recent years, growing interest in this technology has led to a renewal in development activities. Modern reactor designs try to address a number of challenges, including radiation shielding and vibration tolerance. In terms of risk assessment obtained through underwater applications, we see fewer hazards from a theoretical point of view, as the vessel forms a tertiary shield around the primary and secondary containment systems, whereas, with new generation technologies, the nuclear material is in a sealed unit, totally removing the risk of oil leakage. However, as the physics of liberating energy from an atom is different from burning liquid fuels, a well-established safety culture is crucial for nuclear power, requiring advanced training regimes. Waste management also poses additional challenges in terms of operation and decommissioning.

From a business perspective, a nuclear powered vessel is perceived as having high CAPEX costs, as it includes decommissioning, waste management, and storage of used fuel. OPEX costs, however, are relatively low since the fuel is a small part of the cost. With the new generation reactors requiring refuelling every 25-30 years, allowing in some cases the fuels to be removed and reused, the OPEX costs are significantly reduced, as there is no need for bunkering. That introduces monumental changes in the supply chain, the chartering regime, and the overall landscape in which the shipping industry operates.

Public acceptance is a significant factor for the establishment of nuclear technology, which is also the case for other zero-carbon fuel alternatives, such as ammonia or hydrogen. There are existing regulations in place for nuclear power, such as SOLAS Chapter VIII, written in the 1970s, which refers to nuclear propulsion; it was developed around the safety of PWRs and focused on safety standards at that time. With more than just PWR technology available today and safety and security challenges evolving with each piece of technology, the statutory regulation will require an extensive review and upgrade. Issues such as the free access of nuclear ships to ports and national waters, upon countries’ agreement, the location of repair facilities for nuclear ships, or the levels of authority and ownership of the involved bodies and stakeholders for nuclear plant approvals will need to be addressed.

In 2010, Lloyd’s Register (LR) produced a high-level framework of rules for nuclear propulsion with the key focus on safely integrating a licensed reactor in a ship. LR is currently working with a technology provider that aims at building a proof-of-concept for a medium-scale commercial-grade marine reactor based on molten salt reactor technology. Furthermore, the LR Athens office is offering expertise with regards to rules development framework facilitating research.

As with all novel technologies, we need to learn to walk before we run. So, as we move forward, we will need to examine the risks in-depth and gain experience through developing and testing prototypes. At the same time, even when the engineering challenges are resolved, public trust and a robust regulatory framework will also need to reach a significant maturity level, based on the operational experience the industry gains. Russia’s first floating nuclear power plant and China’s plans to build 16 units will help the industry move forward by building the first steps towards nuclear deployment in the marine environment.

While nuclear technologies appear promising, there is still a long way to go until every aspect of these solutions is viable, including investment, technology, and societal acceptance. More evidence to support the readiness assessment is needed, bringing technical insight, safety, and regulation into the forefront. Lloyd’s Register is building the evidence base to support dialogue and decision-making around future fuels and technologies for the decarbonisation of shipping, including the potential of nuclear solutions.
Nuclear propulsion
A viable reality
or a midsummer night’s dream?

In the race towards decarbonization, nuclear energy is viewed by many as the best if not the only solution. Unfortunately, nuclear reactors are very costly, and cargo ships must be cheap to operate and carry a good payload. A reactor requires a lot of shielding, which adds weight and reduces the deadweight. Nuclear fission reactors on merchant ships represent a high capital loss risk. Two significant obstacles are the efficient recycling of nuclear waste and the lack of infrastructure installations in call ports. Future fuels should not be turned into a means of pressure or a political game. The adoption of nuclear merchant ships is also hampered by the limited number of shipyards technologically capable of applying nuclear propulsion to merchant ships.

By definition, nuclear propulsion is ideal for large ships, requiring suitable infrastructure in limited ports of call. Although the cost of a reactor is significantly higher than that of an internal combustion engine, the great advantage of nuclear-powered ships is they do not require refueling and have reduced operating costs. However, a shipowner expects to get the maximum return on his investment as soon as possible. A diesel engine’s initial construction and installation are much cheaper. It burns relatively inexpensive fuels, which are widely available and do not require waste management. In addition, there may be restrictions on who the ship can be sold to, dis-
encouraging investors. Other significant obstacles, until proven otherwise, are the safety of reactors and finding ports that will allow nuclear-powered ships to approach.

Shipyards must enter into agreements with various chartering offices that under certain conditions, nuclear-powered ships are acceptable. They need agreements with large ports and authorities such as the Panama Canal and Suez Canal that they will serve ships with nuclear propulsion. It must be demonstrated that the reactor meets the safety requirements of the countries to be visited by the ship as well as those of the cargo charterers. Of course, in the real world, political problems can arise. A government may respond to public opposition and ban nuclear ships from their ports or waters. Furthermore, it must be proven in no uncertain terms that operating costs meet the requirements of shipping companies.

National and international efforts to develop new carbon-free energy sources explore a nuclear power idea first introduced in the 1950s and 1960s: The Molten-Salt-Reactor (MSR). This design is very different from the current light-water nuclear power plant and inspires a new look at technology. In an MSR, the core works very differently. The main refrigerant is a salt heated above its melting point to reach a liquid state. Instead of fuel rods, fissile material is dissolved in the molten salt. Fuel flows around graphite rods, which attenuate neutron energy to support the nuclear chain reaction. As a fuel, thorium offers many benefits. There is at least three times more thorium on the planet than uranium. Its waste decomposes in hundreds of years and not tens of thousands. Other advantages of the MSR include safety and efficiency. Replacing water as a coolant removes the possibility of steam explosions and the production of flammable hydrogen gas. Low-pressure operation places lower requirements on shielding systems. Nuclear reactions are easier to control because liquid salt expands. In the event of an unpredictable rise in temperature, this expansion stops the reaction. In addition, a frozen plug can melt to open passages and send the fuel to the tanks to stop the reaction. This feature provides an additional safety valve in the event of a power failure or other incident. Because these reactors can operate at higher temperatures, their steam cycle generates electricity more efficiently. The use of liquid fuel allows waste treatment in real time. Finally, there is no need to shut down the reactor to refuel. New fuel can be introduced into the system during operation.

The price of the nuclear propulsion system will be the sum of the components’ construction costs, a part of the system’s development costs, and an amount of the operating costs. Everyone can build a nuclear propulsion system, and everyone is afraid to be the first to do it. It is much better to see a competitor make this move first, and to enter the market when these ships are actually accepted in ports.

In essence, nuclear ships must be seen as a public commodity combating climate change and protecting the economies of nations based on ocean trade. A common set of safety rules and benchmarks created by the IMO would be the “insurance policy” for manufacturers who develop nuclear technology. Today, the push to reduce the size of reactors with a simplified design like the molten salt reactor that offers inherent safety advantages makes nuclear power a major factor in the future energy landscape of shipping. The successful use of nuclear power through the safe choice of thorium reactors is inevitable in the long run.
The Panama Ship Registry adjusts its operation to a corporate business model

The Panama Ship Registry, administered by the Panama Maritime Authority (AMP), provides legal and technical support to thousands of shipowners who have placed their trust in the Panama flag.

An article by H.E. the Ambassador and General Consul of Panama to Greece Julie Lymberopulos and the Panama Maritime Authority

According to IHS Markit, the Panamanian fleet comprises 8,617 vessels with a total of 235.9 million grt (gross registered tons) as of 27 August 2021. Panama-flagged vessels account for 17.8 million grt in the Greek market, Panama being among the Top 5 most used registers in the country. After an irregular year such as 2020, because of the pandemic, the Panamanian Administration considered it necessary to approach not only its clients but also other essential actors of the maritime business, the lawyers who represent its users, and the Recognized Organizations (ROs) and Recognized Security Organizations (RSOs).
The annual meeting with the ROs and RPOs in charge of the certification and regulatory services of the fleet was held both in-person and virtually and attended by regional operations managers from the 31 ROs and RSOs from different countries in the Americas, Europe, and Asia working with the Panamanian administration. The main objective of the meeting was to keep the certification and regulatory services processes aligned with national and international regulations.

The meeting addressed topics related to the fleet’s behavior and performance statistics in the various Memoranda of Understanding (PSC MoU); the requirements related to the MLC Convention (2006), and the obligation to maintain financial guarantees in force and valid onboard as per the different Codes and Conventions of the IMO/ILO, in addition to measures related to the control and monitoring of the existing fleet. The International Safety Management (ISM) Code, the civil liability of the Panamanian fleet, and information related to statutory certificates were part of the discussions.

The Re-engineering and Modernization Program of the Panama Ship Registry was also on the agenda.

Furthermore, the Registry held a meeting with the law firms that represent the Registry’s clients, which was carried out in a hybrid manner and attended by more than 140 people directly related to the activities of the Ship Registry.

The principal legal themes were re-engineering the Panama Ship Registry, fleet depuration, flag requirements, due diligence, and all aspects of maintaining the country as a leader in ship registration.

Rafael Cigarruista, Panama Maritime Authority’s General Director of Merchant Marine, said, “The objective of the conversation is to ensure that national and international actors, including the 53 private consulates of the Merchant Marine and the regional offices of Segumar, put into context the Panamanian Registry technical revisions and methodologies we are currently implementing.”

The Panama Ship Registry’s priority is the performance of the fleet in the different PSC MoUs. According to the inspection results by Port State, the Panamanian fleet maintains a 96.68% compliance rate in the different supervision regimes established around the world at the end of the first half of 2021.

The Panama Maritime Authority works to protect the environment and actively participates in discussions on related issues in various international forums.

Panama maintains in its incentive program the special “Eco Ship” discount, which for a 3-year period offers a 50% discount in favor of ships registered now or in the future in the Register if they show evidence of corporate social responsibility programs focused on the reduction of atmospheric or sea pollution complying with the following provision: the percentage of the Energy Efficiency Design Index (EEDI) obtained must not be greater than that of the required EEDI, which is calculated based on the Reduction Factors of the prescribed EEDI, during the time established for each of the phases.

The Panamanian administration concentrates its efforts on supporting shipowners who trust its flag. On 20 July 2021, the agreement between the Republic of Panama and the Government of the People’s Republic of China on Maritime Transportation came into force. At the end of this agreement renewal process between the Panamanian and Chinese authorities, it was decided that from 17 May 2021 and until it enters into force, both parties would continue to benefit from its provisions.

The agreement will be for five years instead of three years, strengthening the commercial relations and commitment of the Ship Registry to its users entering ports located in the People’s Republic of China.

It is important to reiterate that Panama merchant fleet vessels will maintain the same conditions for port exemption rates, uninterrupted benefits, and preferential treatment in the People’s Republic of China ports, reaffirming its “Most Favored Nation” status.

The Panama Ship Registry continues to monitor compliance with international regulations for the benefit of its users, providing first-class attention and the necessary technical support to each of the more than 8,000 vessels that make up the Panamanian fleet.
Greek shipping ready to take on the decarbonization challenge

After a cautious start, Greek owners and operators are now addressing shipping’s sustainability challenge in earnest, increasingly approaching ABS for support with advanced decarbonization projects as regulations and technology drive significant fleet investment.

The shipping industry stands at a turning point, the like of which comes along perhaps once in a century. Not as epochal as the move from sail to steam, perhaps, but the transition from a single fuel to multi-fuel operations is at least as significant as the change from steam to diesel. In the coming decade, the industry will have to assimilate fundamental shifts in the fuel and propulsion technologies it can adopt to comply with the IMO’s targets and ambitions for decarbonization. There is no way of heading off the changes; the UN mandate to the industry through the IMO makes it clear that shipping must reduce its emissions and ultimately operate at net zero carbon.
How the leading industry players, particularly Greek shipowners, are responding to this challenge does much to demonstrate the operational, technical, and financial changes required across the broader industry. We see that Greek owners are currently developing serious projects in significant volume.

ABS has been at the leading edge of this process from the beginning, investing in broadening the capabilities of the Athens office with specialists in sustainability, alternative fuels, and propulsion. We have created a world-leading center in sustainability, ship systems, and digital capability. Therefore, we are well placed to advise owners through the complex maze of regulation, finance, and technology that makes future fleet development so challenging today.

The degree of potential jeopardy can be seen from the current situation at shipyards, where an increasing number of industry projects are focusing on research into future solutions. Meanwhile, owners are increasingly hedging their bets with investments in dual-fuel designs powered by LNG, LPG, and Methanol. They are also studying and ordering ‘dual-fuel ready’ designs for future fuels such as Ammonia.

The transition towards a truly sustainable shipping industry comes with an enormous price tag, especially when the development of new fuels is included. The investment decisions required mean there is little margin for error when it comes to managing financial and operational risk and achieving compliance.

As is so often the case, Greece’s shipowners have a vital role to play. As owners and operators of tonnage across the range of vessel types, from the simplest workhorses to the most technologically advanced, they cover the entire spectrum of energy efficiency and commercial standards.

The process of understanding what carbon reduction targets mean for their existing fleet and newbuilding projects is accelerating, with owners beginning to evaluate all the options for primary and auxiliary propulsion and improving vessel efficiency.

In addition to investigating the use of new fuels, Greek owners are evaluating pathways to increased energy efficiency, dual fuel readiness, and the first vessel to receive a new notation for sail power readiness. Some major names are even understood to be looking at investments and partnerships that will help them secure new types of vessel fuel.

Projects currently going through the ABS Athens office include consultancy with gas carrier operators on decarbonization and ESG strategy and sustainability for bulk carrier operators. The resources available to them represent the full suite of services, encompassing power and propulsion, fuels and sustainability, as well as digital services.

Our conversations with clients – including some of the best-known names in Greek shipping – show that new tools, services, and partnership approaches will be needed from trusted partners in classification. This includes the traditional technology remit of class and extends to new types of services designed to reflect the emerging landscape.

In the next few years, a raft of new technologies, including those that support low and zero-carbon fuels, will begin to mature and become available. The safety implications of these options will need to be fully understood and accounted for, and the value of each option will need to be assessed against the decarbonization goals of each asset and the wider fleet.

Drawing on its vast technical heritage, ABS provides external guidance and best practices to help owners effectively implement new technologies and operational changes.

Many of these projects are associated with new and emerging digital capabilities, which are having an increasing impact on client needs. Having conducted a growing number of remote surveys over the past 18 months, we believe that digital services offer valuable efficiencies and potentially safer operations. ABS is a pioneer in this field, with resources locally available from its Athens office.

A new ABS service is helping shipowners access ‘green finance’ provided to borrowers who can demonstrate their environmental credentials through a program that assesses the contribution of environmental technologies to the reduction of carbon emissions and intensity.

For borrowers, ABS will review their ESG guidelines and offer advice on which technologies with a positive environmental contribution may qualify them for green financing. For lenders, ABS can assess environmental technologies based on the IMO EEXI and Carbon Intensity Indicator set out in the Poseidon principles. It may also reflect a bank’s own ESG guidelines and advice for granting green financing to asset owners.

An industry undergoing a period of seismic change requires that class services evolve alongside it, supplementing survey and certification services with broader advice on their technical and financial options for decarbonization and ESG. These new services represent a further extension of ABS’s leadership in providing trusted solutions to industry challenges.
Shipping entrepreneurship developments

Shell becomes a strategic partner in the Signal Maritime MR pool

Shell Tankers (Singapore) Private Limited will contribute ten medium-range product tankers (MRs) to the Signal Maritime MR pool in a partnership that reflects the increasing role of digital technology in global shipping. Shell and Signal have also agreed to collaborate on carbon emissions reduction initiatives in line with the shipping industry’s decarbonization efforts. Shell’s partnership in the MR pool comes after Shell became an early adopter of the Signal Ocean platform in product tankers. The two partners expect digital technology to help improve commercial results through the MR pool structure and other potential synergies. Plans for further expansion of the pool with select partners are in progress, following the initial launch of the pool with vessels from Astra Shipmanagement and Signal. The pool aims to increase its fleet while sustaining high performance and quality of service with a global presence. The MR pool has been a natural expansion step for Signal Maritime, following the successful establishment of the company’s Aframax Pool as a top-performing operator. The commercial team leverages its analytical capabilities and expertise along with the powerful Signal Ocean platform to run its tanker pools more efficiently and profitably while ensuring transparency and flexibility to the pool partners. The two partners have also agreed to investigate further synergies and pooling opportunities in other tanker segments.

Edited by:
Giannis Theodoropoulos
DeepSea Technologies secures fresh funding

DeepSea Technologies, the leading maritime technology specialist in vessel performance monitoring and optimization, has secured €5 million in fresh funding from existing and new investors.

The investment reinforces DeepSea’s strong financial position and will enable further technological and product research, design, and development. The fresh funding will also be invested in accelerating the company’s international commercial expansion, which will focus on Asian markets.

The round was led by Nabtesco Technology Ventures with participation from The Signal Group and existing investor ETF Partners. The funding follows a rigorous technical due diligence process carried out by the investors, which involved months of research, technical tests checking the accuracy of the AI models that the company has developed, and strict competitive analysis exploring how DeepSea scored against fellow technological companies and competitors in the industry. The resulting investment future-proofs the company and demonstrates that sector-specialized investors highly trust DeepSea.

A.P. Moller - Maersk accelerates fleet decarbonization with eight large ocean-going vessels

In the first quarter of 2024, A.P. Moller - Maersk will introduce the first in a ground-breaking series of eight large ocean-going container vessels capable of being operated on carbon-neutral methanol. The vessels will be built by Hyundai Heavy Industries (HHI) and have a nominal capacity of approx. 16,000 containers (Twenty-Foot Equivalent - TEU). The agreement with HHI includes an option for four additional vessels in 2025. The series will replace older vessels, generating annual CO₂ emissions savings of around 1 million tonnes. As an industry first, the vessels will offer Maersk customers truly carbon-neutral transportation at scale on the high seas.

More than half of Maersk’s 200 largest customers have set – or are in the process of setting – ambitious zero carbon targets for their supply chains. As part of Maersk’s ongoing collaboration with customers, corporate sustainability leaders including Amazon, Disney, H&M Group, HP Inc., Levi Strauss & Co., Microsoft, Novo Nordisk, The Procter and Gamble Company, PUMA, Schneider Electric, Signify, Syngenta, and Unilever, have committed to actively use and scale zero-carbon solu-
tions for their ocean transport, with many more expected to follow.

The vessels come with a dual fuel engine setup. Maersk will operate the vessels on carbon-neutral e-methanol or sustainable bio-methanol as soon as possible. Sourcing an adequate amount of carbon-neutral methanol from day one in service will be challenging, as it requires a significant production ramp-up of proper carbon-neutral methanol production, for which Maersk continues to engage in partnerships and collaborations with relevant players.

MOL and Tata Steek to develop and deploy an environment-friendly bulk carrier

Japanese shipping heavyweight Mitsui O.S.K. Lines (MOL) has signed a memorandum of understanding (MoU) with Indian steel major Tata Steel to develop and deploy an eco-friendly bulk carrier. MOL will partner with Tata Steel in this innovative project to reduce greenhouse gas emissions in its supply chain.

Peeyush Gupta, Vice President, Supply Chain, Tata Steel, said: “The objective of the agreement is to reduce greenhouse gas (GHG) emissions in the ocean transportation of raw materials for steel production. In the initial stage, the partnership will explore various technologies’ environmental benefits and commercial and operational feasibilities. This will include the “Wind Challenger,” a hard sail, which would reduce emissions by harnessing wind energy. MOL has been jointly studying the technology with cross-industrial partners, and the first vessel to be equipped with the Wind Challenger is slated to start operation in 2022.”

Ranjan Sinha, Chief Group Shipping and Director RM Procurement of Tata Steel, said: “Tata Steel as a signatory of Responsible Steel is committed to aligning its shipping activities with responsible environmental behaviour. We are pleased to be joining hands with MOL, a reputed global marine transport company, in combining efforts towards sustainable shipping.”

Latest developments in the gas transportation market

On 16 August 2021, Norwegian Odfjell SE announced its exit from the gas market. Specifically, its subsidiary, Odfjell Gas Shipowning AS, entered into an agreement with Singapore headquartered BW Epic Kosan Ltd. (BWEK) for the sale of Bow Guardian and Bow Gallant, two LPG/Ethylene carriers built in Korea in 2008. The purchase price will be settled partly in cash, used for the full repayment of mortgaged loans on the vessels, and partly by the issuance of 6,889,611 freely transferable shares in BWEK. Following the transaction, Odfjell will own 4.3% of the shares in BWEK.

At the same time, Dorian LPG Ltd. announced on Tuesday, 17 August, that it had entered into an agreement to sell the Captain Markos NL, a 2006-built, debt-free VLGC, which, as previously announced, had been classified by the company as a vessel held-for-sale. The transaction will be made with own-funds.
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Blue Economy

Seabed 2030 Initiative: mapping the Earth’s ocean floor

The Nippon Foundation-GEBCO Seabed 2030 Project and Kongsberg Maritime have entered a Memorandum of Understanding to support the global initiative to produce the complete map of the ocean floor of all the Earth’s oceans. Seabed 2030 is a collaborative project between The Nippon Foundation and GEBCO to inspire the complete mapping of the world’s ocean by 2030 and compile bathymetric data into the freely available GEBCO Ocean Map. GEBCO is a joint project of the International Hydrographic Organization (IHO) and the Intergovernmental Oceanographic Commission (IOC); it is the only organization with a mandate to map the entire ocean floor. Under the terms of the agreement, The Nippon Foundation and Kongsberg Maritime will work together to advance understanding of ocean bathymetry utilizing the technological solutions offered by Kongsberg for safe, efficient, and sustainable shipping activities.

A new initiative for bio-LNG fuel production with the backing of Brussels

The European Commission will fund the FirstBio2Shipping, a project to produce liquefied biogas as an alternative marine fuel developed by Attero and Bio-LNG Hub Wilp. The project aims to decarbonize the shipping industry by setting up the first industrial plant producing renewable, low-carbon bio-LNG in a standardized and scalable fashion. Producing low-cost bio-LNG could lead to the replacement of fuel oil by bio-LNG in the future. The plant under development is expected to produce 6 million normal cubic meters of biogas, 2,400 tonnes of biomethane, and 5,000 tonnes of bio-CO2 per year. The European Commission will invest 118 million euros in 32 energy projects in different countries. These projects aim at developing low-carbon technologies, energy storage technologies, and renewable energy technologies in energy-intensive industries, such as shipping.
Long Beach Container Terminal, the world’s greenest all-electric terminal

The West Coast port of Long Beach has announced the completion of construction work on the new LBCT container terminal in Middle Harbor. This terminal is equipped with almost all-electric and zero-emissions equipment, making it one of the world’s most technologically advanced cargo facilities. LBCT is designed to strengthen competitiveness, improve cargo flow, and dramatically improve air quality in the second-largest U.S. port.

“As the world’s first all-electric, zero-emission mega terminal, the Long Beach Container Terminal sets the industry standard for moving cargo sustainably while keeping the port competitive and supporting vital jobs,” said Mario Cordero, executive director of the Port of Long Beach.

Construction of the terminal, whose cost reached $1.493 billion, started in May 2011. The first part of the terminal opened in 2016 with the completion of Phase 1, allowing the terminal to begin operations across an initial 151 acres. Phase 2 wrapped up in October 2017, adding another 40 acres to the terminal. The third and final phase concluded in July, growing the terminal to 300 acres with a completed container yard, an administration building, and an on-dock rail yard designed to handle 1.1 million TEUs annually, thus minimizing truck traffic on local roads and freeways. Additionally, the terminal is equipped with fourteen of the most advanced gantry cranes that can simultaneously serve three massive containerships.

With an annual capacity of 3.3 million TEUs, LBCT by itself would rank as America’s sixth-busiest seaport. In fact, its completion is expected to provide extra capacity to the port, which, despite the pandemic, set a record in container traffic in the last year.

Shedding light on the history of New York’s canals

On 20 July, New York Governor Andrew M. Cuomo instituted the Seneca Lake Archaeological and Bathymetric Survey Project, an underwater exploration occurring at Seneca Lake that aims to preserve the history of New York’s Canals. To this end, state-of-the-art equipment will be used to record and take photographs of ships wrecked while crossing the region’s canals in the 19th century.

The research that will be carried out will be a unique testimony for the period and an important educational chapter for the students of New York State. At the same time, the bathymetric survey will map the seabed while collecting information on water quality and the ecosystem of Lake Seneca. In his statement, Governor Cuomo stressed that the State has a duty not only to preserve history but to make it accessible to all New Yorkers.

It is worth noting that this project, which will be a product of cooperation of many public bodies of the State of New York, has been repeated in the past. Previous research in 2018 and 2019 had brought to light the 16 shipwrecks of ships that crossed the canals of the State in the 19th century.
Geopolitics

Afghanistan: The realignment of geopolitics the day after

The Taliban seizure of power in Afghanistan is “the most important geopolitical event” since the annexation of Crimea in 2014 as it offers a “new opportunity” for China, Russia, and Turkey to “expand their influence” in Central Asia said High Representative of the European Union for Foreign Affairs and Security Policy Josep Borrell. Addressing MEPs, Josep Borrell reiterated the need for Europe to “talk to the Taliban” in dealing with the humanitarian crisis, without this meaning formal diplomatic recognition of their status. The situation in Afghanistan “will greatly impact regional and international security. We must act together with our regional and international partners. Central Asia will become a region of greater strategic importance to us,” warned Josep Borrell. “We are well aware that Turkey, China, and Russia will have a new opportunity to expand their influence to the detriment of the West in Central Asia,” he warned, calling for stronger European diplomatic relations with Iran, Pakistan, and India. According to Josep Borrell, the European Union “should work closely with the United States and step-up diplomatic efforts to build a consensus with its allies to develop an effective common approach” to the new Taliban regime.

At the same time, the US government and the US Federal Reserve have frozen Afghanistan’s multi-billion-dollar foreign exchange reserves, according to US media reports. According to informed sources who spoke on condition of anonymity to The Washington Post, the move aims at preventing the Taliban from gaining access to those resources. The Governor of the Afghan Central Bank, Azmal Ahmadi, who left the country after the Taliban came to power, said on Twitter that about $7 billion is deposited in the Fed, which is most of Afghanistan’s foreign exchange reserves. About $2 billion is invested elsewhere, according to Ahmadi.

“Given that the Taliban are on international sanctions lists, it is expected that the country’s resources will be frozen, and the Islamist movement will not have access to them,” the central banker added. According to The Wall Street Journal, as the Taliban approached Kabul, President Joe Biden’s government decided to cancel the transfer of large amounts of cash in dollars to Afghanistan. “No resource of Afghanistan’s central bank in the US will be available to the Taliban,” a Biden government official told the Journal.

Ukraine: “We cannot allow Russia to use gas as a geopolitical weapon”

Following the recent talks between Ukrainian President Volodymyr Zelensky, German Chancellor Angela Merkel, the Ministers of Energy of Ukraine, the United States, and Germany discussed the threats to the energy security of Ukraine and the whole of Europe posed by the Nord Stream 2 project, the issue of reforming the energy sector of Ukraine, and the introduction of new technologies. “As the President of Ukraine said, we cannot allow the Russian Federation to use gas as a weapon. We discussed in detail the importance of ensuring the security of gas supply, gas transit, and the steps that will provide guarantees for Ukraine on preserving the transit potential,” said Minister of Energy of Ukraine German Galushchenko at a briefing following the meeting. He noted that the ministers discussed the application of the Third Energy Package and, separately, the issue of Russia strengthening Gazprom’s monopoly in the European market.
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According to German Galushchenko, the synchronization of the Ukrainian and European Union energy systems was also discussed during the meeting.

For his part, German Federal Minister for Economic Affairs and Energy Peter Altmaier noted that it had been a good and meaningful discussion as the issues of gas supply to European countries and ensuring the security of its transit through Ukraine had been discussed.

The ministers discussed a declaration made between the United States and Germany a few weeks ago. “We also support Ukraine’s “green” course. We are planning to continue our close cooperation on the synchronization of energy systems of Ukraine and the EU in order to play a positive, constructive role in all issues that are important to Ukraine in this area,” said Peter Altmaier.

According to Peter Altmaier, many German companies are willing to invest in the production of “green” hydrogen in Ukraine, which will positively impact the decarbonization of the country’s economy.

The US takes action against Iranian oil-smuggling

According to Reuters News Agency, the USA has imposed sanctions on a foreign broker involved in an international oil-smuggling network that supports the Iranian Islamic Revolutionary Guards Corps (IRGC).

Specifically, the sanctions concern an Omani citizen and four legal entities, of which two are based in Oman, one in Liberia, and one in Romania. Due to the sanctions, the above natural and legal persons cannot do business with American companies, while at the same time, their assets in the USA were frozen.

In a recent meeting between Japanese Foreign Minister Toshimitsu Motegi and Iranian President Ebrahim Raisi in Tehran, the latter called on Japan to release billions in Iranian funds frozen due to U.S. sanctions. President Raisi said the freezing of these funds, which Japanese banks cannot transfer to Iran due to US sanctions, is unjustified.

Passenger Shipping

XRTC Study: The consequences of the pandemic on Greek coastal shipping

XRTC Business Consultants Ltd. published the 20th annual comprehensive study on Greek Coastal Shipping, covering critical aspects of development and records general data on the Greek coastal shipping market. The 20th study of Hellenic Coastal Shipping finds that the industry is at a particularly critical turning point, requiring all stakeholders to show responsibility and understanding of the current situation. There is also a need for analysis and forecasting regarding the conditions that will prevail in the future and, finally, decision-making that will directly determine the viability conditions of coastal shipping companies. The criticality of the situation is due, among other things, to the pandemic, which has acted as a catalyst in the emergence of its chronic economic problems, which were overshadowed by the positive dynamics created by the steady upward trend of demand in the four years 2016-2019.

According to the study, in 2020, the negative conditions that began to affect the industry continued, resulting in a significant drop in demand and negatively affecting the companies' financial performance.

INTERNATIONAL WATERS
sequences of the pandemic on the passenger shipping industry were particularly severe, resulting in an unprecedented loss of transport work and revenue, as restrictions were imposed on the movement of passengers on the Greek coastal lines from the end of March 2020 to mid-May 2020.

More specifically, due to the slump in passenger traffic, 30% of the available fleet remained idle, which put significant pressure on companies concerning maintaining logbooks and high maintenance costs.

Given the significant slump in tourism in the third quarter, but also the new restrictive measures due to the outbreak of the pandemic in the last two months of the year, the decline in passenger traffic on the domestic lines in 2020 reached 53% compared to 2019, while in vehicles (total cars and trucks) the reduction was 28%. In the Adriatic market, the negative impact was more pronounced in passenger traffic, which dropped by 69%, in contrast to the movement of trucks and vehicles, which decreased by 8%.

The decline in passenger and vehicle traffic significantly affected the turnover of companies in the sector, which showed a 45% decrease in inland lines and 30% in the Adriatic lines. The loss-making results for 2020 exceeded € 130,000,000 while the liquidity of companies was limited.

New $125 million cruise terminal in the Port of Galveston

The Port of Galveston, the fourth most popular cruise port in North America, hosted a ground-breaking ceremony on Saturday, 14 August, to inaugurate the construction of Royal Caribbean International’s new $125 million cruise terminal.

To be completed in fall 2022, the port’s third cruise terminal is being built by Royal Caribbean to homeport its award-winning Oasis Class ship, Allure of the Seas. One of the world’s largest, most innovative cruise ships and the first of its kind to call Galveston home, Allure will sail 7-night Western Caribbean itineraries starting November 2022.

The construction project will generate an estimated 400 Texas construction jobs and 400 local operations jobs. The 161,300 square-foot terminal will cover 10 acres at Pier 10 in the easternmost area of the port on Galveston Island. The port will build and operate a 1,800-space cruise parking lot at the terminal.

Ceres Terminals Holdings, LLC, will operate the terminal and support cruise operations with services, including stevedoring, passenger luggage services, and ship provisioning. Ceres is an international company with 60 years of experience in shipping, cargo, and cruise operations.

The port signed a long-term contract with Royal Caribbean for the new facility in December 2019. Through the public-private partnership, Royal Caribbean will build the terminal, then lease it from the port for the initial term of 20 years with four 10-year options.

The facility will feature state-of-the-art technology to enable mobile check-in and facial recognition to expedite guests’ arrival experience. The terminal is designed to meet global LEED (Leadership in Energy and Environmental) health, efficiency, and sustainability standards.

World’s largest cruise ship on sea trials

On Friday, 20 August, the Wonder of the Seas, the world’s largest cruise ship, set out on its four-day sea trial voyage in France, between the port city of Saint-Nazaire on the west coast of France and the island of Belle-Île-en-Mer.

The “Wonder of the Seas” is 362m long and 64m wide and is as tall as a 20-storey building, exceeding the height of the Eiffel Tower, which is 324 m. When she debuts, she will become the world’s largest cruise ship. She can travel at a maximum speed of 25.1 knots, accommodate 6,988 passengers and 2,300 crew members, and has four swimming pools, 18 bridges, and 2,867 cabins.

NCL’s first of six new cruise ships floated out from Fincantieri shipyard

“Norwegian “Prima,” the first of six vessels of Norwegian Cruise Line’s (NCL) new Prima Class of ships, was floated out at the shipyard in Marghera, Venice.

Along with her sister-ships, the “Norwegian Prima” will form the backbone of the future NCL fleet, being more than 142,500-tons, almost 300 meters long, and accommodating 3,215 guests. Deliveries are scheduled between 2022 and 2027. The class is based on a prototype project developed by Fincantieri, which enhances the consolidated features of NCL’s signature offering of freedom and flexibility, qualified by an innovative configuration for an enhanced passenger experience. In addition, the focus was set on energy efficiency, with the twofold aim of optimizing consumption at sea and reducing environmental impact, compliant with all the most recent regulations on this matter.
The Oinoussian paradigm: A success story of the Greek islanders' collective solidarity

As part of the Summer Camp organized by Isalos.net and HELMEPA last July, Naftika Chronika visited the historic seaport of Oinousses, the homeland of seafaring on the frontier of Greece. While there, we had the good fortune to be given a tour of the emblematic settlement of the island, where historical personalities of Greek and international shipping began their journey. We talked to representatives of local organizations, locals, and people who continue the great maritime paradigm of Oinousses. They spoke emotionally about their homeland on Greece and Europe's border and explained to us why the fame of Oinousses reached across the oceans.
An archipelago that has left its mark on the international shipping arena

by George Daniil, Mayor of Oinousses

Oinousses has a long tradition in seafaring. As a small place with no natural resources or the means to sustain its people, it made them turn towards trade and short-distance shipping during the sailing ship period. Later, shipping’s transition to steam was a defining moment for the future of this development. Today, Oinousses can be proud of having left its mark on the international shipping arena. And it is not only the mark of the island’s shipowners or the mark of the shipowners’ descendants; it is also the mark of Oinousses on maritime training. Since antiquity, Greeks have been associated with seamanship, and I believe this will continue for many centuries to come.

Everything on this islet has to do with shipping

by Dr. George D. Pateras,
President at Hellenic Chamber of Shipping

We were born into shipping here. Wherever you go, wherever you walk around the island, everything has to do with shipping. Everybody you meet has something to do with shipping. All you hear about in the coffee shops, restaurants, and houses is shipping - stories about shipping. Everybody has something to do with shipping. You cannot not be involved in shipping when you are on the island. Everybody is called captain or “mastro.” I am an engineer, so they used to call me “Mastro-Giorgi”.

The island has nothing but shipping, and I am very proud of our heritage. What I love about Oinousses is my home - I feel safe here. I used to bring my kids here every summer. Even today, they walk around, and everybody knows who they are by the family nickname. I knew they would grow up amongst people involved in shipping. That way, I was sure that my children would love the business as they grew up because all they heard about was shipping. And it’s a beautiful island. It’s got natural beauty, and it’s clean. We don’t have that much tourism, but it’s our home. We know everybody as we are small enough to be familiar.
We are very proud that the name of our small island has managed to become well known in many parts of the world

by John M. Hadjipateras,
President of the Oinoussian Benevolent Fund

It is a fact that Oinoussian shipowners were and remained shipmasters; they have always had direct contact with the ship, which obviously helps in its quality management. I believe that we will successfully deal with the next big challenge, namely the change from fossil fuels to new technologies, just as Oinoussian shipowners managed to move from sail to steam in the past through the cooperatives they created. We are hands-on shipowners and have close contact with the ship and its crew, which helps us to better deal with day-to-day ship management issues.

I have been coming to the island every year since early childhood. Every summer, my children, my wife and I visit Oinousses for our holidays, and they have come to love the island as much I do. The bridges that connect the Oinoussian diaspora with the island, such as the Oinoussian Benevolent Fund, which I have served for almost 20 years and chaired for the last five years, keep our roots alive and help us have direct contact with our native land.

The Oinoussian Benevolent Fund was founded in 1942 by Oinoussians who were living in London at the time. During the war years, there was limited communication between the seafarers and their families living in Oinousses. So, the shipowners arranged to send money back to Greece to help the seafarers’ families. The charity continued its work, after the German occupation; in the 1950s, the shipowners decided they needed to help rebuild the island with infrastructure projects. Thus, the charity helped with many construction projects such as roads and buildings, as well as supporting the Merchant Marine Academy, the Boarding School, the Junior School and St Nicholas Church.

Next year, the Oinoussian Benevolent Fund will be celebrating 80 years of supporting the Oinoussian community.

It is a vital link that inspires young Oinoussians who may have lost touch with the island to build a connection with Oinousses and get to know their roots. We hold an annual fundraising event in London to support the island’s community and, of course, continue to receive annual voluntary contributions from Oinoussian shipping companies.

Today, Oinousses is on our minds daily, and we still offer as much as we can to this island at the edge of Europe and Greece. We are very proud that the name of our small island has managed to become so well-known in many parts of the world through its diaspora and local community.
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For us, the sea was the only way out

by Ioannis G. Lygos,
President of the Oinousses Friends Association

For Oinousses, shipping was the only way out because it was essentially a barren island where economic activities such as animal husbandry or agriculture could not be developed. Therefore, the island inhabitants had to turn to the sea to make a living. Entire families, either as cooperatives or as individuals, initially turned to sail ships. Later, as the sea was the only way for this island to survive economically, shipping developed, and today we can talk about the maritime miracle of Oinousses. Let’s not forget that the benefits and privileges of shipping are numerous.

But to get here today, some people dedicated their lives to doing their best for the island.

The Oinousses Friends Association (OFA) was founded in the difficult years of the interwar period - in August 1929 to be precise - by a group of ardent patriots, Oinoussian scientists, seamen, and shipmasters. These people believed it was necessary to create a collective body to deal with the various problems of the Oinousses cluster and its inhabitants. The main problem was the threat of a diaspora due to the need to transfer the shipping activities of Oinoussians to major international shipping centers such as London and Piraeus.

Today, the OFA’s responsibility remains the same: to keep the flame of love as alive as in 1929 when a team of “Filikoi” from Agnoussa laid the foundation stone for the Agnoussa of our dreams.
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Through a seafarer’s eyes

Is the “Fit for 55” package Europe’s last chance to reduce greenhouse gases?

The European Commission is preparing for a major revision of climate and energy policy and legislation to meet the EU’s “Fit for 55” target of a 55% reduction in greenhouse gas emissions by 2030. On 14 July, it presented a package of measures to the Member States and their European Parliament representatives who will be called to take a stand in favor or against, after lengthy consultation. The EU has been the first economy in the world to start translating its long-term goal of zero carbon emissions into actual policies, introducing them into the daily lives of all its citizens and businesses.

If the revision is agreed and implemented, the “Fit for 55” proposals will deepen and expand the decarbonization of the European economy to achieve carbon neutrality by 2050. Without this package that aligns current EU climate legislation with the 2050 zero-carbon target, Europe will only achieve a 60% reduction in emissions.

An extensive package of legislative proposals has been presented to achieve the goal of reducing the European Union’s greenhouse gas emissions by 55% by 2030, compared to 1990 levels, aligning EU policy with the ambitious political mandates of the Green Deal and EU Climate Law.

The main purpose of these measures is to turn the 2020s into a transformative decade for climate action, combating the climate and biodiversity crises.

The “fit for 55” measures include but are not limited to:

by Capt. Georgios Georgoulis
• The European Emissions Trading System (ETS EU): The ETS EU sets a cap on total emissions for specific sectors (steel, electricity, EU airlines) and then allocates a total of carbon credits for these emissions, which are then exchanged within each sector to reward those who have low emissions and increase costs for those who pollute. The emission reduction obligation for ETS sectors has also increased from 40% to 61% by 2030 based on 2005 levels.

• The Social Climate Fund: The increased emphasis on the “polluter pays” philosophy in the face of the effects of carbonization, also announced under the “Fit for 55” package, creates an unwarranted financial burden on vulnerable micro-enterprises, consumers, and transport users. The €72.2 billion budget for 2025-2032 is generated by revenue from the new ETS. It will be made available to the Member States to finance their citizens’ investments in energy efficiency and cleaner transport modes.

• The Renewable Energy Directive (RED): One legislative amendment that has attracted significant interest in recent months is the Renewable Energy Directive (RED). The RED sets a target for the level of renewable energy sources in the overall EU energy mix. It identifies the sources of energy that can be considered “renewable” and therefore contribute to this target. The previous RED targeted 32% of renewable energy sources by 2030, but under “Fit for 55”, this share increased to 40%.
• The Energy Efficiency Directive (EED): The EED sets a more ambitious, legally binding annual target for overall improvements in energy efficiency and reduction of energy use, as well as a target for the rate of building renovation. Previous goals under the EED were to improve overall energy efficiency by 20.5% by 2030. Following its revision, the EED sets a 2030 target of 36-39% to improve overall energy efficiency.

• Marine fuel in EU Ports (FuelEU Maritime): The new proposal for maritime transport sets a ceiling on the carbon content of marine fuel used by ships arriving in European ports. The ETS (Emission Trading System) extension to shipping and FuelEU Maritime will apply to ships of at least 5,000 gross tones, regardless of flag. Moreover, both place the responsibility for complying with existing requirements on shipowners. However, they recognize the “polluter pays” principle and state that a shipping company can hold the charterer responsible for ship emissions or the intensity of greenhouse gases and, therefore, for the compliance costs through a relevant clause in a charter party. The new regulation stipulates that the charterer is the entity responsible for the ship’s choice of fuel, route, and speed.

• The Carbon Border Adjustment Mechanism (CBAM): The idea behind this initiative is to protect the EU industry from ‘carbon leakage’ of production to other regions with lower operating costs than the EU due to weaker environmental standards. The CBAM achieves this by creating a level playing field for carbon emissions, obliging third-country and domestic producers to pay the EU ETS carbon price.

• The Alternative Fuels Infrastructure Directive (AFID): The Commission proposes that all new cars registered from 2035 have zero emissions. The tightening of CO2 emission standards for cars and trucks will accelerate the transition to zero-emission mobility, requiring a reduction in the average emissions of new vehicles by 55% by 2030 and 100% by 2035 compared to 2021 levels.

• Refuel EU Aviation: The Commission will propose progressive taxation of kerosene for flights within the EU. According to the Alternative Fuel Infrastructure Regulation, aircraft, like ships, must have access to clean electricity supply in major ports and airports.

• The New EU Forest Strategy: In addition to being the green lungs of our planet and sources of timber, forests are one of the most critical bastions against climate change. The Commission encourages the implementation of forest management practices to improve the climate and the living conditions of humans and fauna and flora in each region. Ecological indicators will be adopted to monitor forest management via terrestrial and satellite stations while encouraging the participation and contribution of local citizens and local or national organizations in the discussions and the formulation of local forest management practices in the framework of the European forest policy. Four (4) pan-European volunteer networks and sixty-eight (68) organizations from twenty (20) European countries have so far responded to the call to implement and support a robust forest strategy with transparency and prospects.

The climate targets outlined by the EU, first in the Green Deal and re-affirmed through the EU Climate Law, are very ambitious. The political mandate is clear. Therefore, the Fit for 55 package is crucial, as it covers some of the EU’s most powerful decarbonization tools. If well-executed, driving decarbonization from an integrated perspective could help strengthen the scope of each individual measure, creating an ‘ecosystem’ of mutually reinforcing climate policies. Nevertheless, it remains to be seen how effective this approach will be in practice as there is certainly scope for the interdependency of the policies to manifest in challenges and failures.

Drones and warships deployed to eliminate the new piracy hotspot in the Gulf of Guinea

Helicopters hover above a patrol vessel in Nigeria’s frenetic Apapa Port to identify pirate boat attacks. On the dock, drones emblazoned with the Nigerian flag sit ready to deploy – all part of a $195 million U.S.-backed “Deep Blue” initiative to deter pirate attacks in the world’s most dangerous area for seafarers. Since the waters off Somalia in East Africa have become more secure, nearly all the world’s kidnappings at sea now take place in the more than 2.35 million square kilometers stretch (910,000 million square miles) of the Atlantic Ocean known as “pirate alley” that borders some 20 West African nations Nigerian Maritime Administration
and Safety Agency (NIMASA) representatives have reported that “Deep Blue” had stemmed recorded kidnappings in the second quarter, after a record 130 sailors last year, compared with five in the rest of the world.

But there have already been 50 kidnappings logged this year, and the U.S. navy is helping with training, and European navies are assisting in patrols, a mark of their concern for a region that is a key global supplier of crude oil.

Unlike in Somalia, which had no navy and limited government capability and thus allowed foreign navies to fire on ships and arrest pirates, only Nigerian security forces are allowed to be armed in the country’s large territorial waters. Beneath the government’s new show of naval power lurks the poverty in the Niger Delta, home to almost all of West Africa’s pirates. Pollution in the region where international and local firms churn out Nigeria’s oil means people cannot farm or fish since, according to the United Nations, 70% of its roughly 30 million people earn less than $1 per day, making piracy attractive.

United Nations officers and top personnel of private security firms have argued that collusion between some members of the security forces and pirates and scant prosecutions for kidnappings must also be tackled, while the issues that caused the piracy incidents in the Niger Delta have not been addressed. This year, the Nigerian navy has said it would strengthen measures to root out and punish security personnel who collude with kidnappers and criminals.

Piracy is nothing new to Nigeria, but the number and range of kidnappings has shot up, with oil tankers, container ships, and fishing boats at risk even 210 nautical miles offshore.

Kidnappings for ransom accounted for only 15% of attacks in 2009, according to UNDOC; by 2020, these made up nearly all attacks as ransoms became more lucrative than any cargo.

The cost of freeing a group of hostages roughly doubled to up to $300,000 from 2016 to 2020, according to UNDOC, which estimated that Niger Delta-based pirates netted $4 million in ransom payments last year.

The sum pales compared with Somali pirates’ more than 1,000 captives in 2010, but Nigeria’s vice president put the economic cost in the billions, stifling much-needed development in a region disproportionately dependent on sea-borne imports.

On the other hand, shipowner associations have claimed that many ship owners simply refuse to ply the waters, pushing up costs, while crews also refuse to sail in the region – and can demand double pay if they do.

Pirates typically take kidnapped sailors to the Delta’s swampy, snaking creeks, where they face malaria, typhoid, and attacks from rival bands of kidnappers. Nationwide, kidnappings have spiked over the past year as the economy faltered.

In January, a seafarer from Azerbaijan died during a kidnapping, and two others of unspecified nationality died of sickness during abduction in 2020.

The Danish, Italian and Portuguese navies are also sending assistance. Early this month, a hulking U.S. expeditionary base – the USS Hershel “Woody” Williams – docked to help train regional security to use the new kit.

Insurance companies, led by underwriters Lloyd’s Market Association (LMA), expanded the size of the area in the Gulf of Guinea included in the highest risk level last year.

Despite “Deep Blue,” the Nigerian security forces were unlikely to change their assessment. Last year a Nigerian court made the first convictions under a 2019 anti-piracy law. Before that, there was no specific law against piracy.

According to UN officials in the country, the biggest problem lies in the swamps and tributaries of the Niger River, where pirates and government officials such as the security forces share the same roof and the same poverty. In truth, the Nigerian government prefers to do nothing, leaving piracy almost unchecked to terrorize ship crews and increase the costs of all those involved in maritime trade. The intervention by the forces of foreign countries can bring minor improvements because the problem is not whether the state can deter piracy but whether it is willing.
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Fire in the engine room: A success story of emergency response

The Australian Transport Safety Bureau (ATSB) has released a preliminary report from its ongoing investigation into a fire onboard the MPV Everest multipurpose vessel while on charter to the Australian Antarctic Division. The report outlines basic information, including the fire’s sequence of events as established as part of the investigation’s initial evidence collection phase. It does not detail any safety findings or analysis.

On the evening of 31 March 2021, the Bahamas-flagged multipurpose vessel MPV Everest (Figure 1) departed a location approximately 100 nautical miles off Mawson Research station in the Australian Antarctic Territory, bound for Hobart, Tasmania. There were 37 crew and 72 expedition staff on board for the 3,328 NM passage to Hobart.

At 0800 local time on 5 April, MPV Everest was about 1,075 NM north-east of Mawson station on a north-north-easterly course and making good 11 knots (Figure 1).

The propulsion power was provided by engine numbers 2 and 3 in the port engine room and number 6 in the starboard engine room. Engine numbers 4 and 5 in the starboard engine room were out of service at the time. The weather at the time was recorded as south-south-easterly winds at 20 knots with 2 m seas on a 6 m west-north-westerly swell.

At about 1030 local time, the ship’s master and doctor were in the master’s office located one deck below the navigation bridge (bridge), overlooking the main and upper accommodation decks aft. Shortly before 1100, they saw large flames erupting from the open louvres in the port engine room’s exhaust casing located one deck above the upper accommodation deck, aft of the accommodation block.
The master hurried up to the bridge and raised the alarm by announcing on the ship’s public address system that there was a fire, instructing crew and expedition staff to report to their emergency muster stations. As expedition staff began mustering at their stations on the forecastle deck, the ship’s crew were preparing the fire-fighting equipment and hoses.

The chief engineer, accompanied by the third engineer, went to investigate and, on opening the watertight door to the port engine room, they saw thick smoke and burning material. The chief engineer noted the water mist-fixed fire extinguishing system was active. They retreated, shut the watertight door, and returned to the ECR. The chief engineer broadcast a report on the ship’s radio emergency channel, activated the emergency stops for all three engines in the port engine room, and instructed the second engineer to shut the fuel quick closing valves for the port engine room.

A few minutes later, the number 6 engine in the starboard engine room also shut down due to overload, and all power, including propulsion, was lost. Limited electrical power was restored using the emergency generator, but there were problems with its use, including its location near the flames from the exhaust casing. As a result, the number 6 engine was restarted, and its electrical output was connected to the emergency switchboard.

At about 1115, the master had confirmation that all personnel on board had been accounted for. Shortly after, the master instructed the chief engineer to manually re-activate the water mist system in the port engine room.

The chief engineer monitored the temperature at the port engine room watertight door with an infrared thermometer, and when the reducing temperature had stabilized, the water mist system was stopped. Then, the chief engineer, electro-technical officer, and an expedition staff member with professional fire-fighting experience ashore entered the engine room equipped with fireman suits, SCBA sets, a charged hose, and a fire extinguisher. They confirmed that the fire had been extinguished and safely exited the engine room. Shortly before 1400, the mustered expedition staff were stood down. There were no injuries to anyone on board. According to initial inspections of the fire-damaged engine room, the crew observed fuel oil dripping down into it from within the exhaust vent casing above. In addition to the exhaust piping for the engines, air vent pipes for several engine room fuel-oil tanks and other spaces are situated within the casing. Some of these vent pipes terminate on top of the casing, while others terminate internally within the casing. Those that terminated inside the casing included the port fuel-oil settling tank that was being filled on the morning of the fire. The IAS data indicates that this tank probably overflowed sometime after 1030 that morning.

Despite the root cause of the incident, which is crucial for preventing a reoccurrence, the above incident is an excellent case study of exceptional response to an emergency by crew and passengers. The weather was relatively good at the time, but the biggest ally for the successful outcome was the time (daylight) when this serious incident occurred, whose outcome could have been very different if the master, the first engineer, and the officers and crew, or even the passengers did not show the professional response required for the situation, which is presumed by the sequence of events:

- Activating the fire alarm
- Mustering and presence proof of crew and passengers
- Detecting the location of the fire
- Closing quick fuel valves
- Activating the engine room water mist and isolating the fire area
- Cooling the space outside with hoses
- Stabilizing the temperature of the fire area and entrance for the final extinguishing using the necessary equipment (SCBAs’ Fireman outfit, hoses, and nozzles)

All the above operational activities in the whole range of fire-fighting management were observed as provided in the relevant plans with professionalism and precision, thus ensuring the safety of the ship, its crew, and its passengers.
Despite the circumstances and the general restrictions imposed by the Polish government amidst this extraordinary period, Remontowa Shiprepair Yard continues its operations, dry dockings and repairs, working currently on the same pace. There are currently no legal restrictions on arrivals of foreign ships to Polish ports and shipyards.

Crew members of any vessel entering Poland are not subject to a mandatory 14-day quarantine either, but members of the crew are most likely to be examined by sanitary officers.

Of course, considering health care of all crew members and shipyard's employees, Remontowa has taken some additional actions aiming to prevent any potential threats. Our customers’ safety remains a priority especially under this current unprecedented condition.
Leading vetting survey company RightShip has announced that nearly 200 independent chartering organizations moved to and are currently using its expanded vetting criteria. This has reduced the need for charterers to apply bespoke criteria to their vetting due to the innovative standardization tools used in the process. The new criteria extend beyond the previous 20-item version to 50 assessment items, including separate, brand-new sections for flag and class, ship structures, engineering, and a comprehensive section on crew welfare.

Strong standardization of technical procedures and expectations have been a consistent challenge for the maritime industry. RightShip has improved data ingestion and made standardization a priority to serve the industry’s interests more effectively. This includes consolidated trends found from RightShip’s existing proprietary vessel vetting insights, cleansed incident database and closeout reports, and the addition of the latest industry requirements to the Vetting Criteria.

According to RightShip’s vetting policy, there is no minimum Safety Score. Any vessel may be vetted with a Safety Score between 1 and 5 and recommended by RightShip, provided that the baseline requirements are met. To be eligible for a recommendation, vessels with a lower Safety Score require greater due diligence checks, possibly including completing a RightShip Inspection.

- Vessels with a 0/5 Safety Score are unlikely to be recommended until the reason for the score has been investigated and resolved to the satisfaction of RightShip.
- Vessels with a N/A Safety Score are not covered by the normal due diligence vessel screening service and may require additional checks if a charterer requires RightShip to vet a Vessel with a N/A Safety Score.

RightShip vets more than 40,000 vessels a year, powered by an intelligent Platform and a global team of vetting superintendents. The new vetting criteria have been applied from 30 June 2021.

According to the same vetting policy, the conditions that always lead to a vessel being recommended as Unacceptable are:

- Vessel age exceeds the RightShip Standard (over 30 years of age for every vessel, 25 years of age for tankers and bulk carriers, 35 years of age for LNG)
- Open abandonment of seafarer cases involving the subject vessel (any vessel found to have committed human rights abuses, found with poor living standards, poor working standards, gross failure of protecting seafarers’ rights, terms, and conditions of employment and is the subject of a current ILO abandonment case or associated with an owing or managing entity of a current ILO abandonment case)
- Vessels banned by a Port State Control MoU (3 or more PSC detentions in the last 24 months)
• Vessels or companies restricted by RightShip due to ongoing concerns (zero score)
• Incidents of extreme significance, likely to be those Category A incidents that cause multiple fatalities, have a very high environmental impact or attract major media attention
• Vessels with an “Unacceptable” last RightShip Inspection
• Vessels flagged and/or classed with flags and Class Societies on the Paris MoU Blacklist
• Vessels that have been dis-classed or class-suspended due to performance and failure to complete class requirements
• Vessels falsely presenting themselves
• Vessels with overdue class and statutory surveys and overdue conditions of class
• Vessels whose operators demonstrate an unwillingness to undergo a RightShip Inspection due to vessel age and/or performance
• Vessels whose operators are unable to verify the vessels class, flag, P&I, or ownership details

RightShip vets more than 40,000 vessels a year, powered by an intelligent platform and a global team of vetting superintendents. The new vetting criteria were applied from 30 June 2021. According to the above, it is very difficult for a management company and its ships that operate with professionalism and respect for safety and the environment not to be accepted by RightShip. Therefore, the bet is the score they will achieve and the competitive position they will find themselves in compared to other companies and ships. Another interesting observation about the competition between shipping companies and their ships regarding the quality of their services is the function of inspections using new technologies. Although different inspectors perform different inspections (classification checks by classification societies, flag inspections by flag state authorities, port state inspections by port authorities, control inspections by the respective inspectors), RightShip collects the results of these inspections in a shared database with access upon request or registration of interested charterers for a specific ship or management company.

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Air France-KLM: a trusted ally dedicated to the global maritime industry with a focus on seamen’s travel

Yiannis Pantazopoulos,
Regional Manager GR, TR, CY at Air France-KLM, talks to Nikos Vergounis
In his interview with *Naftika Chronika*, Mr. Yiannis Pantazopoulos analyses the impact of Covid-19 on the flight operations of the AF-KLM Group, the prospect of a post-pandemic recovery in leisure travel, and the importance of Cypriot and Greek Marine & Offshore business for the AF-KLM Group. He also discusses the Group’s commitment to sustainability and the SAF program.

**How has the COVID crisis affected the AF-KLM Group?**

More than a year after the COVID crisis, the lockdown measures and travel restrictions in France and the Netherlands - our home markets - and worldwide continue to impact the Group’s activity, just like the entire aviation industry. Our Group has shown its resilience in this constantly demanding environment, maintaining strict control of its capacity and costs. Depending on the restrictions imposed by each country, we have been able to operate throughout this period whenever and wherever we are allowed to do so.

**Do you believe that leisure travel will manage to cover the losses it incurred during the previous period?**

We hope that the summer season will be longer this year, and the progress of the vaccination roll-out worldwide and the implementation of travel passes will allow borders to reopen and traffic to recover. Although leisure travel is an important part of our traffic, it was our strong performance in marine and cargo traffic that partially compensated for the drop in passenger traffic.

The coronavirus pandemic has led to severe travel restrictions that varied from country to country. Canceled flights were a further consequence. Thus, AFKLM has been monitoring the situation from the beginning to ensure proper flights and connections tailored to seafarers’ needs globally while complying with each country’s pandemic regulations and fully adapting all its hygiene protocols to provide safe transportation to its customers.

**How important is Marine and Offshore traffic for Greek and Cypriot market that are in your area?**

To better comprehend the importance of maritime and offshore operations for Greece and Cyprus, allow me to point out that despite having only 0.16% of the world’s population, Greece has managed to maintain its strength and distinct influence in the world’s seas, with Greek ship-owners holding 20.67 percent of world tonnage and 54.28 percent of European Union capacity. This dynamic has been clearly demonstrated to the aviation industry and is confirmed by the uninterrupted contribution of shipping to the turnover of airlines during the pandemic period. Historically, shipping worldwide has always been resilient in the face of adversities such as pandemics, conflicts, political crises, etc., and thankfully, Covid-19 was no exception.

This means that Greece and Cyprus are leading the way, right?

Exactly! Greece and Cyprus are leading the way, figuring first in the global ranking position based on M&O turnover; therefore, our countries’ contribution to the Group’s turnover was and continues to be one of the most significant. That only became possible thanks to our strongly committed and highly professional staff based in Greece, servicing both the Greek and Cypriot markets. Our team here in Athens has managed to promptly respond to our seafarers’ needs, demonstrating their commitment to the Shipping segment.

For an industry whose core business (leisure travel) is shrinking, this is a big success...

For years, Air France and KLM have been dedicated to the global maritime industry with a focus on seamen’s travel and have repeatedly been the recipients of the recognition and appreciation of customers in this target group. Air France and KLM give special attention to developing specific solutions, special fares, regulations, departments, and policies, amongst other things, and invests in human resources to meet the requirements of the most demanding sector in shipping. Our immense focus on supporting the ship crewing industry has put us in a leading global position in the maritime industry.

**How do you feel about the fact that Greece and Cyprus are leading the Marine segment?**

Both the AF-KLM Greece and Cyprus teams are incredibly proud about it. At the same time, we fully
acknowledge the responsibility that derives from the leading position these countries hold. Therefore, we are constantly adapting to meet our customers’ requirements.

Despite the COVID crisis, the AF-KLM Group is reinforcing its sustainability commitment…

Absolutely! Despite the economic difficulties, the Group has remained mobilized to achieve its ambitious objectives of reducing its environmental footprint. By 2030, the Group will have halved its CO₂ emissions per passenger/km compared to 2005 and achieved carbon neutrality in its ground operations. Air France-KLM will become a European leader in more sustainable air travel. One of the ways to achieve these targets is Air France-KLM’s innovative Corporate SAF (Sustainable Aviation Fuel) program, enabling companies to play an active role in the future of sustainable travel, which was launched earlier this year.

Moreover, in the first quarter of the year, the Group added two Embraer 195 E2 and welcomed an Airbus 350-900 and two Boeing 777-300 to its fleet. Moreover, at the end of September Air France will take delivery of the first of the 60 Airbus A220-300s. This aircraft embodies the airline’s sustainability commitments with 20% less fuel used compared with the aircraft it is replacing and a 34% reduced noise footprint. With these investments, we continue to build an efficient fleet and show our commitment to sustainability.

How does the KLM Corporate SAF program work, and how can it lead the way in introducing alternative and environmentally friendlier fuels in the airline industry?

The Air France-KLM Corporate SAF program will enable corporate customers to estimate the CO₂-emissions associated with their travel and determine an annual contribution they wish to devote to the Corporate SAF program. All Air France and KLM contributions will be invested in sourcing and the consumption of SAF. This will support the creation of a sustainable aviation fuel industry that guarantees increasingly eco-responsible air transport. By investing in this corporate program, companies are taking concrete action to reduce CO₂ emissions and contributing to the ecological transition of air transport by supporting innovative solutions. A leading example in our area is a significant multinational company called Sea Chefs - a worldwide service provider for shipping companies related to cruises -. We were able to join forces with them and sign our first SAF agreement, which demonstrates their commitment to sustainability and CO₂-emissions reduction. I am confident that Sea Chefs has paved the way for other corporations to team up as well.

Has SAF been tested, and what does it offer in terms of emission reduction compared to traditional jet fuels?

Of course! KLM made its first SAF-powered flight in 2009. Between 2014 and 2016, the Group carried out 78 Air France flights powered by a 10% SAF blend in collaboration with a Total affiliate. These tests showed that the use of SAF had no impact on the reliability of airline operations. Air France-KLM intends to strengthen its leadership in SAF in the years ahead while contributing to research on future generations of aircraft. The first Air France long-haul flight powered by Sustainable Aviation Fuel (SAF) took off from Paris-Charles de Gaulle for Montreal in May, with its tanks filled for the first time with sustainable aviation fuel produced in Total’s French plants. In a worldwide first, KLM operated a passenger flight on the Amsterdam-Madrid route last February partially made on sustainably produced synthetic kerosene.

Can SAF be used in current aircraft fleets? Are existing aircraft ready in terms of energy density to fully replace traditional fuels, or do we need to wait more years for them to be better developed?

No modifications to storage and distribution infrastructure, aircraft, or engines are required to incorporate sustainable fuel. The Group aims to inspire more carriers to use SAF and significantly reduce CO₂ emissions from air transportation, in line with the United Nations’ Sustainable Development Goals.

Where do SAFs stand price-wise compared to traditional aircraft fuels? Are there any ways to make them more economically attractive to airline companies, or will their use be imposed mainly by upcoming regulations for reducing aviation’s environmental footprint?

Biofuel prices are still not competitive enough compared to fossil fuels, so to move in that direction, we have rolled out our SAF initiative, as mentioned earlier. The higher the demand for biofuels, the more likely it is to adjust prices in the near future.

Is there sufficient SAF production worldwide to support the potential use of such fuels in the airline industry? How can governments assist in order to accelerate the production of SAF?

As previously stated, increased demand will inevitably lead to increased biofuel production, which is currently lagging behind that of fossil fuels.
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Assessing, improving, or developing an organisation’s safety culture is not new to us at Green-Jakobsen. We have been working closely with many tanker, bulker, and offshore shipping companies globally in their quest to build the desired safety cultures. Of course, all of these companies aim at establishing the safety culture that best fits their unique features and strategy - a safety culture that is proactive and resilient, ensures that safety is embedded in everything they do, and proves to be above the compliance line.

Organisations with a proactive and resilient safety culture are on a non-stop improvement journey. They continuously identify areas of good safety performance to learn from and build on. They address signs of poor safety behaviour before anything goes wrong. Not only do they have a continuous improvement mindset, but they are also able to adapt to change and come out on top in unique situations.

Since there is no standard manual that tells us how to develop a proactive and resilient safety culture, some organisations fail while others succeed in this.

The reason is that building such a culture involves acting proactively rather than just reacting, and taking control rather than just adjusting to a situation, waiting for something to happen, or merely following procedures. Successful companies acknowledge that they can only truly assess, understand, and manage a situation if they actively participate in it. To this end, they take steps to listen to, involve, and support their seafarers and office staff.

At Green-Jakobsen, we believe that improving safety culture is not a one-time event or an overnight process. We see it as embarking on a journey to which our clients will remain committed. Journeys do not need to be difficult. Our practices make our clients’ journey towards a proactive and resilient safety culture structured, viable, and worthwhile.

The culmination of our years of experience in safety, leadership, and people performance in the maritime industry has proven to address one of the major challenges in safety culture development, i.e., how to make the people commit to it. Without that commitment, improvement may never take hold.

The following are examples of some of our practices that can serve as signs that you are on the right track towards a proactive and resilient safety culture. They are people-related because, in the journey towards such a culture, it is the people in the organisation who take initiatives and bring about a new mindset and behaviours in the workplace.
Visualising your safety culture development journey

A development pathway is a powerful tool. Designing roadmaps for our clients enables every individual in the organisation to visualise what their journey will look like and how they can contribute to its progress.

Putting your people at the centre of the journey

We constantly challenge any ideas that safety culture should be led from afar. We believe that those who do the job should always discuss, assess, and develop safety performance. So, when we say the organisation’s people should be placed at the centre of the journey, we mean they should be the ones who mainly introduce initiatives to improve the safety culture. They should also be responsible for paving the way forward. If only the HSQE department is aware of the idea, then it gets stuck there. As for the crew, they might not think it is their business - in our experience, they often view it as yet another initiative someone in the office has imposed on the vessel.

Work task integration

Over the years, we have observed that a common key challenge among organisations with weak safety cultures is making their people live out the organisational culture. A crucial success factor is triggering a behavioural movement towards specific work tasks; this actually makes people relate to the company’s culture.

Mobilising the people along the journey

We believe that when we delegate to our people the responsibilities of assessing, discussing, and developing their safety performance, we must enable them to do so - meaning, we must empower them. We see mobilising people as:

• Providing them with opportunities to reflect on their safety performance on a regular basis.
• Creating an open and trusting environment that encourages collaboration and dialogue.
• Creating learning opportunities when they need them.

Question to the reader

Where do you think your company stands on the journey of building a resilient and proactive safety culture?

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Commodities
From production to seaborne transport and consumption

DRY BULK CARGOES

COAL

How the US emerges as a winner from the Sino-Australian trade war

US coal exports to China soared in the second half of the year while the trade dispute between Beijing and Canberra continues unabated. According to an analysis by S&P Global Market Intelligence, US coal shipments to China reached 2.4 million tonnes, compared to just 75,000 tonnes in the same period last year. This increase significantly boosted total US coal exports, which amounted to 20.6%, recording an annual increase of 53%. Recovery was also seen in deliveries to Brazil, India, and Japan have also shown signs of recovery.

The Chinese government’s decision to ban coal imports from Australia has resulted in the US becoming a major coal supplier to China. As a result, the Chinese market is now the second-biggest buyer of US coal after India.

The rupture in Sino-Australian trade relations is being exploited to the fullest by US coal companies. In particular, in the second quarter, Warrior Met Coal shipped 600,000 tons of coal to China, while Consol Energy exported the first shipment of coal to the Asian country in 2018. Alpha Metallurgical Resources has sold, so far in 2021, 1 million tons of coal to China, while the outlook is optimistic about maintaining these high flows until the end of the year.
Increase in Australian prices

Australian thermal coal prices rose m-o-m by 16.9% in July to $152.0/mt, the highest since mid-2008. In the January-July period, prices have been around 79% higher than the same period last year. Prices continued to be supported by warmer-than-average weather in Northeast Asia, growth in industrial activities, while some supply limitations also played a part. In China, the main consumer, thermal power demand rose by 10% y-o-y in June, while, at the same time, coal output declined by 5.0% y-o-y in June.

IRON ORE-STEEL

July 2021 crude steel production

World crude steel production for the 64 countries reporting to the World Steel Association (worldsteel) was 161.7 million tonnes (Mt) in July 2021, a 3.3% increase compared to July 2020. China produced 86.8 Mt in July 2021, down 8.4% on July 2020. India produced 9.8 Mt, up 13.3%. Japan produced 8.0 Mt, up 32.5%. The United States produced 7.5 Mt, up 37.9%. Russia is estimated to have produced 6.7 Mt, up 13.4%. South Korea produced 6.1 Mt, up 10.8%. Germany produced 3.0 Mt, up 24.7%. Turkey produced 3.2 Mt, up 2.5%. Brazil produced 3.0 Mt, up 14.5%. Iran is estimated to have produced 2.6 Mt, up 9.0%.

Africa produced 1.3 Mt in July 2021, up 36.9% on July 2020. Asia and Oceania produced 116.4 Mt, down 2.5%. The CIS produced 9.2 Mt, up 11.2%. The EU (27) produced 13.0 Mt, up 30.3%. Europe, Other produced 4.1 Mt, up 4.6%.

The Middle East produced 3.6 Mt, up 9.2%. North America produced 10.2 Mt, up 36.0%. South America produced 3.8 Mt, up 19.6%.

Chinese iron ore imports at 14-month low in July

Chinese iron ore imports fell to 88.5 million tonnes in July, the lowest level since May 2020, according to BIMCO. The fall in July means that accumulated imports are lower than in the first seven months of 2020. Imports this year have totaled 649.0 million, a 1.5% decline from January to July 2020. In July, imports were down 21.4% from the same month in 2020 when they reached a record high of 112.7m tonnes.

In addition to the July drop in iron ore imports, China’s steel production fell to 86.8m tonnes (source: NBS China) as the government seeks to impose limits on steel production to meet climate emissions goals. Chinese steel production was strong in the first six months of the year, and with a resilient domestic demand, it appears that the government restrictions are limiting further growth rather than the actual appetite for steel. In the first six months of the year, which is the most recent data available by origin, Brazil is the only major exporter of iron ore to China that has experienced growth. Brazilian export volumes are up by 14.3% in the first half of the year, reaching 108.3 million tonnes, thus thereby cementing its second spot. However, this is still down from the record of 109.2m tonnes of iron ore that China imported from Brazil in the first six months of 2017. Australia remains solidly in the top spot despite a fall in imports. In the first six months of the year imports from Australia have fallen by 1.3% to 344.8 million tonnes.

The latest data on EU trade and consumption

The European Steel Association (EUROFER) recently released its 2021-2022 economic and steel market outlook report. The report includes data on consumption and steel trade in EU countries in Q1 and Q2 2021 and estimates for 2022.

More specifically, the whole of 2020 was considerably impacted by the pandemic and saw the apparent steel consumption in the EU plummet (-10.6%, lower than the 11.1% in EUROFER’s previous forecast) for the second consecutive year after the -5.3% drop in 2019. Consumption is set to rebound (+11.2%) in 2021 and grow more moderately (+3.7%) in 2022 when it is expected to return to above 2017 levels thanks to continued improvement in demand from steel-using sectors.

After the record low seen over the second quarter due to the severe disruption of the COVID-19 pandemic, which had marked the cycle’s trough, the volume for IQ 2021, albeit to a lower extent than in the preceding quarter, reflects another improvement in demand levels. Mirroring the improvement in demand, domestic deliveries in the EU in
the first quarter of 2021 increased +1%, after the growth of +4.6% recorded in the fourth quarter of 2020. In the first quarter of 2021, real steel consumption dropped by -0.6% (after a fall of -2.2% in the fourth quarter of 2020) - this was the eighth consecutive quarterly drop. Real steel consumption is expected to recover in 2021 (+7.9%) and at a more moderate rate in 2022 (+4.5%).

Imports into the EU, including semi-finished products, were impacted by poor steel demand due to the outbreak of the pandemic, mainly in the second and third quarters of 2020, but continued to fall year-on-year in the fourth quarter (-5.4%) and the first quarter of 2021 (-2.5%). That was the result of uncertainty around steel demand in the EU, despite improved conditions in the economy and the industry, coupled with the effect of the EU steel safeguard measures. In the second quarter of 2021, the countries of origin of finished steel imports into the EU market were mainly Turkey, the Russian Federation, South Korea, India, and Ukraine. These five countries represented 78% of total EU finished steel imports. The Russian Federation and Turkey were the largest exporters of finished steel products to the EU (with a share of 18.9% each), followed by India (17.9%), Ukraine (7.9%), and South Korea (9.5%). Total EU exports of finished steel products to third countries decreased in the first quarter of 2021 (-30%, after -5% in the first quarter). The main export destinations for EU steel exports over the second quarter of 2021 were Turkey, United States, Switzerland, China, and Egypt. These main five destinations together accounted for 46% of total EU finished product exports over this period. The EU’s total steel product trade deficit (finished plus semis) amounted to 1.3 million tonnes per month over the second quarter of 2021, primarily due to the phenomenal rise in imports in May and June, compared to 912 kilo-tonnes per month in the first quarter.

GRAINS

WHEAT

USDA’s supply and demand estimates

The US Department of Agriculture (USDA) recently published the monthly report “World Agricultural Supply and Demand Estimates” for August. The outlook for 2020/2021 US wheat that month is for reduced supplies, lower domestic use, unchanged exports, and decreased ending stocks. The NASS Crop Production report forecast all wheat production at 1,697 million bushels, down 49 million from the previous estimates. Wheat exports are unchanged, although there are offsetting export changes by class for several classes. Projected 2021/22 ending stocks are reduced by 38 million bushels to 627 million and are 26 percent below last year. The projected 2021/22 world consumption is reduced by 4.2 million tons to 786.7 million. Most of the consumption decreases are for feed and residual use with the curtailed supplies in Russia and Canada. Projected global trade for 2021/22 is lowered by 5.8 million tons to 198.2 million on reduced exports for Canada and Russia, only partially offset by higher exports by Ukraine, Australia, and the EU. Projected 2021/22 world ending stocks are lowered 12.6 million tons to 279.1 million with China accounting for 51 percent of the total.

EU yield forecasts

Difficult conditions in Germany hurt soft wheat yields. At the same time, mild temperatures and
adequate water supply led to an improved yield outlook for summer crops in other parts of western and north-central Europe, European crop monitor MARS said.

In this year’s EU harvest, the average soft wheat yield is expected to reach 5.98 tonnes per hectare, down from a projected yield of 6.05 t/ha in July. In the UK, the winter and spring wheat harvest has just started - much later than usual due to the delay in the penological development during the cold spring and rains during the end of grain filling and ripening. Preliminary field reports confirm the positive yield outlook, close to the 5-year average in most regions.

In Ukraine, post-harvest reports confirm a new record yield for winter wheat. MARS expects average durum wheat yield to average 3.52 tonnes per hectare.

SOYBEAN

Brazil’s exports preparing for take-off

Brazilian soybean exports are expected to break successive records. Predictions for 2021 exports are 86 million tonnes, while in 2022, they are expected to total 90 million tonnes, according to agribusiness consultancy Safras & Mercado. Total soybean supply in 2022 is expected to increase by 5%, reaching 147.1 million tonnes, while total demand will increase by 4%, reaching 142.1 million tonnes.
WET BULK CARGOES

CRUDE OIL

OPEC: World demand growth expectations for 2021 remain unchanged

According to a recent OPEC report, oil demand is still estimated to increase by around 6.0 mb/d to average 96.6 mb/d. However, some revisions were taken into account in 1Q21 due to slower-than-anticipated demand in OECD Americas, offset by better-than-expected data from non-OECD countries in 2Q21.

For 2022, world oil demand is still projected to increase by 3.3 mb/d y-o-y, unchanged from last month’s assessment. Total world oil demand is projected to surpass the 100 mb/d threshold in 2H22 and reach 99.9 mb/d on average for the whole of 2022. Economic activities are still projected to gain traction, supported by massive stimulus packages. Additionally, the COVID-19 pandemic is anticipated to be controlled by vaccination programs and improved treatment, resulting in a further recovery in economic activity and a steady rise in oil demand in both the OECD and non-OECD.

Non-OPEC liquids supply growth forecasts in 2021 and 2022 have been revised up by 0.27 mb/d and 0.84 mb/d, respectively. These revisions are mainly due to the incorporation of the latest production adjustment decision of the non-OPEC countries participating in the Declaration of Cooperation (DoC), which are now considered, following the successful conclusion of the 19th
OPEC and non-OPEC Ministerial Meeting on 18 July 2021. Non-OPEC liquids are now expected to grow by 1.1 mb/d in 2021 to average 64.0 mb/d. The main drivers for the 2021 supply growth are anticipated to be Canada, Russia, China, the US, Norway, and Brazil, with the US now expected to see y-o-y growth of 0.12 mb/d. For 2022, liquids supply is now expected to grow by 2.9 mb/d following new incremental production adjustments by the DoC’s non-OPEC members, led by Russia with 1.0 mb/d. The US, with 0.8 mb/d growth y-o-y, together with Brazil, Norway, Canada, and Guyana, will be the other key drivers, OPEC says.

**Recent forecasts on production, consumption, and prices**

In its August Short-Term Energy Outlook (STEO), the US Energy Information Administration (EIA) expects OPEC crude oil production to average 26.5 million b/d in 2021, up from 25.6 million b/d in 2020. The expectation of rising OPEC production is primarily based on the assumption that OPEC will raise production through the end of 2021 in line with targets it announced on 18 July. EIA expects OPEC crude oil production will rise to an average of 28.7 million b/d in 2022. Regarding US crude oil production, EIA forecasts it will average 11.8 million b/d in 2022, up from 11.1 million b/d in 2021.

In 2022, continuing growth in production from OPEC+ and accelerating growth in US tight oil production—along with other supply growth—will outpace decelerating growth in global oil consumption and contribute to Brent prices declining to an average of $66/b in 2022, EIA says. Global consumption of petroleum and liquid fuels will average 97.6 million b/d for all of 2021, a 5.3 million b/d increase from 2020.

**Russia’s output to rise to a new record in July 2022**

The OPEC+ coalition’s recent agreement to steadily raise oil production is paving the way for Russia to slowly shrug off Covid-19 curtailments. The country is on track to set a new monthly crude and condensate output record of 11.6 million barrels per day (bpd) already in July 2022, a Rystad Energy analysis reveals. Russia’s oil output will then accelerate further to a peak of almost 12.2 million bpd in mid-2023.

Russia’s current monthly oil and condensate production record was set in December 2018 with 11.5 million bpd. On an annual production level, Rystad Energy’s projections point to 2023 as a peak year, at 12.16 million bpd. The country’s short- and medium-term production growth will be driven by Rosneft and Gazpromneft’s greenfield projects.

Russia is also expected to set new records for crude oil. Its existing monthly record of 10.7 million bpd from April 2020 will be matched by May 2022. Crude production will keep rising to a peak of 11.3 million bpd in mid-2023 before starting to decline.

Rosneft alone will contribute more than half of Russia’s spare capacity. The company’s greenfield projects will add around 250,000 bpd by 2022 and about 380,000 bpd by 2025. The operator is pressing ahead with its greenfield development plans and is on track with key oil projects.

Gazpromneft will be the second-largest contributor to Russia’s liquids production growth in 2022, with greenfield projects as the driving force. By 2025, about 40% of Gazpromneft-operated production will come from early producing fields and projects currently under development, with the share in total output of the latter reaching 7%.

**IEA cuts demand outlook**

In its latest Oil Market Report, the International Energy Agency (IEA) has downgraded its oil demand forecasts for the rest of the year due to the worsening of the pandemic and revisions to historical data. Global oil demand is now seen rising 5.3 mb/d on average, to 96.2 mb/d in 2021, and by a further 3.2 mb/d in 2022.

Global output is poised to rise further in the coming months after OPEC+ agreed on a new deal to unwind its remaining curbs. Following gains of 600 kb/d this year, supply by producers outside the alliance is expected to rise by 1.7 mb/d in 2022, with the US accounting for 60% of the growth.
LIQUEFIED NATURAL GAS (LNG)

Japan’s new plan and its impact on trading norms

Japan’s recent revision to its Strategic Energy Plan (SEP) lowers the targeted share of liquefied natural gas (LNG) in the country’s power generation mix in 2030 to 20% from 27% previously, as a measure to cut emissions. A Rystad Energy analysis concludes that Japan’s targets are too ambitious to meet and that the changes the new plan will bring will mostly be in the structure of commodities trading.

Before Japan outlined its sixth SEP, Rystad Energy already considered the earlier 27% target an underestimation. Rystad’s analysis shows that the new 20% target may somewhat reduce the share of LNG in the energy mix compared to what it had previously expected, as it expects the country’s LNG reliance to be higher in 2030.

In absolute terms, Rystad Energy calculates that if the sixth SEP’s targets were to be realized, Japan’s LNG demand in 2030 would be cut by 18 million tonnes from Rystad’s previous estimate of 66 million tonnes. In the base case, however, the country’s revised plan is only likely to remove 4.6 million tonnes of demand in 2030, bringing total LNG demand to 61.4 million tonnes, with the entire reduction coming from the power sector. Rystad’s analysis concludes that Japan will fail to meet its new LNG target share because the plan overestimates the potential contribution of renewables and nuclear in its power generation.

The new plan’s proposed 20-22% share for nuclear power will require upwards of 25 gigawatts (GW) of nuclear capacity to become available, representing a re-start for several, if not all, inactive reactors - on top of the currently operational 10 GW nuclear capacity in Japan. The required capacity is a daunting prospect given the widespread local opposition and safety concerns around nuclear power. Renewables might also be difficult to deploy as Japan’s small flat-land area proportion (30%) would constrain solar capacity. At the same time, the surrounding deep and turbulent seas would limit economically viable offshore wind capacity.

Irrespective of its final size, Japan’s demand reduction may affect multiple producers but disproportionately impact some Asia-Pacific basin players such as Brunei and Papua New Guinea that have historically leaned on Japan for LNG revenues. While producers have enjoyed exceptional stability and operational performance from Japanese importers, China is broadly expected to absorb some of the LNG volume growth lined up for the market.

Before Japan’s recent revision, Rystad Energy estimated the global LNG supply deficit in 2030 at 104 million tonnes. Based on currently operational and under-construction LNG projects, Japan’s realistic LNG demand reduction of 4.6 million tonnes in 2030 is only a small trimming to the expected deficit; therefore, it will only have a limited market impact.
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Clearly, cyber security is becoming increasingly crucial in shipping. Today, both owners and business managers largely recognize the role of IT in the maritime industry and have devoted considerable effort and budget to it. A cyber security strategy is not optional anymore. Maritime organizations need to embark on it and practice it far beyond cosmetic measures.
In the context of the recent IMO 2021 Cyber Guidelines, AMMITEC has conducted empirical research on the cyber maturity and preparedness of shipping companies. A questionnaire was addressed to AMMITEC’s full members* (* IT Managers, CIOs, and IT leaders of shipping companies) and was answered anonymously by 50 shipping companies in May 2021.

The research questions and the results of this empirical research, as presented below, provide very relevant feedback from the ICT leaders of the shipping industry and lay the foundation for a constructive discussion on the current ICT conditions in the aftermath of the Covid-19 pandemic.

**The Role of Cyber Security**

1. Does your organization employ a dedicated person responsible for cyber security (CISO – Chief Information Security Officer, Ethical Hacker, Cyber Security expert but as a dedicated role)?

The chart graphically illustrates that only 26% of the responding companies already have a distinct ISO or similar Information Security executive.

In justifying the necessity for such a role, various criteria should be taken into consideration, such as a) the size of the shipping company, b) its cyberculture maturity, and c) the management’s commitment. The new era poses challenges to the cyberspace that necessitate an in-depth investigation. It is becoming increasingly hard to strike a balance between the heavy and often urgent IT workloads and the ever-increasing cyber security requirements.

Provided that an organization is cyber mature and its management supports and invests in its cyber security strategy, the below scenarios are feasible:

- In small-to-medium shipping companies, this workload can be absorbed by the company’s internal structure by clearly defining the responsibilities of each department involved (e.g., ICT, Legal, HSQE, Commercial, etc.), on condition that the appropriate training sessions are provided.
- In larger shipping companies, this role should be undertaken by a dedicated person (or even department). However, this does not mean that the responsibilities of the other company departments should be waived. Ensuring cyber security within the organization remains everyone’s duty. This person or department is to be responsible/ the liaison for cyber security within the company. Of course, the company’s reporting line is of paramount importance in this context.
Major Obstacles

2. What do you think is the major obstacle(s) in improving your organization’s maturity/preparedness in cyber security?

Shipping companies are still in a relatively early stage of their cyber maturity journey. This may be mainly attributed to management’s lack of commitment. As with every major change that needs to be successfully adopted within an organization, management should decisively support every cyber initiative step - which practically means investing in all facets of cyber security, including technical protection measures, cyber training & awareness, or even investing in expanding human resources, as applicable. The responses to this question come to confirm our hypothesis; poorly budgeted or under-staffed ICT departments are, in most cases, the result of a lack of commitment on the management side. It proves that this is a factor that should be seriously taken into consideration when trying to evaluate the degree of a company’s cyber maturity.
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Our mission for
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efficiency led us to the
development of our own
in-house ShipSoft ERP

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Technical Measures

3. What security measures has your company implemented to ensure proper protection against cyber-attacks?

The responses regarding the technical cyber security measures are very encouraging. They indicate that the vast majority of maritime companies are steadily progressing on the technical side of their cyber maturity journey. Most of them have indeed adopted all the must-have solutions such as NextGen FWs, Advanced Endpoint Protection, and IPS. They are now looking into more sophisticated solutions such as SIEM, SOCs, MDM, and 2-Factor Authentication.

However, one of the biggest challenges that IT managers are facing today is the selection of the optimum mix of cyber security tools. How can we find the best possible solutions that minimize cyberthreats while remaining within budget? Many vendors these days are aggressively promoting portfolios of promising maritime cyber security tools and solutions, with some of them portraying themselves as panaceas for all our cyber security problems! However, Maritime IT leaders know better than that. They know that there is neither a single cure-all nor a single size that fits all.

Recognizing the importance of this issue, AMMITEC has decided to proceed with an initiative to create a set of ‘Guidelines for the Evaluation and Selection of Maritime Cyber Security Solutions.’ A Joint Working Group will lead this effort with members from AMMITEC and all interested Vendors.
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Training & Awareness

4. Does your organization provide cyber security awareness training to shore-side personnel and crew members?

- Employees: 46
- Crew-members: 41
- Not yet: 1
- Information data sheets with examples every now & then, specific tutorial presentation: 1

5. If so, is the training provided by third party companies / by in-house expert(s)?

- 3rd party companies (Cyber security): 30
- In-house experts: 15
- Freelancers: 0
- Self-training online courses: 25
- We don’t provide specialised training: 11
- Cyber Security CBT for CREW: 1
- Cybersecurity training platform: 1

From the responses to the above two questions, we see that many are as yet to be convinced about the benefits of security awareness training. It is well recognized that human error accounts for most cyber security breaches. Therefore, the main purpose of awareness training is to create a culture of security in the organization.

One should always remember that no technical measures are bullet-proof. Even the strongest setup may be compromised by irresponsible browsing, greedy email reading, entering passwords in an airport, or a token left unattended at the office. One user’s loose behavior is enough for the breach. Cyberculture needs to be built, and the IT Department needs to push towards it. It takes a modern management team to enforce some otherwise “inconvenient” policies and “boring” procedures. In fact, management’s determination and users’ cooperation are equally required.
World-Link among the first suppliers of a pioneering solution powered by Intelsat

World-Link Communications continues to enhance its well-received ShipSat HTS network portfolio. Late in 2020, the 65 cm antenna was added to the existing 100 cm antenna solution. This year, World-Link Communications further expands its portfolio by introducing a new 45 cm antenna to the HTS suite. This new product, developed in response to a growing market and customer needs, offers a high-quality, reliable network connection and satellite communications for less critical operations.

World-Link Communications, a company known for innovative solutions for maritime fleets, is one of the first companies to offer this solution to its customers. The new, small, low-cost antenna is available as of April 2021. It is suitable for fishing boats, smaller commercial vessels and leisure boats to easily and affordably access connectivity using a smaller and cost-effective antenna form factor. Connectivity is provided by the high-performance Intelsat FlexMaritime network, which delivers unparalleled, multi-layered global coverage through more than 140 satellite beams.

Connectivity is key on any vessel, no matter its purpose, use or size, and connectivity service prices are generally high, which created even more consumer demand. The product is targeted at already existing, and new potential clients and is expected to be an efficient aid in improving connectivity and communication for smaller ship owners.

Key features of the new 45 cm solution includes:

- High-performance stabilisation in rough weather.
- Speeds of up to 6/2 Mbps (MIR only).
- Volume-based packages without overage cost.
- Automatic satellite search.
- Global coverage.

- Ultra-compact antennas from industry-leading manufacturers as KNS & Intellian.
- Two types of ACU Options: a standard and an IQ-200 Modem Integrated ACU.

World-Link Communications is a system and network integrator working with different satellite operators to deliver end-to-end communications and network capability for vessels at sea. Established in 1989, the company’s focus has always been building long-term, fair, and transparent partnerships, with clarity and efficiency at the heart of all interactions.

World-Link’s products and services are used by more than 1800 vessels worldwide, including fleets of tankers, container ships, bulk carriers, research vessels, fishing fleets, as well as oil and gas support vessels. World-Link is committed to excellence and innovation with value-added services. The company has a broad portfolio of sophisticated in-house applications, customised especially to modern vessel’s needs.

World-Link Communications tailors its services to the unique requirements of the individual ship owners, operators, and crew members. The company operates its own communications hubs and has distribution agreements with major satellite operators and equipment manufacturers. Further, World-Link Communications develops its own software and hardware, including network security solutions and infrastructure applications. For more information visit www.wlnet.com.

www.wlnet.com  sales@wlnet.com  +357 25 877 565
Penetration Testing

6. How frequently do you carry out penetration tests?

The responses to this question indicate that less than 50% of the responding companies have penetration testing as a standard practice in their security policies, while others simply “hope” that they will not fall victim to an attack. A surprising 23% replied that they have never carried out penetration testing.

Short to medium term Priorities

7. Which areas of cyber security do you think will be the highest priority for your organization in the next two years? Please choose the top three.

The Covid-19 restrictions and ongoing “work from home” policies seem to have affected the feedback to this question, making “Remote workforce security” a clear winner. The rest of the answers seem to follow a normalized distribution, meaning that most of the abovementioned cyber security areas will battle for our attention in the years to come.

The above results clearly indicate the increased cyber maturity and awareness of the Maritime ICT leaders. They also point to the inherently dynamic nature of the cyber security sector, imposing the need for continuous engagement of all the ICT fields involved!
Together, we can improve seafarer safety

We have a dedicated, worldwide loss prevention team providing Members with proactive and inclusive support
Global freight volumes, forecasted to triple by 2050, are expected to be highly impacted by drivers such as energy usage, environmental legislation, and technological developments¹. With the largest volumes of freight transported by sea, IMO adjusted its regulations in 2018 to align with the Paris Climate Agreement and reduce CO₂ emissions in 2050 by 50% compared to 2008 levels. At the same time, sustainability regulations are pushing companies to take measures towards greening their supply chains. In parallel to the current technological innovations that provide greener fuel alternatives and vessel technologies that reduce emissions, it is crucial to increase the efficiency of supply chains. The availability of big data is a gold mine when leveraged properly, which can shift the paradigm towards smart, more efficient supply chains.
New concepts are emerging that focus on applying available information to develop more efficient, flexible, and sustainable supply chains. At the European level, the advent of the Physical Internet (PI) is regarded as the way forward towards the development of zero-emissions logistics. The PI is loosely analogous to the digital Internet, but it transports physical goods instead of information and creates a connected, self-organised transport system. For example, a shipper sends a batch of containers from point A to point B as simply as sending an email without worrying about how it will get there as long as it arrives at the final destination. The PI relies on the interconnectivity of the supply chain in three dimensions: physical, digital, and operational. On the physical and operational level, supply chains are asked to share capacity and assets and flexibly exchange cargo between services. Digital connections are developed via the secure real-time sharing of information between the engaged partners. Shipping faces various forms of inefficiencies such as the empty space inside containers, return of empty containers, unpredictable ETAs of vessels in ports, and long waiting times for vessels in anchorages and terminals. Currently, the VSAT and maritime IoT technologies revolution can make real-time connectivity between the vessel and the shore a reality. Real-time data exchange between ports and vessels can ensure flexible real-time planning of terminal operations, dynamic berth allocation, and optimal fuel and speed for vessels. Although total vessel automation will require a lot of time to be fully realized, automated systems provide a vast amount of data that can be used to improve supply chain visibility and optimize vessel operations. Secure information flows can also help shippers and LSPs trace the location of their goods and adjust their planning. Among the pioneers in port sustainability, the Port of Rotterdam has set up SmartPort to promote the integration of the shipping industry in sustainable smart supply chains. SmartPort develops innovative technologies that allow industry players to exchange information and improve ship calls by reducing waiting time. Operators are alerted about the products arriving or leaving the port to prioritize the ones they will handle first and adjust their planning to ensure low hinterland and seaside waiting times.

In an effort to become more responsive to future disruptive events, apart from providing efficiency and sustainability, smart supply chains are asked to improve their flexibility. The application of PI concepts provides an expanded interconnected network where resources can be shared, and loads can be redirected. The implementation of flexible contracts without pre-specified routes, modes, and timeslots will give players the freedom to design and operate smart, flexible multimodal supply chains. Easy-booking services can improve flexibility and ensure higher utilization rates but require end-to-end visibility and strong collaboration between the different actors. There is a long road ahead full of challenges. Most major liner companies have integrated other activities such as terminal operations, freight forwarding, and intermodal transport (“door-to-door”). Further vertical integration will require strong, trusting relationships and proof that such collaboration will be profitable for all the engaged players. Building trust between stakeholders is probably the biggest challenge as companies will frequently be asked to collaborate with their competitors. Defining governance processes and standardized load and data exchange protocols is a first step towards developing open global maritime and logistics networks. Further standardization of modular loading units (boxes in particular) and the adoption of a seamless modal transshipment process should be put in place. The different levels of technological maturity of companies, actors, terminals, and governmental bodies (i.e., customs or port authorities) pose extra obstacles that need to be tackled to ensure the inclusion of smaller players. As more and more regulations are put in place, especially in terms of sustainability, new technologies and big data can transform traditional industries such as shipping and ensure their effective integration into smart supply chains.

Maran Gas Maritime (MGM), the gas shipping unit of the Angelicoussis Group, recently boosted its fleet with the addition of a newly built liquefied natural gas carrier, the first vessel in its fleet to feature X-DF dual-fuel engines. At the end of July this year, the company took delivery of the LNG carrier “ISABELLA,” which was built at the Daewoo Shipbuilding & Marine Engineering (DSME) shipyard in South Korea. The “ISABELLA,” like all Maran Gas Maritime’s vessels, is registered under the Greek flag and is manned by Greek Officers.

The vessel features a No 96 – GW LNG cargo containment system from GTT, with a total cargo capacity of 174,000m³. It is equipped with two 2-stroke X-DF main engines from Winterthur Gas & Diesel (WinGD) and four 4-stroke auxiliary engines from Wartsila. The vessel’s main and auxiliary engines are dual-fuel type, capable of burning natural gas by using gas compressors which are part of the cargo management system. Furthermore, the ship can reliquefy the boil-off gas (Advanced Partial Reliquefaction) using an exclusive high-pressure compressor that ensures the required pressure and temperature are maintained in the cargo tanks, thus reducing possible cargo losses.

The advanced technology in cargo management and reliquefaction systems, the modern low-pressure dual-fuel engines, and the application of an optimized hull design by DSME - combined with the use of twin-propeller and DSBow - ensure low fuel consumption and competitive energy efficiency, which is recorded at much lower levels compared to the current and future limits of the energy efficiency index (EEDI-phase III 30% below the benchmark).

Burning LNG as a fuel meets the international environmental regulations regarding the limitation of nitrogen oxides in the atmosphere (NOx Tier III) while burning low sulphur fuel oil while sailing in ECA areas (emission control areas) ensures compliance with Tier III level requirements due to the installed low-pressure catalyst (LPSCR) in the main engines and SCR in the auxiliary engines.

Finally, the vessel’s operational profile is enhanced by the notations of the American Bureau of Shipping (ABS) R2 (propulsion redundancy) and SLAM-S (Strengthened against Stern slamming) and its environmental profile by the ENVIRO and BWT notations.
Maran Gas Maritime Inc.

“Isabella”

Vessel Type: LNGC
Yard: DSME, South Korea
Hull No.: 2495
Delivered: 22 July 2021
Flag: Greek
IMO No.: 9874820
Class: ABS
DWT: 93,080

Cargo tanks capacity (100%): 174,130 m³
Cargo containment system: No 96 - GW
Class Notation: +Al(E), Liquefied Gas Carrier, Ship Type 2G (Membrane tank, Maximum Pressure of 0.25/0.35 bar, Minimum temperature -163°C, Specific gravity 0.5), SH, SH-DLA, SHCM, SFA (40), SLAM-S, RRDA, IHM, +AMS, +ACCU, +APS, DFD, TCM, NBLES+, CPS, UHIELD, ENVIRKO, BWVT, R2, CRC(SC), R/W, SELev

GRT / NRT: 115,405 / 34,621
Propulsion engine: 2 x HYUNDAI-WINGD 5X72DF with LPSCR (Derated)
Aux. diesel engine: Wartsila 2 x 8L34DF x 3840 kW x 720 RPM + 2 x 6L34DF x 2880 kW x 720 RPM
Propeller: Twin Fixed Pitch Propeller 2 x Blades: 4, Diam. = 8.00 m.
Maran Tankers Management Inc.

“Maran Antiope”

VLCC Maran Antiope was delivered in August 2021 as the last sister ship of an efficient and eco-friendly series of 19 VLCCs built by Korean Daewoo Shipbuilding and Marine Engineering from April 2016 to August 2021. Their design and construction were a joint effort by DSME, the MTM in-house plan approval, the shipbuilding supervision, and the technical operations teams of influential oil majors.
The Maran Antiope can achieve a 17% lower EEDI compared to the EEDI Phase 0 baseline and is compliant with the EEXI requirements stipulated in the latest MEPC (June 2021) due to the combination of efficient machinery and hydrodynamically optimized hull form, propeller, and energy-saving devices (DSME duct, rudder bulb, long propeller cap).

Her main dimensions, mooring system, and equipment arrangement comply with the latest industry and oil terminal standards. The Maran Antiope is propelled by the successful and reliable MAN ES 7G80ME-C9.5 Tier III Main Engine equipped with an Exhaust Gas Recirculation system (EGR) and a flexible M/E turbocharger layout allowing the cut out of one turbocharger to increase the M/E efficiency at low loads.

Other novel features worth mentioning include the installation of an open-loop SOx Scrubber manufactured by Alfa Laval, the installation of variable frequency drives in the engine room fans and cooling seawater pumps, the implementation of an online performance monitoring system with a shaft torque meter and Coriolis-type flow meters, the installation of an ORCA artificial intelligence-based navigation and collision avoidance system, and an aerodynamically optimized funnel and accommodation block.

The Maran Antiope is a benchmark for MTM not only because of her technical characteristics, but because she marks the dawning of a new era for the company, namely its transition to decarbonization.
**Maran Tankers Management Inc.**

“Maran Antiope”

- **Shipyard:** Daewoo Shipbuilding & Marine Engineering Co, Ltd
- **Class:** ABS
- **Type ME:**
  - 1 X MAN-ES 7G80ME-C9.5, MCR: 25,330KW @ 64RPM,
  - NCR: 21,000KW @ 60.1RPM
- **Aux Engines:**
  - 3 X Himsen 7h21/32 - 1,540 Kw @ 900rpm
- **Class Notation:** *A1, *Accu, *Ams, (E), Ab-Cm, Bwe, Bwt, Cpp, Crc, Cps, Csr, Enviro, Esp, Ihm, Oil Carrier, Port, Pot, Res, Rdra, Rw, Sc-Pl, Seiev, Sprma, Tcm, Uwild, Vec-L

- **Vessel Type:** Crude Oil Tanker
- **Delivered:** 13/08/2021
- **IMO:** 9901348
- **Flag:** Greece
- **NRT:** 111,537
- **GRT:** 163,099
- **DWT:** 318,482.20 MT

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**NEWBUILDINGS**
The HullSkater is a revolutionary onboard solution specially developed for proactive cleaning. Together with the premium antifouling SeaQuantum Skate, Jotun Hull Skating Solutions will maintain a clean hull, even in the most challenging operations.

Operational needs arising from a dynamic market in combination with challenging environmental conditions increase the risk of fouling. The end-result being increased fuel cost and Green House Gas emissions. To combat fouling, Jotun Hull Skating Solutions is engineered to keep the hull fouling-free at all times. This groundbreaking approach is now in the final verification stage, in collaboration with leading industry partners.
Keppel Offshore & Marine (Keppel O&M) has successfully delivered Russia’s first Liquefied Natural Gas (LNG) bunkering vessel. Designed and built by Keppel O&M, the 5,800m³ ice-class LNG bunkering vessel (LBV) Dmitry Mendeleev was delivered to Shturman Koshelev LLC with a perfect safety record.

The LBV is the fourth newbuild LBV by Keppel O&M and was built at its Keppel Nantong Shipyard in China to Keppel’s proprietary MTD 5800V LNG design.

The dual-class LBV, the 12th ice-class vessel delivered by Keppel O&M, was developed by its ship design and development arm, Keppel Marine & Deepwater Technology (KMDTech). The vessel is compliant with the Arc 4 and Ice Class 1A notations from the Russian Maritime Register of Shipping and Bureau Veritas, respectively. Its hull is optimized for independent ice navigation in medium first-year summer ice thickness of up to 90cm. Measuring 100m in length and 19m in width, the vessel is also equipped with an integrated digital system that allows it to be managed by just one person from the navigation bridge.
MOL and DSME succeed in Demonstration test of “Cryo-Powered Regas” System for FSRU

Mitsui OSK. Lines, Ltd. and Daewoo Shipbuilding & Marine Engineering Co., Ltd have successfully carried out the demonstration test of the “Cryo-Powered Regas” System for FSRU at DSME’s Okpo shipyard.

The role of an FSRU is to regasify -160°C liquified natural gas (LNG) through heat exchange. In the past, LNG’s cold energy had not been utilized in FSRUs and was released. By installing the “Cryo-Powered Regas” System, such cold energy will be transferred to another heating medium; the generated steam will be sent to a turbine to generate electricity, reducing the FSRU’s fuel consumption and CO₂ emissions.

A small-scale version of the “Cryo-Powered Regas” system was built in DSME’s R&D premises. The turbine generator used in this system was designed and constructed by Mitsubishi Heavy Industries Marine Machinery & Equipment Co., Ltd., specifically for the CPR System. Through this test, MOL and DSME verified that the system could successfully generate electricity up to its rated capacity. The result of this demonstration test confirms that through the utilization of the “Cryo-Powered Regas” System, fuel consumption and CO₂ emissions of new generation FSRUs can be reduced by 50% at maximum rated regas flow rate compared to conventional existing FSRUs.

A new green hydrogen agreement

Fincantieri and Enel Green Power Italia signed a memorandum of understanding for the production, supply, management, and use of green hydrogen for port areas and long-range maritime transport. The two companies intend to exploit their expertise and know-how in their respective sectors to identify possible sustainable and innovative solutions.

In particular, the two companies will evaluate the possibility of collaborating in the supply of green hydrogen to naval, submarine, and surface vessels and industrial users within the port area, including designing and constructing the infrastructure elements and storage, where necessary. Furthermore, they will look into designing and developing an energy flow management system through the involvement of other companies from the respective groups.

In the energy transition context, hydrogen can make a valuable contribution to the decarbonization of energy-intensive industries such as chemicals, aviation, maritime transport, and non-electrified railways, provided it is produced sustainably.

Wärtsilä 20DF dual-fuel engine upgraded to deliver more power

The technology group Wärtsilä introduced an upgraded version of its popular and successful Wärtsilä 20DF dual-fuel engine. The new version will deliver increased power output, have a reduced environmental impact, and feature a lower fuel consumption. It will also further increase the engine’s fuel flexibility by allowing a much wider gas quality span, down to methane number (MN) 65, while still delivering full output.

The engine’s power per cylinder is increased from 185 to 195 kW, while the methane slip is lowered by as much as 40 percent, thereby drastically reducing the CO₂ emissions. The existing Wärtsilä 20DF control system is replaced by the latest Wärtsilä UNIC all-inclusive automation system. Skip-firing technology combining torque control with cylinder deactivation is introduced for genset applications to optimize fuel consumption at low engine load. Energy consumption is reduced by three percent.
The new Wärtsilä 20DF engine is better suited for variable speed applications with mechanical propulsion.

**LNG bunkering and storage: a step towards the shipping industry’s decarbonization**

RINA has been awarded a framework contract by the European Maritime Safety Agency (EMSA) to support initiatives to increase the availability of LNG in the medium term with small-scale bunkering and depots to expand the use of this fuel throughout the Mediterranean, Black and Caspian Seas. This important, strategic project aims to reduce environmental impact by making LNG more widely available for a variety of uses, including ferries, cruise ships, tourist activities, and promoting the LNG road supply chain.

The services provided by RINA will help Port Authorities determine which locations are feasible, both in terms of safety and technical and financial viability, to install small-scale LNG bunkering or depot facilities. RINA provides eight different services, from which each Port Authority can choose according to its goals. The activities include gap analysis of regulatory frame and evaluation of applicable standards, feasibility study, definition of risk acceptance criteria, site analysis, nautical analysis, hazard identification, quantitative risk assessment, and ship collision risk study. Having a common methodology and framework will give countries with a gap in LNG infrastructure access to a high standard of qualified guidance, regulatory compliance, and safety. Increasing the number of ports with LNG refueling capability will help support the wider adoption of this more environmentally friendly fuel to meet MARPOL regulations.

**A new deal for construction of LPG fuelled VLGCs for LPG/Ammonia transport**

Mitsui OSK Lines, Ltd. announced that its group company Phoenix Tankers Pte. Ltd. signed a deal with Namura Shipbuilding Co., Ltd. to construct two very large gas carriers (VLGCs) to transport liquefied petroleum gas (LPG) and ammonia. Namura Shipbuilding will construct the two vessels at its Imari Shipyard under a technical tie-up with Mitsubishi Shipbuilding Co., Ltd. The vessels, which can also run on LPG fuel, are slated for delivery in succession after 2023.

In comparison with fuel oil, LPG can reduce CO₂ emissions by about 20%, and SOₓ, PM, and so on by about 90%. The new carriers are designed to maximize fuel efficiency and are cutting-edge, environmental-friendly vessels in compliance with EEDI Phase 3, applicable to VLGCs contracted after 2022. Ammonia is drawing attention as a next-generation clean fuel that does not emit carbon dioxide when burned and as a “hydrogen carrier” that can transport hydrogen. The newly ordered vessels are also designed to transport ammonia and are presently the world’s largest-scale ammonia carriers. Furthermore, the vessels will be built with an eye toward conversion to ammonia fuelled in the future because LPG and ammonia fuels have similar characteristics.
Adams Ship
Buildings & Repairs FZE

- Ship Repairing
- Conversions
- Ship Building
- Electrical Repairs
- Piping
- Steel Fabrication
- Mechanical Repairs
- Fuel Pump Injector Repairs

Tel: 0097165269301, Fax: 0097165269305, P.O. BOX 50906, Hamriyah Freezone, Sharjah, UAE
Website: www.adamship.com, Email: info@adamship.com
The Abu Dhabi National Oil Company (ADNOC) announced that, in partnership with Fertiglobe, it had sold its first cargo of blue ammonia to Itochu in Japan for use in fertilizer production. The sale builds upon recently announced joint efforts to enhance industrial cooperation between the UAE and Japan and support the development of new UAE-Japan blue ammonia supply chains. Fertiglobe, a 58:42 partnership between OCI and ADNOC, will produce blue ammonia at its Fertil plant in the Ruwais Industrial Complex in Abu Dhabi for delivery to ADNOC’s customers in Japan. The shipments, sold at an attractive premium to grey ammonia, underscore the favorable economics for blue ammonia as an emerging source of low-carbon energy. They represent the first production milestone of a planned scale-up of blue ammonia production capabilities in Abu Dhabi, which is expected to include a low-cost debottlenecking program at Fertil. In June, it was also announced that Fertiglobe would join ADNOC and ADQ as a partner in a new world-scale project to produce 1 million metric tons of blue ammonia per annum at TA’ZIZ in Ruwais, subject to regulatory approvals.

Ammonia can be used as a low-carbon fuel across a wide range of industrial applications, including transportation, power generation, refining, and industries including steel, wastewater treatment, cement, and fertilizer production. For Japan, in particular, hydrogen and its carrier fuels, such as blue ammonia, are expected to play an important role in its ongoing industrial decarbonization efforts.

ADNOC announced in May that it would be advancing a world-scale blue ammonia production facility at the TA’ZIZ industrial ecosystem in Ruwais, Abu Dhabi. The design contract for this project has already been awarded, with the final investment decision for the project expected in 2022 and the start-up targeted for 2025. The facility’s capacity will be 1 million tons per annum. In June, Fertiglobe entered an agreement to join the project, subject to regulatory approvals.

U.S. natural gas net trade growing as annual LNG exports exceed pipeline exports

In its August 2021 Short-Term Energy Outlook (STEO), the U.S. Energy Information Administration (EIA) forecasts that U.S. natural gas exports will exceed natural gas imports by an average of 11.0 billion cubic feet per day (Bcf/d) in 2021 or almost 50% more than the 2020 average of 7.5 Bcf/d. Increases in liquefied natural gas (LNG)
exports and pipeline exports to Mexico are driving this growth in U.S. natural gas exports. For the first time since U.S. LNG exports from the Lower 48 states began in 2016, annual LNG exports are expected to outpace pipeline exports—by an estimated 0.6 Bcf/d—this year.


In 2020, natural gas exports accounted for 23% of total U.S. energy exports in energy-equivalent terms. U.S. LNG exports, in particular, have grown as the United States has added LNG export capacity and expanded its LNG export destinations.

It is expected that U.S. imports of natural gas by pipeline and as LNG, combined, to increase by 6% compared with 2020, averaging 7.4 Bcf/d in 2021, before declining to 6.9 Bcf/d in 2022. Almost all U.S. natural gas imports enter the United States from Canada into midwestern and western demand markets. U.S. pipeline imports previously had been declining annually since 2008. However, EIA expects natural gas pipeline imports to increase in 2021 because of relatively flat U.S. dry natural gas production and slightly higher U.S. natural gas consumption.

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### Nigeria overhauls Mining Act to regulate the exploitation of the country’s mineral wealth

According to a report by Reuters, Nigerian President Muhammadu Buhari has signed into law the Petroleum Industry Bill 2021, in a long-awaited legislation overhaul on the exploration and exploitation of oil and gas fields in the country. This law introduces a new regulatory and legislative framework for the Nigeria Petroleum industry in Nigeria, including new regulations regarding the taxation of legal entities.

According to the country’s National Statistics Office, Nigeria was the largest oil producer in Africa in 2020, with production reaching 86.9 million tons (or 1.8 million b/d). It is noted that more than 50% of the national income comes from oil exports.

### Wind turbine prices to rise by up to 10%

According to a new analysis by Wood Mackenzie, wind turbine prices are expected to increase by up to 10% over the next 12 to 18 months due to increases in commodity prices, logistics costs, and coronavirus-related challenges.

As noted in the recent Wood Mackenzie report, a rise in steel, copper, aluminium, and fibre prices, coupled with a four-fold increase in logistics costs, have increased turbine prices over the last six months. Wood Mackenzie expects this trend to continue for the next four to five quarters.

As the US-China trade tussle shows no signs of improvement, turbine OEMs are facing further cost pressures. This has forced the likes of Vestas, SGRE, and Nordex to explore alternative supply hubs, such as India.

According to Wood Mackenzie, as market conditions continue to evolve, OEMs and turbine suppliers must adopt next-generation technologies and materials because supply chain bottlenecks for essential materials will emerge over the next four to five years.
While the IMO 0.50% sulphur cap on marine fuels has been successful from a safety perspective, complying with the regulation has proved a headache for many shipowners.

The International Maritime Organization’s cap on fuel sulphur content was met with some predictions of vessels suffering loss of electrical power or losing propulsion in busy shipping lanes. Thankfully, widespread problems never materialised, and the industry came through the transition period largely unscathed.

However, concerns over the poor stability characteristics of some of the new very low sulphur fuel oils and the incompatibility between stems were realised, while operational issues that were perhaps not as well foreseen, such as engine liner wear, also arose.

North has dealt with numerous claims and disputes related to these issues.

Imagine the following scenario: the vessel requests the delivery of compliant bunkers, and the party ordering the bunkers – the owner or time charterer – specifies compliant fuel to be supplied to the vessel. Upon completion of bunkering, the supplier issues a bunker delivery note (BDN) declaring the fuel to be compliant (0.50% sulphur or less). The receiving vessel then sends a sample drawn during bunkering to an independent laboratory where it is tested against ISO 8217-listed parameters for commercial purposes. Days later, the test result returns a sulphur content between 0.51% and 0.53%, indicating non-compliance with the limit specified in MARPOL Annex VI.

What happens next? Are the bunkers off-specification, non-compliant, or both? Can the fuel be used? Who should be notified? Will the vessel be targeted by the authorities, and what action will they take? Should it be de-bunkered? This is where confusion reigns, leading to commercial disputes and, in some cases, de-bunkering.
Are the bunkers non-compliant?

If the receiving vessel's own sample returns a result above 0.50%, it does not automatically mean that the bunkers are non-compliant with MARPOL. Commercial samples – such as the vessel's own sample – should not be considered definitive evidence of non-compliance. However, few administrations have confirmed this explicitly, and experience suggests that some port state control functions are taking a contrary view. Port state control officers in some countries are not applying the single-test reproducibility tolerance to in-use samples during their inspections, as it is not mandatory for them to do so, but the IMO is promoting its early adoption. Again, the lack of a consistent approach by port states around the world causes confusion for calling vessels.

Who should be notified?

In general, shipowners have been advised to follow the notification process in MEPC.321(74) 2019 GUIDELINES FOR PORT STATE CONTROL UNDER MARPOL ANNEX VI. However, as the document’s title suggests, this is the IMO guidance for port state control. There is no published guidance to shipowners, and the statement “the master may…” implies that the notification process is voluntary, and there is no obligation to notify the referenced parties. Further clarification on the notification process is needed.

Will the vessel be targeted by PSC?

It is important not to disincentivise the reporting of potentially non-compliant fuel, as the IMO GISIS module – which allows flag states to report on behalf of shipowners – relies on these reports to identify suppliers that provide non-compliant fuel. It stands to reason that if PSC targets a vessel for inspection following the submission of a voluntary notification, it is likely to disincentivise reporting.

A call for clarity and consistency

Marginally off-spec bunkers are causing lengthy disputes and, in some cases, de-bunkering. Considering the carbon footprint of the de-bunkering process, these developments could be considered as contradicting established industry environmental goals. Shipowners need to feel sure they understand the rules and are confident of their consistent enforcement worldwide. We have a wealth of information on the IMO 2020 sulphur cap, including articles, news, and resources, available at: https://www.nepia.com/topics/2020-vision/
Jotun Paints and the Angelicoussis Group share similar values and strategic priorities, which created a good foundation for the partnership. They both endeavor to reduce their environmental impact through investing in technological solutions, applying first-class standards in all processes, and exercising constant training and development while maintaining rigorous ethical, professional, and legal standards in business.

The partnership with Jotun has been extended after four years of monitoring the Angelicoussis fleet performance. The Group expects to achieve the environmental target of improving its fleet’s energy consumption with Jotun hull paints and the in-house specialized team of analysts and tools of Jotun Hellas.

D. Koronakis S.A. enhances its global presence by acquiring new premises in Norway!

The purchase of new offices and warehouses in Norway is the latest investment of D. Koronakis S.A. These premises, owned 100% by the company, are located in the strategic Norwegian Port of Alesund and cover a total of about 5,000 square meters.

The company will enrich its global network by creating a new stock of mooring ropes, synthetic tails, wire ropes, and various accessories like tonsberg shackles, etc., so customers with vessels calling at ports in Northern Europe can receive a faster service.

Of course, the company will continue its commercial policy of invoicing any transaction made in Norway from its headquarters in Greece.

Exclusive 3-year partnership signed between Jotun Paints and the Angelicoussis Group

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The Angelicoussis Group is committed to transporting commodities across the globe in a safe, efficient, and reliable manner. The Group provides first-class shipping services and creates innovative business solutions for its customers while applying fair employment practices at sea and ashore.

Jotun protects property, its employees, customers, suppliers, shareholders, and the environment, committing substantial resources, time, and effort to nurturing and developing the company values of Loyalty, Care, Respect, and Boldness throughout its operations.

This strategic partnership is a strong advocacy of the significant benefits and synergies that can be attained between Jotun and its clients who share the same values and aspirations.
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Besides the ports/locations that we cover via our offices appearing on the relevant list, Mylaki Shipping Agency covers all Greek and Cypriot ports through our local correspondence.
There can’t be a business left on land or sea that has not felt the pressure to ‘go green’ in the last few years. It is desirable – even urgent – and the advantages are many. But there is usually a downside: Hitting sustainability targets or meeting new green regulations can mean huge capital investments for businesses. As we enter the fourth industrial revolution of smart automation and the Internet of Things (IoT), most of this no longer applies. The way forward is now reliant on digitalisation, communication, and connectivity – all of which traditionally have been difficult at sea until now.

Towards the green shift
Digitalisation on board is based on simple principles:
Collecting data – Processing data – Transmitting data to shore – Storing and sharing data
Most likely, you are already collecting sensor data and sending it to shore. But how much of it is used for digitalisation that benefits the whole business varies greatly. New business models where the original equipment manufacturers no longer deliver hardware but services, shifting the responsibility of secure operations from shipowners to their suppliers. To be able to deliver on this model, OEMs require constant access to their systems for pricing models, maintenance, and ensuring secure operations. However, shipowners rarely get access to that same data, which means they cannot benefit from it. And, as the saying goes, data is the new gold.

Telenor Maritime enables the data to work for you
Telenor Maritime stands as a neutral enabler in the ongoing digital transformation, running an ecosystem that creates value through new digital services for all parties – shipowners and OEMs alike. At Telenor Maritime, they believe that digitalisation must happen already on board. To do that, the company has created the Unified Hosting Service™ (UHS®), a data-sharing platform allowing everyone to benefit from the data collected onboard.

Hybrid connectivity is the key
One source of connectivity is not enough to establish robust, reliable, and secure communications between ship and shore. This is why Telenor Maritime has developed the Connectivity Platform, a solution that combines multiple backhaul bearers into a powerful connectivity source. The connectivity can then be used for passenger and crew services, as well as IoT solutions. Telenor Maritime offers shipowners and equipment manufacturers an integrated digitalization strategy and new ideas for innovation.
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IATA’s Business Confidence Survey in early July 2021 gives some indication about the latest developments in the airline industry and its profitability outlook. The survey queried airline CFOs and Heads of Cargo on a range of issues, capturing trends and geographic differences.

One of the key takeaways from the July survey is encouraging signs of improvement in airline financial performance. 73% of respondents now expect profitability for their airline to improve further in the twelve months ahead, compared to less than half in the April survey. Very few surveyed airlines expect a further decline, but close to a quarter think profitability will not change from its low base. Carriers expecting no improvement were all based in Europe and the Asia Pacific. Moreover, 72% of respondents have seen profitability improve in the three months to July 2021 compared to the same period in 2020, but this is no surprise given how weak passenger demand was at the peak of the crisis last year.

Respondents that expected improvements suggested reasons such as the easing of travel restrictions, cost reduction efforts, higher passenger confidence, and vaccination progress. Nevertheless, there remain reasons for caution. Many respondents indicated that they did not expect profits but rather reduced losses and a slow and gradual recovery from a low base. Among the airlines that do not anticipate changes, some cited as key issues the lack of government coordination or vaccines not being recognized by partner markets. Some respondents thought yields would go down, and others pointed out the significant uncertainty and the risk that the recovery could be reversed.

All in all, the July 2021 Business Confidence Survey points to cautious optimism, with a slow and vulnerable recovery despite recent progress and a wide range of possible outcomes across markets.

The world’s best airports for 2021

Hamad International Airport in Doha, Qatar, was voted the Best Airport in the world in the 2021 World Airport Awards survey recently released by Skytrax. The 2021 World Airport Awards recognized the efforts of global airports in adapting and meeting the challenges of the COVID-19 pandemic. The past 18 months have been the hardest and most financially challenging period ever experienced by the world air transport industry, so airports have invested in providing the safest possible environment for their customers and staff during the global pandemic. COVID-19 has impacted some regions and airports more than others; for more than a year, many areas have had few, if any, international routes operating.
Amongst the other major airport awards announced recently, Istanbul Airport was named the World’s Most Improved Airport in 2021, moving from No 102 in 2020 to No 17 in the 2021 results. Changi Airport Singapore - a frequent previous winner of the World’s Best Airport title - was named the World’s Best Airport in the 10 to 15 million passenger category and took the awards for the World’s Best Airport Staff and Best Airport Staff Asia. Tokyo Haneda Airport, another major winner of awards, was ranked second-best in the World’s Best Airport category and first in the Best Airport in Asia, World’s Best Domestic Airport, World’s Best Airport Cleanliness, and Best Airport PRM / Accessible Facilities categories. Guangzhou Baiyun International Airport was named Best Airport in China, World’s Best Airport in the 35 to 45 million passenger categories, and took the Best Airport Staff Award in China. The airport also achieved its highest global ranking at No 14, up from No 30 in the 2020 Awards. Munich Airport retained its place in the Top-10 list, being named the Best Airport in Europe. London’s Heathrow Airport was named World’s Best Airport in the 20 to 25 million passenger category and Best Airport in Western Europe.

Eve to deploy 100 air taxis in the Asia-Pacific region

Eve Urban Air Mobility, LLC, an Embraer company, and Ascent Flights Global Ltd. recently announced a deepening of their partnership aimed at developing a robust Urban Air Mobility (UAM) ecosystem in the Asia Pacific region. Beginning in 2026, Eve will provide Ascent with up to 100,000 hours of flight time per year on its electrical vertical take-off and landing (eVTOL) aircraft, also known in the market as EVA (Electrical Vertical Aircraft), for use in key cities such as Bangkok (Thailand), Manila (Philippines), Melbourne (Australia), Singapore, and Tokyo (Japan). Backed by Embraer’s more than 50-year of aircraft manufacturing and certification expertise history, Eve unveils a unique value proposition by offering a comprehensive suite of UAM products and services. Eve’s zero-emission and low noise EVA represents a simple and intuitive design that continues to reach development milestones. The first flight of the engineering simulator happened in July 2020, while a proof of concept (POC) followed in October 2020. In parallel, Eve’s Urban Air Traffic Management (UATM) project reached a new milestone in its collaboration with the United Kingdom’s Civil Aviation Authority (CAA) to develop a scalable environment needed to host UAM flights. Eve plans to deploy up to 100 aircraft to be marketed by Ascent on its current and future routes. Ascent, which acts as an independent on-demand platform, will pay for flight time utilized on Eve’s aircraft while operating in combination with partners in the Asia Pacific region and other markets. This new agreement is part of Eve’s comprehensive UAM strategy to position the company as a leader in the industry. The deployment of Eve aircraft across the Ascent network is subject to the parties entering into definitive final agreements.

Aegean Airlines welcomed another new A321neo aircraft

In late July, Aegean Airlines welcomed its latest A321neo aircraft, delivered to the Greek carrier’s representatives at the Airbus facilities in Hamburg, Germany. It was the fourth aircraft of the 46-airplane order from the Airbus larger version A320neo family. Aegean Airlines’ new A321neo aircraft flew to Athens airport using a blend of sustainable and conventional aviation fuels. By achieving this milestone, Aegean takes a significant step towards sustainable aviation. Dimitris Gerogiannis, Aegean’s CEO, stated: “Although we are still finding our way through a major pandemic crisis, we remain focused on the new era for Aegean and more environmentally sustainable air transport while continuing our fleet renewal program and increasing our efforts for innovation. Today’s first delivery flight with sustainable aviation fuel (SAF) is a significant symbolic milestone for Aegean and an important step towards sustainability in Greece.”
The unexplored maritime history of the Cyclades
Naoussa as a Russian Naval Station after the Orlov Revolt: discovering the “Paros through Russian Cartography, 1770-1775” exhibition.

The presence of the Imperial Russian fleet in the Aegean Sea in the 18th century and the fact that it remained in Naoussa, Paros, for five years, in conjunction with the establishment of the “Russian Principality of the Archipelago,” are little-known events of particular historical significance.

On the occasion of the Russian-Greek Year of History, Naftika Chronika presents the “Paros through Russian Cartography, 1770-1775” exhibition, investigating an unexplored period in the pre-revolutionary Aegean.

by Panagiotis Korakas
The reason behind the presence of the Russians in the Aegean was the outbreak of the 1768-1774 Russo-Turkish War. The Russian Empress Catherine II, wishing to expand her state's influence towards the Black Sea and the Mediterranean, decided to send the Russian fleet to the Aegean. Asserting the interests of the Russian Empire would have long-term consequences in the Aegean and the Black Sea regions as it would act as a precursor for the organization and flourishing of the Greek merchant fleet in the following decades.

The Russians’ main strategic goal was to ensure the Black Sea ceased to be an “Ottoman lake” and, consequently, to impose conditions of free navigation in the Dardanelles and the Bosphorus. At the same time, the Russian Empire wanted to establish a permanent naval base in the Aegean by creating a homodox island government that would be under Russian protection without, however, having the characteristics of a colony.

The “Archipelago Expedition”, as it was named, would begin its challenging journey from the Baltic Sea, under the command of Admiral Alexei Orloff, and would reach the Aegean Sea in early 1770, having passed through important European ports.

The Russian presence in the region would encourage many outbreaks of insurgency in areas where Greek populations were already in a revolutionary “fever” against the Ottoman rule, especially in the Peloponnese, where the Russian military forces landed.

Despite the revolutionary movements in many geographical areas of the Ottoman Empire and promises of further military assistance from Russia, these efforts were unsuccessful. The withdrawal of the Russian forces from the Peloponnese in the summer of 1770 and the dynamic reaction from the Sublime Porte would lead to catastrophic events. In 1771, the revolutionary flame of the Greeks would be extinguished with a heavy tax of blood.

Despite the bitter failure of the Orlov Revolt, as it would become known in Greek historiography, the presence of the “Archipelago” fleet in the Aegean was accompanied by success for Russian interests. The Russian navy struck a major blow at the Battle of Cesme in July 1770, crushing the Ottoman fleet. This victory is considered one of the most important in the history of the Russian navy; for the first time, the relatively young Russian fleet had a success of this magnitude. The dominance of the Russians at sea would lead to a lasting presence in the Aegean as a few months later, in October 1770, they would settle in Paros and, more specifically, in Naoussa.

“Auza,” as Naoussa would become known in Russian historiography, would become the Russian fleet’s center of operations but also the administrative center of the “Russian Principality of the Archipelago.” The Russians preferred this bay of the Cyclades because it was protected from the northern winds and had a depth that favored the mooring of large battleships. As presented in various sources, Paros must have been an impressive sight since more than 10,000 soldiers were stationed on the island, and a series of defensive fortifications, a shipyard, two hospitals, and a church were constructed during that period.

The permanent establishment of the Russians in the Cyclades would be further advanced by the introduction of a political system and the establishment of a chancellery with the presence of three elected representatives from the local island councils with tax and judicial responsibilities. As far as local representation is concerned, we know that in 1771, Antonios Psaros from Mykonos was elected as the general deputy of the Archipelago. The islands that made up this Russian “Principality” consisted essentially of the Cyclades, with Patmos and Samos being added until 1774.

It is worth noting that despite the change of government experienced by the local island communities...
The hopes that accompanied the removal of Ottoman rule, the Russian government would eventually take the form of tax sovereignty over the island populations. Cases of misconduct carried out by the Russian military representatives in the region were often observed. The Russo-Turkish War would eventually end in 1774, with Russia emerging victorious. The cessation of hostilities was sealed with the signing of the Treaty of Küçük Kaynarca. As a result of this treaty, Russia was recognized as a protective force for the region’s orthodox population, who gained the right to have their ships sail under the Russian flag. The strengthening of the position of Russian trade led to the flourishing of cities such as Odessa, which attracted hundreds of Greek merchants and seafarers. Thus, the foundations would be laid for the creation of a large merchant fleet which in the coming decades would lead to the rise of a Greek merchant navy, which in turn would contribute decisively to the successful outcome of the Greek Revolution.

The large Russian fleet would remain in the Aegean Sea until 1775, when it returned to its home ports, leaving an important chapter in Cycladic maritime history behind it. The history of the ‘Archipelago Expedition’ remains largely unknown in the Greek historical memory. The Russian presence in Greece is connected almost exclusively with the failed Orlov Revolt: a black page in pre-revolutionary history, one accompanied by massacres and disaster. There are, however, initiatives that aim to highlight the fascinating history of the Cyclades and the five-year presence of the Russians in the Aegean.

One such effort to preserve, highlight and enrich this undiscovered history is the exhibition “Paros through Russian Cartography, 1770-1775”, hosted in the cells of the St. John Detis Monastery in Paros, which has been operating as a museum since 2014. The exhibition consists of previously unpublished manuscript charts of the Russian mission in the Aegean and maps belonging to the 1788 “Atlas of the Archipelago,” which are presented in the form of large size, high-definition digital copies. The area where the exhibition is located was an important stronghold for the Russian presence in the Aegean. On the peninsula of St. John Detis and the general area of the bay of Naoussa, several ruins of the outposts and military installations of the Russian naval base are still preserved. The exhibition details the geophysical features and areas of settlement of the Aegean islands in the 18th century. The selection of cartographic relics is also a typical example of the aesthetically pleasing 18th-century Russian cartography. The exhibition was organized under the scientific supervision of historian Eleftheria Zei. The monastic cells hosting the collection have been renovated thanks to a donation by the Stavros Niarchos Foundation, preserving their beautiful Aegean design.
This place is captivating, as the architectural austerity of the monastery’s cells and their geographical location contribute to the visitor’s “in situ” experience, who is transported back in time to the historical space: Through the windows of the exhibition, one sees the bay where dozens of ships were anchored, and thousands of soldiers and crews were encamped, representing the interests of the far-away Russian Empire more than 250 years ago. The exhibition is open to the public annually and until the 30th of September for this year (and upon request thereafter). The project was sponsored by the A. G. Leventis Foundation and it is based on the systematic historical research in Russian, Western European, and Greek archives carried out in 2012-2013. The research team was led by the Director of the Institute of Mediterranean Studies, Gelina Harlaftis.

The museum belongs to the Environmental and Cultural Park of Paros - a municipal SA founded in 2009 to protect and promote the peninsula of St. John Detis. Mrs. Elisavet Papazoi, former Minister of Culture and Minister of the Aegean, served as Chairman of the Board of Directors of Paros Park from its establishment until 2019. This position is currently held by Mr. Andreas Andreopoulos, Professor of the National Technical University of Athens.

As head of the Russian-Greek Year of History event-planning committee, Mrs. Elisavet Papazoi has announced a series of projects that will highlight the presence of the Russians in the Cyclades in the period 1770-1775.

More specifically, the “Archipelagos Historia” platform, an initiative for the digital mapping of the geographical area of the Aegean, is going to be inaugurated in the following months. The project aims to organize and make available primary material and testimonies vital for the region’s history. “Archipelagos Historia” is an initiative organized by the Cultural Park of Paros and the Institute for Historical Research of the National Hellenic Research Foundation, with Mr. George Tolias as the research director.

Furthermore, the creation and screening of a short film of historical interest are underway. Moreover, the translation in Greek of the book “Archipelagos” by historian Elena Smilianskaya has also been scheduled. This series of events is expected to be completed by the summer of 2022. The final program of events will be announced soon.

Historical events, such as the Russian presence in the Aegean, underline the timeless importance of the region as a place of particular geostrategic and commercial interest. At the same time, instances such as these are typical examples of how a historical event can be interpreted and assimilated into the historical memory of two peoples in a completely different way. For the Greeks, the Orlov Revolt has been preserved as a catastrophic memory. In contrast, the Russians consider the “Archipelago Expedition” and the Naval Battle of Cesme a golden legacy of its navy.

Placing such historical encounters between two peoples under the spotlight is undoubtedly something modern society is obliged to do. Revealing the multiple aspects of such an encounter helps us understand how a short episode of local history leaves its mark, indirectly affecting the fate of an entire nation a few decades later.
Maritime Numbers

- **90**: The number of active cruise lines, according to the 2022 Global Cruise Ship Index.
- **$24,970**: The average Capesize freight rates per day in the first seven months of this year.
- **349**: The number of containerships ordered in January-July 2021, according to VesselsValue.
- **53%**: The drop in passenger traffic in Greek coastal shipping in 2020 compared to 2019, according to a study by XRTC Business Consultants.
- **5,950,000 b/d**: The expected oil demand increase in 2021.
- **$1,2 trill.**: The value of the global merchant fleet, according to Clarkson Research Services.
- **49**: The number of ships (over 100GT) lost worldwide in 2020.
- **135**: The number of ports offering LNG bunkering services to ships.
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